

The letter very clearly shows that the bulk of it has to do in the first instance with biomedical facts and in the second instance with interplanetary flight and preparations therefor.

Mr. MONDALE. Mr. President, will the Senator yield further?

Mr. HOLLAND. I will yield. I had promised to yield to the Senator from Florida. However, I yield first to the Senator from Minnesota.

Mr. MONDALE. Mr. President, one cannot clearly read the letter from Dr. Adey without concluding that earth orbiting is precisely what he is referring to.

Let me repeat:

Therefore it is submitted that the program for a Space Shuttle might well remain in the phase of fundamental research and feasibility studies, pending the outcome of medical investigations in the Skylab program.

That is the earth orbiting program.

Mr. HOLLAND. Mr. President, it seems clear to me that the Senator is overlooking entirely the earlier part of the letter in which he is talking about interplanetary flight.

Mr. MONDALE. And earth orbit.

Mr. HOLLAND. He is talking about the creation of artificial gravity which is so necessary in the case of interplanetary flight. He is talking about things that have relation at all to what we are talking about here, as well as making some mention of the things we do have great concern about in the bill. However, the Senator is, I think, overlooking entirely the fact that the letter from which he reads, written by Dr. Adey, refers to a much broader group of subjects than we are talking about at the present time.

Mr. MONDALE. Mr. President, may I say that the problem of long-duration flight—either in earth orbit or interplanetary—is one about which we do not know the answers, as Dr. Adey says.

Mr. HOLLAND. Mr. President, the problem is so different that in the case of earth orbit, we might be talking about a period of a few weeks and, in interplanetary flights, we might be talking about a period of a few years. The difference is so great that the two can hardly be mentioned as the same problem.

Mr. GURNEY. Mr. President, will the Senator yield?

Mr. HOLLAND. Mr. President, I yield.

Mr. GURNEY. Mr. President, I think the Senator from Florida makes an able case for the space shuttle and the very problem we are talking about, man's ability to live in space.

As I gathered from the colloquy between the Senator from Florida and the Senator from Minnesota, and earlier from the colloquy between the Senator from Minnesota and the Senator from Wisconsin, they try to shoot down the space shuttle on the point that man cannot live long in space. There is no evidence that that is so.

From all of our own space flights so far—and we have had men orbiting for up to 13 days in space—they have suffered no ill effects.

As far as we know from the recent Soviet space flight which has lasted for just short of 18 days, there were no ill effects.

The reports have been fragmentary, as

the Senator pointed out, in the letter from the space medical doctor on this matter.

But the Russian news reports which I have checked, and checked recently while listening to the colloquy, are that the Russian cosmonauts are entirely well and did not suffer any ill effects that could have come from long space flight.

The point is that we are now obviously in the neighborhood of 3 or 4 weeks in space. We know that men can live and get along all right.

If we have the space shuttle and if men suffer ill effects in space, we can bring them back in whatever period is necessary.

Obviously, the space shuttle as far as manned space flights are concerned backs up the facts already in existence.

So, I think that the argument the opposition is making about the space shuttle on the basis that we do not know how long men can live in space falls of its own weight because the space shuttle, as specified in the sky lab, works so well that we can bring our people home and substitute new men. So, we can have continuous surveillance and observation of men in space.

That is a good reason why we ought to have a space shuttle.

Mr. HOLLAND. Mr. President, I thank my colleague from Florida for bringing out that real and very worthwhile objective of the space shuttle; that is, the possibility of recovery, of relief given, and recovery made in the event something went wrong so that men in space could survive for the length of time they are able to survive, but still could not bring back their vehicle to the earth.

I do wish to correct one statement a while ago, which was a slight misstatement. I said in the authorization hearing this amendment was defeated by 2 to 1. The vote was 56 to 29, which is almost 2 to 1 but not quite 2 to 1.

I will continue to read from the hearings. The last question, I think, was by the Senator from Maine (Mrs. SMITH). It must be remembered that she is the ranking minority member of the Committee on Armed Services and the ranking minority member of the space committee as well. More than any one individual she has kept check on the cooperative aspect of the programs of DOD and NASA.

Senator SMITH of Maine. As you were talking with Senator Cannon about consolidating need of various agencies, would not the shuttle be that one that Defense and NASA could agree upon?

Dr. FOSTER. Yes, Senator Smith, that is what I intended to point out.

That is something they could cooperate on.

I see in the Chamber the distinguished Senator from Nevada (Mr. CANNON) who had been questioning Dr. Foster in an earlier part of the hearing. The Senator from Maine (Mrs. SMITH) was referring to an earlier series of questions and answers in which the Senator from Nevada had been questioning Dr. Foster. Am I correct in that?

Mr. CANNON. The Senator is correct.

Will the Senator yield at that point?

Mr. HOLLAND. I yield to the Senator from Nevada.

Mr. CANNON. I have before me the agreement that was entered into between the National Aeronautics and Space Administration with the Department of the Air Force concerning the space transportation system.

The Senator from Minnesota (Mr. MONDALE) seems to imply that perhaps the Air Force or DOD needs have not been considered as a part of this program, that this was something NASA was undertaking, independent and apart from the military services.

This document, and I shall ask that it be made a part of the RECORD, establishes an agreement between NASA and the Department of the Air Force, acting as the agent of DOD "to insure that the proposed national space transportation system will be of maximum utility to both NASA and the DOD." This agreement is signed by Dr. Paine, Administrator of NASA, and Robert C. Seamans, Jr., Secretary of the Air Force, and it is dated February 17, 1970.

The agreement merely delegates to NASA the authority to proceed on behalf of both agencies in an effort to consolidate and not have two parallel programs going, but to get the job accomplished on behalf of both agencies.

Mr. President, I ask unanimous that a copy of the agreement may be printed in the RECORD.

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

AGREEMENT BETWEEN THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AND THE DEPARTMENT OF THE AIR FORCE CONCERNING THE SPACE TRANSPORTATION SYSTEM

This document establishes an agreement between NASA and the Department of the Air Force, acting as the agent of DOD, to insure that the proposed National Space Transportation System will be of maximum utility to both NASA and the DOD.

I. OBJECTIVE OF THE SPACE TRANSPORTATION SYSTEM

The objective of the Space Transportation System (STS) is to provide the United States with an economical capability for delivering payloads of men, equipment, supplies, and other spacecraft to and from space by reducing operating costs an order of magnitude below those of present systems.

The program may involve international participation and use. The development of the STS will be managed by NASA. The project will be generally unclassified. For purposes of this agreement, the STS will consist of the earth-to-orbit space shuttle.

II. NASA/USAF STS COMMITTEE

A. Organization

In order that the STS be designed and developed to fulfill the objectives of both the NASA and the DOD in a manner that best serves the national interest, a NASA/USAF STS Committee is hereby established that will report jointly to the Administrator of the NASA and the Secretary of the Air Force. The Committee will consist of eight members, four to be appointed by the Administrator of the NASA and four to be appointed by the Secretary of the Air Force. The Co-Chairmen of the Committee will be the Associate Administrator for Manned Space Flight (NASA) and the Assistant Secretary for Research and Development (Air Force). Any proposal for changing the composition or functions of the Committee will be referred to the NASA Administrator and

the Air Force Secretary for their joint consideration.

B. Function

The Committee will conduct a continuing review of the STS Program and will recommend steps to achieve the objectives of a system that meets DOD and NASA requirements. Specifically, the Committee will review and make recommendations to the Administrator of NASA and to the Secretary of the Air Force on the establishment and assessment of program objectives, operational applications, and development plans. This will include, but not be limited to: Development and operational aspects, technology status and needs, resource considerations, and interagency relationships.

THOMAS O. PAINE,
Administrator, NASA.

Date: 17 Feb. 1970.

ROBERT C. SEAMANS, JR.,
Secretary of the Air Force.

Date: Feb. 17, 1970.

Mr. HOLLAND. Mr. President, I thank the Senator from Nevada who, as a member of the Committee on Armed Services, not only had knowledge of this agreement but of the fact that it was available publicly. I knew of the existence of the contract but I did not know if it could be made available publicly. I am very glad that it will be in the RECORD. I am sorry the Senator from Minnesota is not in the Chamber at the present time. It makes clear that some 3 months prior to our hearings the agreement had been entered into whereby DOD had assigned to NASA the doing of the very work which would be interfered with if this \$110 million were cut out of the appropriations bill.

I shall continue to read from hearings where the Senator from Maine (Mrs. SMITH) was asking questions of Dr. Foster.

Senator SMITH of Maine. I gathered that is what you were talking about.

Dr. Foster, are you aware of the Budget Bureau request of the Defense Department and NASA to jointly prepare plans for possible further consolidation of the DOD Eastern Test Range and the NASA Cape Kennedy Space Center activities?

Dr. FOSTER. Yes, I am, Senator; and we are making that review now. The date by which we have to submit that study to the Bureau of the Budget is May 1, 1970.

Which was a few days after our hearing.

I shall read one more exchange because I think it is so very full of meaning.

Senator SMITH of Maine. Doctor, you spoke of these joint committees and joint effort and so forth, between DOD and NASA. Are you finding full cooperation in this, or is there any lack of it on either side.

Dr. FOSTER. The answer there is that we find full cooperation. I must say it is getting better as the budget gets tighter.

Senator SMITH of Maine. We have been asking this question for some years, and I never feel satisfied that there is the full cooperation that will bring about the results that some of us would like to see.

Dr. FOSTER, does the United States have a capability to detect whether a Soviet spacecraft carries nuclear weapons?

Dr. FOSTER. [Deleted.]

Senator SMITH of Maine. Is the Soviet [deleted] launch vehicle operational?

Dr. FOSTER. [Deleted.]

Senator SMITH of Maine. [Deleted.]

Dr. FOSTER. [Deleted.]

Senator SMITH of Maine. [Deleted.]

Dr. FOSTER. [Deleted.]

Senator SMITH of Maine. [Deleted.]

Dr. FOSTER. [Deleted.]

Senator SMITH of Maine. [Deleted.]

Dr. FOSTER. [Deleted.]

Senator SMITH of Maine. [Deleted.]

Dr. FOSTER. No.

The deletion of those questions and answers shows the importance to the security of our Nation, which is involved in this matter.

I would like to say to the Senator from Minnesota, who was called temporarily from the Chamber but who has now returned, that in his absence the distinguished Senator from Nevada placed in the RECORD the operational agreement between the Air Force, acting for DOD, and NASA, making a common program out of the space shuttle.

Mr. MONDALE. How much money does the Air Force contribute to that?

Mr. HOLLAND. I would be glad to yield to the Senator from Nevada if he knows the answer.

Mr. CANNON. I would assume they contribute nothing.

Mr. MONDALE. That is what I thought.

Mr. CANNON. DOD thought NASA was the organization to handle the project for both agencies. I assume all of the appropriation would be through the authorizing agency, the agency that is made manager of the project.

Mr. MONDALE. I think there have been many cases in the past where DOD and NASA jointly funded efforts, but in this one, DOD thinks so little of the project they will not spend a penny on it.

Mr. CANNON. Does the Senator have the idea that DOD gets money from other sources? Do they have some source, other than NASA has to go to, to receive their money for these projects? If so, I would like to know what it is. I thought the money came from appropriations by the Senate and House of Representatives.

Mr. MONDALE. If DOD thought that there was a critical defense need, it was my impression they have been more than able to come to Congress and get as much money as they requested—but in this instance they even canceled the MOL program.

Mr. HOLLAND. This is a program which, if proved to be successful, would be eminently useful for civilian purposes. They would save the vehicles and make use of them time and time again. It would be useful from the standpoint of the Department of Defense for the same purpose. There is no reason in the world why NASA should not have been agreed upon as the agency to do this work because it was trying to effect a method of economy, which the Senator from Minnesota is now seeking to destroy if he puts off new work that needs to be by way of research to make this effort successful.

There is one more point I wish to make and then I shall be finished. Generally speaking, there are three steps in the construction of a space system.

One of them is research and feasibility, which is covered in the \$110 million. Second is detailed planning and preliminary design, which is also covered within that. The third development and construction, which is not covered within it. We are not trying to commit ourselves to the latter at this time.

Of course, as the Senator knows, and

as he has stated, and stated very properly, the research as to the ability of man to live, and under what kind of conditions he can live, and how long, in space, is something that is going on, not only in this particular program but in every other manned program of any great duration in which we are engaged.

I strongly hope that this amount will not be cut out of the appropriation. It seems to me that the Senate, having specifically approved this project, by a vote of 56 to 29, at the time of authorization, should feel even less inclined to approve the effort of the Senator from Minnesota, knowing that the latest Russian effort shows clearly, beyond any question, that they are experimenting in this same field—the biomedical part of it—and that they conducted a rather fine experiment, based upon what was released only recently, in keeping their two cosmonauts in space some 17 days-plus.

Mr. President, I yield the floor.

MESSAGE FROM THE HOUSE

A message from the House of Representatives, by Mr. Hackney, one of its reading clerks, announced that the House had passed, without amendment, the bill (S. 3592) to amend the Federal Meat Inspection Act, as amended, to clarify the provisions relating to custom slaughtering operations.

INDEPENDENT OFFICES AND DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT APPROPRIATIONS, 1971

The Senate continued with the consideration of the bill (H.R. 17548) making appropriations for sundry independent executive bureaus, boards, commissions, corporations, agencies, offices, and the Department of Housing and Urban Development for the fiscal year ending June 30, 1971, and for other purposes.

Mr. ALLOTT. Mr. President, I find myself in a very peculiar position this afternoon, as ranking Republican member of the subcommittee, in being asked to take the position for the committee of carrying the opposition to this amendment. I realize the feelings of the distinguished chairman of the committee. Nevertheless, I feel that this is a very important program, and the contributions of the distinguished senior Senator from Florida and the distinguished junior Senator from Florida, as well as the distinguished junior Senator from Nevada, have been very helpful.

The space shuttle will be the most important rocket vehicle in the U.S. space program and will be available in the late 1970's. This is one thing that the arguments this afternoon failed to take into consideration. It will replace all of the intermediate size launch vehicles and will also launch many of the payloads planned for the giant Saturn 5; and everyone knows that that is a very expensive vehicle. It will be used for science payloads as well as application payloads, and it will also be the only capability manned space flights after 1974, when the last space flight is scheduled.

Without a shuttle, therefore, there will

be no more manned space flights after 1970; and even if the shuttle is developed, as we hope it will be developed, there will be a gap in all manned space flights between 1975 to at least 1977, and perhaps 1978 or 1979.

I would like to speak now about the funding matter, because the funding requested in fiscal year 1971, which is \$110 million, is basically for a conceptual design, and that is all. It does not constitute a commitment to move on to shuttle development, and such a commitment would only be made in terms of the fiscal year 1972 budget, and would have to be approved by the Senate next year when the 1972 budget is under consideration.

The major purpose of these design studies is to fully ascertain the space shuttle cost, and by the time NASA asks for a commitment, probably in 1972, to develop the shuttle, the cost range should be firm. However, we know, even out of the total, the shuttle development cost will be considerably less than stated in the press releases of various Senators.

Now I would like to define exactly what we are talking about here for this space shuttle, and I am going to read from the Extensions of Remarks appearing on page E5879 of the CONGRESSIONAL RECORD of June 23, 1970, a letter to Chairman OLIN E. TEAGUE, chairman of the Subcommittee on Manned Space Flight, Committee on Space and Astronautics, House of Representatives. This letter is dated May 28, and is signed by T. O. Paine, Administrator of NASA.

I want to read from it because it will clear up a lot of confusion that many of us really need not have. I skip the first paragraph. I shall place the whole letter in the RECORD, so it will be in the RECORD for all to read. Starting with the second paragraph:

First, I would like to review briefly the NASA policy of phased project planning. Under this policy, major research and development programs are conducted in four sequential phases. The first phase (Phase A) consists primarily of an in-house analysis and preliminary study effort to determine whether the proposed technical approach is feasible. Phase B consists of detailed studies and definition, comparative analyses, and preliminary design directed toward facilitating the choice of a single approach from among the alternate approaches selected through the first phase.

So that phase B which is what we are talking about here, is simply detailed studies and definition, comparative analyses, looking toward the choice of a single approach from among the alternate approaches that might be selected.

Now, at a later point he says:

Accordingly, we selected contractors on May 12 to proceed into the second or definition phase of detailed study, comparative analysis, and preliminary design directed toward facilitating the choice of a single program approach.

He said further:

We will decide at the conclusion of this phase whether it is appropriate to settle on a single design or continue competitive approaches.

So it very clearly shows, from these or three paragraphs I have read in Mr. Paine's letter, this is not for a design for a model, but, rather, a defini-

tion design, or what I have called previously a conceptual design, beyond which they hope to make some selection from alternatives.

Then he goes on in another paragraph and says:

Similarly, these detailed definition studies will permit us to gain a thorough understanding of service life, frequently of utilization, and what is involved when we consider such matters as Air Force requirements. These detailed results will in turn supply the Department of Defense with the information it will need to determine how it will utilize the shuttle and what organizational, logistics, and financial support it should provide.

Then, reading from the penultimate part of the letter I read:

Thus I believe it is clear that the responsible course to be taken is to invest now in the study efforts and proceed at an efficient pace in the future toward bringing into operation a system that will permit us to end the practice of discarding vehicles after a single flight. We will continue this work through the Phase B studies currently being initiated. Then at the conclusion of this phase we will reach another checkpoint at which we will be able to review the situation thoroughly.

I think that should clear up just exactly what we are doing here with the particular amendment that has been offered.

I ask unanimous consent that the letter from Mr. Paine to the Honorable OLIN E. TEAGUE be included at this point in my remarks.

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

NATIONAL AERONAUTICS AND SPACE
ADMINISTRATION,
Washington, D.C., May 28, 1970.
Hon. OLIN E. TEAGUE,
Chairman, Subcommittee on Manned Space
Flight, Committee on Science and Astronautics,
House of Representatives,
Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your significant and timely inquiries regarding the design, operations, and cost of the space shuttle and related booster system. Attached are specific answers to each of your questions. However, I would like to set forth some general comments on our space planning to establish a framework for the answers to your specific questions.

First, I would like to review briefly the NASA policy of phased project planning. Under this policy, major research and development programs are conducted in four sequential phases. The first phase (Phase A) consists primarily of an in-house analysis and preliminary study effort to determine whether the proposed technical approach is feasible. Phase B consists of detailed studies and definition, comparative analyses, and preliminary design directed toward facilitating the choice of a single approach from among the alternate approaches selected through the first phase. Phase C involves detailed systems design with mockups and test articles to assure the hardware is within the state-of-the-art and that the technical milestones schedules and resource estimates for the next phase are realistic. The final phase (Phase D) covers final hardware design development and project operations.

The phased project planning process provides that the work content of each of the first three phases is directed toward developing information needed to support the decision to proceed into the next phase.

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first three phases is directed toward developing information needed to support the decision to proceed into the next phase.

NASA and the DOD have been working for more than three years on the preliminary analysis of alternate approaches and concepts, and on the research and technology effort needed to determine whether it is appropriate to develop reusable vehicles that will substantially reduce the cost of operating in space. We have concluded that this is an achievable objective. We are convinced that availability of these vehicles will lead to significant changes in our concepts of operation in the space environment as well as reductions in costs.

Accordingly, we selected contractors on May 12 to proceed into the second or definition phase of detailed study, comparative analysis, and preliminary design directed toward facilitating the choice of a single program approach. These contractor efforts will take place over the next eleven months. However, to assure high flexibility as we proceed, we are continuing with first-phase studies of several alternative approaches.

The steps we are taking now will provide us with more complete information on the very significant questions you and others are asking. We will decide at the conclusion of this phase whether it is appropriate to settle on a single design or continue competitive approaches. We will be able then to take into account technical assessments and opinions throughout NASA, as well as those of other experts in industry, universities, and other government agencies. We can determine then whether the criteria described in the RFP comprise the most feasible and realistic system, all factors considered.

Similarly, these detailed definition studies will permit us to gain a thorough understanding of service life, frequently of utilization, and what is involved when we consider such matters as Air Force requirements. These detailed results will in turn supply the Department of Defense with the information it will need to determine how it will utilize the shuttle and what organizational, logistics, and financial support it should provide.

One objective of the space shuttle is economy based on broad and flexible utilization of this transportation system. The system will have the capability for a wide variety of future missions including logistic support of manned orbiting systems, delivery of unmanned payloads to orbit, recovery and return or on-orbit repair of satellites, and performance of independent short duration manned missions. We believe that the vehicle design will provide an inherent capability to meet additional applications which will materialize as we acquire experience in this type of space operation. Therefore, the problem of early "dead-ending" should not be experienced in the shuttle program.

This brings us to your third group of questions. Again I wish to emphasize that all of these matters are being pursued vigorously as we enter the definition phase. Alternate approaches are being considered. Formal reviews will be conducted every two or three months. Use of existing hardware and facilities will be fully considered along with the cost and impact of additional facilities, should they be required. Integrated plans were developed in support of the Space Task Group activity during 1969. These plans are being re-examined and updated with consideration of alternatives in the phasing of major program elements consistent with realistic consideration of the budget aspects of the transition from current systems to the space shuttle, space station, and other advanced systems in future years.

Finally, the plan to move toward reusability is based on studies that show the resulting savings will more than repay the cost of development. The economies of reusability

ity will occur in both the vehicle and payload areas. Necessarily, these studies are based in part on assumptions. No one can predict all of the variable factors with certainty for a time period eight to ten years from now. But my associates and I are convinced we are at the very beginning of the utilization of space and space technology for the benefit of men on earth. We believe that these estimates are quite conservative, and that when the shuttle becomes available the traffic to and from earth orbit will increase rapidly. We expect that presently contemplated applications will expand sharply and that others not even foreseen at present will be introduced.

The benefits of the space shuttle are not limited to cost reduction. It is my expectation that this new capability will provide a significant contribution to our national security. It will also provide the capability to do things such as space rescue, which cannot now be done. Furthermore, there is reason to expect that the ability to retrieve, repair, and refurbish objects in space will provide additional improvements in the economy and effectiveness of space operations.

Thus I believe it is clear that the responsible course to be taken is to invest now in the study efforts and proceed at an efficient pace in the future toward bringing into operation a system that will permit us to end the practice of discarding vehicles after a single flight. We will continue this work through the Phase B studies currently being initiated. Then at the conclusion of this phase we will reach another checkpoint at which we will be able to review the situation thoroughly.

Therefore, in light of all these considerations, we believe that it was a sound decision to move ahead at this time with Phase B of the space shuttle.

Please call on me if I can be of further assistance.

Sincerely,

T. O. PAINE,
Administrator.

DESIGN

Question 1—Is it appropriate at this point in time to settle on a single design or concept when the risks and costs of the primary or alternate schemes are not clearly known?

Answer—NASA has not settled on a single design. The Phase B study proposals provide a point of departure for defining a reusable shuttle system. They encompass a range of configurations and design approaches. Technical risks and costs implicit in any of these design alternatives will be prime considerations of the study. Concurrent with Phase B, NASA will continue to study alternate approaches.

Question 2—Have divergencies of opinion within NASA as to basic concepts been taken fully into account?

Answer—Yes, NASA has considered many opinions and taken them into account in evolving the Phase B approach. Extensive in-house evaluation of configurations developed in earlier studies were made prior to release of the RFP. Positions from many sources including the NASA MSF centers and research centers and appropriate Air Force agencies have been melded together to establish the approach taken in our Phase B studies where in these positions will be the subject of continued investigations and definition.

Question 3—Can the RFP be challenged as to its genuine substance, depth, and ultimate acceptance as the most feasible and realistic system, all factors considered?

Answer—The RFP was designed to define baseline requirements and a study plan whereby the contractors will consider alternate approaches and conduct extensive tradeoffs to define a feasible and realistic system.

NASA conducted extensive Design Reference Reviews and configuration studies and these together with the Phase A feasibility studies served as the basis for the RFP. The

RFP including the Statement of Work was prepared and reviewed in depth through successive stages by NASA and the Air Force. Consequently, a wide range of expertise was utilized in the preparation and approval of the shuttle RFP.

OPERATIONS

Question 1—Has full consideration been given to Air Force requirements especially to the cross-range capability?

Answer—Yes, Air Force requirements are being given full consideration and especially as regards cross-range.

Under "Study Objectives and Approach" of Phase B Space Shuttle System Statement of Work in-depth study of the cross-range requirement is stipulated as a fundamental objective. The study effort will yield data to evaluate designs of the space shuttle system with the orbiter optimized for a high aerodynamic cross-range of 1500 n.m. and a low aerodynamic cross-range of 200 n.m. NASA will completely evaluate the results of the contractor's two design studies to explore in depth the overall influence of the cross-range performance requirement on the cost, schedule and capability of the space shuttle.

NASA and the Air Force have jointly developed the requirements for a national space transportation system and have developed a policy of mutual participation in such activities as design review, technology programs, preparation of work statements and Source Evaluation Boards.

Question 2—What is the service life of the shuttle and what is the frequency of utilization?

Answer—Based on previous systems and technology studies, a design goal of one hundred reuses of each vehicle has been established. When the shuttle becomes operational, each flight system will be capable of being readied for another mission within a turn-around time of two weeks. Requirements for these design goals will be evaluated during the Phase D studies.

Question 3—What potential military uses exist for the shuttle and at what point in time and under what circumstances will the Air Force assert its role, specify its missions, and provide organizational logistics and financial supports?

Answer—John S. Foster, Jr., Director of Defense Research and Engineering, for DOD stated to the Senate in March of this year that DOD fully supports the Space Shuttle studies in the following testimony.

"Once an economical and operationally effective STS is developed, we would expect to use it to launch essentially all DOD payloads into earth orbit. We hope thereby to reduce DOD launch costs by an order of magnitude. Not only will we economize from the point of view of a reusable launch vehicle, but significant savings can accrue because repair and reuse of payloads will be possible and payloads design criteria would become less stringent. In addition to all of this, we would expect to benefit from the STS technology resulting from NASA's development efforts."

The Air Force and NASA have worked very closely during the past several months to identify their respective missions and associated design requirements. This close working relationship is continuing and the requirements of both agencies are reflected in the Phase B study plan. The National Aeronautics and Space Administration and the Department of the Air Force have signed an agreement which establishes a Space Transportation Policy Board. It is the function of the Policy Board to assure that the Space Transportation System will fulfill the objectives of both agencies by establishing program objectives including operational aspects, technology status and needs, fiscal considerations and interagency relationship.

COST

Question 1—Have all possible approaches been fully considered to minimize cost and risk?

Answer—Preliminary cost analyses of the space shuttle system have been underway for a number of months, but a more comprehensive study must await the time when the data from the Phase B definition studies is available. Under the Phase B studies, cost, performance, and schedule and their associated technical risk will be prime tradeoff factors in all design decisions. This is consistent with the stated program objective: to provide a low-cost, economical space transportation system based on both minimized development and operational costs.

Question 2—What bench marks can be established in the program to assure that the lowest risk design has been chosen and is being developed at optimum cost?

Answer—During the period of performance of Phase B studies for the engines and systems, large scale formal reviews at the end of the third, sixth, eighth and eleventh months will be conducted by NASA to insure that the studies are proceeding in the desired manner. NASA will conduct in-house analyses of the contractors' efforts and will perform an in-depth examination of the Phase B results and a continuing appraisal of potential alternate approaches. In addition, design certification and operational program experience such as that gained in Apollo will enable NASA to insure that the proper system consistent with optimum cost, performance and low risk is carried forward for detailed design and development in later phases.

Question 3—Is existing hardware and facilities directly applicable and usable for the new shuttle being utilized to the maximum extent?

Answer—Several study activities are being initiated which will provide insight as to the capabilities of existing facilities to support the shuttle and to define possible additional facility requirements. The Phase B studies will identify major facility requirements for the shuttle. An independent assessment of all facility requirements will also be made.

Consideration is being given to the possible use of existing facilities for engine evaluations, wind tunnel tests, structural investigations, vacuum chamber simulations and operational planning. Also included is the consideration of existing launch and support facilities at KSC and WTR and the flight test facilities of NASA and the Air Force. At this time, only a limited effort has been initiated on the space shuttle that would require the use of facilities. Since the shuttle configurations are in an evolutionary state at this time it is not possible to make a final commitment on facility requirements.

Question 4—Has NASA prepared integrated plans for various systems with realistic consideration given to reasonable budget aspects during the period?

Answer—Yes, Integrated plans were developed in support of the Space Task Group activity during 1969. During the past year NASA has conducted continuous planning activities to further develop these integrated plans. Several alternative levels of funding were included in the Space Task Group studies. These integrated plans are being reassessed and updated with consideration of alternatives in the phasing of major program elements and development efforts to conform to realistic expectations with respect to annual budget levels.

Question 5—Has consideration been given fully to the cost and impact of additional facilities in new programs and proposals?

Answer—Consideration is being given to the cost and impact of additional facilities should any be necessary.

Space Shuttle facilities requirements will be examined during the Phase B system studies. In addition, NASA has established Facilities Task Group whose function will be to prepare an overall Space Shuttle facilities plan. This plan will reflect recommendations as to the facilities necessary to

support activities identified by the Phase B contractors and by NASA and DOD. Each proposed facility requirement will be evaluated against several factors including the possible utilization of existing facilities. New facilities requirements will be identified. The use of existing resources is not justified. Economic analysis and cost trade-offs will be carefully weighed in each case.

Mr. ALLOTT. In substance, Mr. President, the remarks during the debate on this matter today have been exactly the same as the debate we heard when we had the authorization bill before the Senate. At that time there was offered an amendment to reduce the authorization and to take the space shuttle out of the authorization.

Mr. President, I wish to express, and express very strongly, that this is not a hardening of design. It is anything but that. It shows a very cautious, intelligent, and planned approach to the whole matter.

Another matter of which we have heard again this time is the "monkey argument." We heard the "monkey argument" during the course of the authorization at some length.

It was widely reported in the press that the Soviet cosmonauts suffered serious ill effects from their recent record-breaking flight. These reports have been used by some as a justification to reduce appropriations for our space program.

This argument, Mr. President, has been used again today, the argument being, of course, that because a monkey could not stand 8 days in space, the spacemen could not. We have orbited men 14 days, and the Soviets have orbited them almost 18 days; and while I am prone to say that there is a great deal of difference between a man and a monkey, there might be some who would argue with me.

Mr. HOLLAND. Mr. President, will the Senator yield?

Mr. ALLOTT. I yield.

Mr. HOLLAND. Does the Senator recall that a year or two ago, the Russians began their talk of launching a platform, and that a little after that, they had three satellites up at one time, to show that they could join them and enable transfers back and forth between them, and to show that there is an ability for joining between a spacecraft setup and a platform, if it were there in orbit?

Mr. ALLOTT. I recall that very well, yes.

Mr. HOLLAND. And yet we apparently pay no attention at all to the fact that, from those facts and from the discussions in those months, many months ago, it was quite clear that the Russians were moving toward exactly what we are moving toward, and they showed it even more clearly by this 17-day plus venture in space the other day, attempting to discover what was the biomedical situation.

Mr. ALLOTT. The Senator is entirely correct. I do not know how one could very well interpret those two aspects of the Russian activities in any other way.

I think there are two false assumptions in the argument for the amendment. The first, of course, is that we are talking here about sending men into outer planetary exploration. There is no such purpose in this space shuttle

whatever. It is not intended for that. It is intended for the more economical and expeditious use of our money, for which the very people have been arguing who now offer this amendment.

The second false assumption, I think, is that somehow or other we are planning to keep people in orbit all of their lives, send them up and leave them up there. I do not think anyone has that in mind. I know there is a limitation. I do not know exactly what those limitations are now.

But the amendment, it seems to me, is based upon those two false assumptions. The space shuttle is important, because then men may go up to orbiting laboratories and back without the very great expense which is attendant upon the use of our very heavy boosters, or even our intermediate boosters.

In a recent press conference with respect to the introduction of amendments cutting the NASA budget, it was stated that the reports on the Soviet Soyuz 9 flight were a major factor behind the decision to seek a substantial reduction in space funds.

We now know, Mr. President, that these reports were inaccurate.

A report by the Library of Congress concludes that the Soviets consider the flight a success. The chief designer of the Soyuz spacecraft stated that as a result of the flight:

It is possible to conclude that man can stay and work in space for at least two or three months.

Let me quote further from the Library of Congress Report:

On 23 June TASS issued a statement concerning the health of the cosmonauts which was subject to some unfortunate interpretation. The actual TASS statement reads as follows: "The general condition of the cardiovascular system [of the cosmonauts] is normal, although a certain instability is observed, and this indicates that the process of readaptation of the organism from weightlessness to terrestrial condition has not yet been completed. It is quite possible that it will be expedient to create artificial gravity on spacecraft or orbital stations. In a word, the adaptation of man to conventional conditions [of gravity] after a long journey in space is not so simple after all."

The above statement was interpreted to mean that the cosmonauts were in serious cardiovascular trouble and that is was doubtful whether man could stand spaceflight without artificial gravity. These reports were widely circulated in the press and on the radio in the United States on June 24th. It should be noted that on the 24th TASS issued another statement of a more optimistic nature and retracted the implication that artificial gravity would be necessary. The TASS statement of 24 June indicated that man could stand weightlessness for up to one month.

Since the basic purpose of the flight was biomedical, it is obvious the Soviets would give close attention to the cosmonauts' condition.

It is unfortunate, however, that inaccurate information would be used as justification to curtail our own efforts in space, even though I know that the information was given in good faith.

Mr. PASTORE. Mr. President, will the Senator yield?

Mr. ALLOTT. I yield.

Mr. PASTORE. It has been said here

several times today that these arguments have been made time and time again. My own position, of course, is not on the question of the desirability of the program; it is on the question of where we are going to place our priorities. The only thing I wish to say at this time is this: If it is inflationary, let us say, to provide funds for impacted areas, to keep our children in school and give them the proper kind of an education, the Senator from Rhode Island does not understand the necessity for this program and the pursuance of it at this particular time.

That is the only argument I make. There may be some distant military value to it. I do not dispute that. There might be some scientific value to it. All these programs are very desirable.

But for now, I feel inherently and innately that we have reached the time where we have to properly allocate the money available to us, and I think this is one of the things that can wait.

My reason for rising was that I have been told that there is a possibility of limiting debate on this amendment so that we could come to a vote. I ask the Senator from Colorado whether an hour and a half, with 45 minutes on each side, would do.

Mr. ALLOTT. Mr. President, I would like to say to the distinguished Senator that as far as I am concerned—and, of course, I am doing this at the chairman's request—if I may finish up in 10 minutes at the very maximum, which I think I can, the distinguished junior Senator from Florida has approximately 20 minutes, the Senator from South Carolina (Mr. THURMOND) and the Senator from Nevada (Mr. CANNON) have requested time—

Mr. BYRD of West Virginia. The Senator from Minnesota (Mr. MONDALE) wants 30 minutes.

Mr. ALLOTT. Let us make it 45 minutes on a side.

Mr. PASTORE. Mr. President, I ask unanimous consent that debate on the pending amendment and all amendments thereto be limited to 1½ hours, 45 minutes to the side.

Mr. ALLOTT. Mr. President, reserving the right to object, I ask unanimous consent that the time in opposition to the amendment be controlled by the Senator from Colorado.

Mr. PASTORE. By the Senator from Colorado, and the time of the proponents in behalf of the amendment will be controlled by the Senator from Minnesota, that is correct. The Senator from Rhode Island will be neutral.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and it is so ordered.

Who yields time?

Mr. ALLOTT. I yield myself such time as I shall use.

Mr. President, it has been suggested that NASA should undertake more programs in cooperation with other nations. I believe the record is clear that NASA has pursued international cooperation in a most aggressive manner. This occurred not only under the present Administrator, Mr. Paine, who, incidentally, was an appointee of the pre-

vious administration, but also under Mr. James Webb, who was the former Administrator. There have been cooperative flight projects with other nations; there are such projects as the Helios project with West Germany underway today. I call the attention of my colleagues to part 3 of the hearings of the Senate Space Committee on the fiscal year 1971 NASA authorization which is devoted in its entirety to international space cooperation.

But most important to the space shuttle issue before the Senate today is the fact that NASA has invited participation of the European Space Community in the space shuttle and space station program. Dr. Paine, the Administrator of NASA, met with members of the European Space Community in Paris from June 3 to June 5 to outline the U.S. space station program and invite these nations to evaluate their strength and interests and thereby assess the participation they desire to have in the program.

A similar session is scheduled on the space shuttle program in Bonn, Germany, on July 7 and 8. The NASA team will be headed by Dr. Homer Newell, Associate Administrator of NASA. It is understood that the Europeans are greatly interested in assuming responsibility for selected modules or systems in the space shuttle program.

Mr. MONDALE. Mr. President, will the Senator yield?

Mr. ALLOTT. I yield, on the time of the Senator from Minnesota.

Mr. MONDALE. Have the European countries promised to contribute to this joint project?

Mr. ALLOTT. I do not have that information. It is too early to know. The first meetings were held in June. Another is scheduled on July 7 and 8.

Mr. MONDALE. Is it the impression of the Senator from Colorado that they will contribute substantial amounts of money to this joint project?

Mr. ALLOTT. As I read the report, I do not know that it is based upon that assumption, but, rather, that they would develop and finance certain modules or certain parts of the spacecraft in Europe.

The point is that it is not true that there have not been any efforts made to bring the European community in and they are just now getting in.

Mr. MONDALE. My only point is that I very much suspect that this is going to be the type of space cooperation we have seen before—where the other countries stand back and cooperate and we spend all the money. I was wondering whether this is likely to be the same kind of cooperation.

Mr. ALLOTT. I would not make any projections on that, because, so long as they can get us to spend our money, they will do it, and the Senator knows that.

However, for the Senator's information, just as great efforts have been made to get the cooperation of the Russians in a joint space program; and they obviously feel—contrary to what some people on the floor of the Senate feel—that there is a very close military appli-

cation of this entire program, and they do not get very far with the rest of it.

Here are very active and current efforts on the part of NASA to engage international participation in these forward looking developments. This participation has been recommended on several occasions by those who would cut the NASA appropriation on the basis that our funds could be saved through joint funding. Yet today just when NASA is actively seeking this participation and cooperation, amendments are being proposed to prohibit further study of the space shuttle program in this country or to reduce NASA funding to such a level that it would be virtually impossible to fund such efforts. Mr. President, this is completely inconsistent. It is also, and probably most important, a damaging blow to international cooperation and certainly strains the credibility of the United States as to the seriousness of its overtures to seek a greater degree of international cooperation.

Mr. President, I have heard the argument this afternoon that if this is a military vehicle, it should be over in military. Yet, the same people who so argue have been arguing for years that all these projects should be in one agency of the Government. They are now in one agency of the Government, and this is the way I think we will make the greatest progress.

In conclusion, I should just like to voice one thought: The Senator from Colorado was one of those who called and asked for some very hard studies at the time of the announcement by President Kennedy that we should send a man to the moon in the decade of the 1960's. I do not think that that was given the thought by our scientists that it should have been given, but we have done it. But the fallout of the space program—about which I will talk later—has been so fantastic in almost every field—the electronics field, the metallurgical field, the physics field, even the nuclear physics field, the field of astrophysics, and the medical field—that it is almost impossible for a single individual to understand it. But I will say this. I have watched these appropriations for research for many, many years, and no research program in the United States has provided the dynamic forward thrust and accomplishment that the space program has provided, because without it many of the things that are commonplace today—even including our computers—would not be here if there had not been the necessity for their development. Are we going to stop now and quit our space program? I hope not.

We are not talking about sending a man to Mars. We are not talking about sending a man to Venus. We are talking about orbital laboratories around the earth which will enable us to study, even to a greater extent, for example, spots on the sun, and all the things that can be studied outside the atmosphere of the earth, without the interference of the atmosphere of the earth.

So as we go into the next space age, do we want to leave the 5 years between 1974 and 1979 vacant while the Russians

are developing this technology, or do we want to proceed at this point to try to define under phase B, as I read a few moments ago, the initial stages, so that at least a choice can be made of one of two directions in which the United States may go?

We are at the stage now that we were back in 1960, perhaps, when we were talking about the various forms of structures that might be used to get a man on the moon and retrieve a man from the moon. Now we are talking about the same thing. The big boosters that we have now are the horse and buggies of the future space age. They are expensive, they will continue to be expensive, and they will place a great financial burden upon the resources of this or any other country. There is one way in which that can be cut down, and that is by starting to define now the conceptual design of a space shuttle which, in fact, will take us into the second great era of our space program for which we have had so many benefits in every scientific area of the world.

Mr. GURNEY. Mr. President, will the Senator yield?

Mr. ALLOTT. I yield 20 minutes to the distinguished Senator from Florida.

Mr. GURNEY. Mr. President, I oppose this amendment to cut out the money for the space shuttle for this appropriation bill.

Essentially, what we have here is a replay of the authorization bill some months ago, earlier in the year. The same amendment was offered then, the same arguments were made, and the Senate rejected that, as the distinguished Senator from Florida pointed out, by a margin of almost 2 to 1; and I hope the Senate will reject the amendment again today by a similar margin.

The principal facts for the space shuttle program and also against the proponents of the amendment have been set out ably and in full by the ranking minority member of the subcommittee, as well as my own colleague from Florida, Mr. HOLLAND.

I should like to make some general remarks which will apply not only to the pending amendment but also to some others which are intended to be offered later, to cut out money from the bill.

Mr. President, the committee recommendation for a NASA appropriation of \$3,319,303,000 is the absolute minimum amount necessary to retain the technical team and facilities we must have for an admittedly low key, but viable space program in the next decade.

A reduction of any magnitude will not merely result in further deferrals and delays. It will mean the termination of programs in which we have invested substantial amounts of money, which took years to build. It will mean a reversal of the President's Space Task Force directive for stable, long-range goals in space. If we cut back this amount we will be saying, in effect, that it is no longer a goal of this Nation to maintain its world leadership in technological achievement. We should not do this. We must not do this.

The President's Space Task Group

assigned the job of charting a new course in space for the next decade, one which would be consistent with austere budget goals. The reexamination of future direction in space, which is now being called by the proponents of further cuts, was precisely the job of the Space Task Group. They developed three near- and long-term options based on the current economic climate, and technological capabilities of NASA.

NASA then recommended a budget level to implement the Space Task Group directives—a solid approach to space exploration without the waste pitfalls of a crash program. The NASA request to the Bureau of the Budget, based on the Space Task Group recommendation was \$4.497 billion. The administration, in view of rising inflation, urgent domestic needs, and competing demands, felt it necessary to further reduce this figure to \$3.333 billion. This amounted to a cut of over a billion dollars.

There has been a lot of argument made as to priorities. It seems to me that so far as priorities are concerned, the space program for the past 3 years has been placed in a low priority. If we place it any lower, we will place it out of business.

I point this out to show that NASA has already taken one of the biggest cuts proportionally, of any of the agencies so far this year. Compared to previous years, it is down by billions of dollars. The budget estimate is \$2.5 billion below our 1966 space program. This means that it has been cut by 40 percent—close to half. Comparing it with expenditures in other fields over the last decade—while defense spending has gone up by 73 percent, domestic social programs spending has increased 222 percent—the space program has declined by 40 percent overall—down to almost half of its budget 4 years ago. To accommodate this lower funding, NASA made very substantial reductions in its program. Decisions were made to:

Reduce electronic research and close the Electronics Research Center in Boston, Mass.

Suspend the production of the Saturn V launch vehicle following vehicle No. 15. Defer the launch of Skylab I, America's first experimental space station, by 4 months to late 1972.

Delay the Apollo 18 and 19 lunar landing missions from 1972 to 1974.

Delay the unmanned Viking Mars landing flight from 1973 to 1975.

Delay two advanced technology satellite missions incorporating direct broadcasting and other experiments, by 1 year, from 1972 and 1974 to 1973 and 1975.

Terminate the NASA sustaining university program.

The committee is to be commended for its recommendations to keep the appropriation amount in the research and development and construction of facility areas, on the level of the budget estimate. I was encouraged by the fact that the Appropriation Committee restored the \$106 million in research and development taken out by the House appropriation.

The amount recommended for research and development however, is still \$300 million under the authorization and almost \$500 million under the 1970 ap-

propriation. A further reduction by the Senate in this already austere budget of any amount whatever will not mean that NASA will have to just tighten its belt—it will mean crippling key programs and the loss of irreplaceable personnel.

In my judgment, NASA simply cannot take further reductions. When the House cut \$106 million in research and development, it was done with the idea that the reduction could be accommodated by reducing the number of lunar landing missions during fiscal year 1971 from two to one.

The Deputy Administrator of NASA, Dr. George M. Low, has stated that this assumption is not borne out by the facts. Dr. Low said on May 11, 1970, that the maximum fiscal year 1971 cost reductions resulting from such a deferral are estimated to be from \$10 to \$20 million. Moreover, the House NASA oversight study recently reported that:

A launch rate of less than two manned vehicles per year would materially increase the risk of mission failure in space flight.

According to Dr. Low, the \$106 million, to say nothing of a larger cut, would require NASA to examine all of its research and development programs with a view toward further delays and terminations.

It is inconceivable to me that we could even consider a course of action which surely means slowly abandoning the continued leadership in space we enjoy today. Reducing this budget by \$110 million—to say nothing of the 20 percent cut—\$600 million—advocated by my colleagues, will mean just that.

The question has been raised as to whether to delete the research funds for a space shuttle. This has been suggested by some of my distinguished colleagues, and would constitute a crucial turning point for the U.S. space program. I suggest that it would constitute a decision to end our manned space flight capability after 1974. Based on our presented manned space flight program, we face a gap from 1975 to 1977. If the shuttle money is taken out of this budget now, the gap will be stretched to 3 and to possibly 5 years.

The space station/shuttle money is for research and design only. It is not even hardware money. It does not commit us to a Mars mission or to great future expenditures. Its whole purpose is just the opposite—to reduce costs through a reusable shuttle which can return men, cargo, and equipment back to earth, thereby producing economies in every aspect of space operations. It is being designed to enable us to continue a viable space exploration program at perhaps half the amount it has cost in the past to put payloads into earth orbit. It will also be available on short notice for Department of Defense use should that need ever arise.

Mr. President, we know the concept of a shuttle station has been studied in many countries in the last decade. Now that the technology is available, we cannot afford to throw away this opportunity to take the initiative and carry out an orderly program.

Dr. Paine, NASA Administrator, in testimony before the Senate space committee recently said:

Space astronomy has come into being at an exciting time when astronomers are wrestling with some of the most puzzling problems ever turned up in man's investigation of the universe. Huge radio galaxies, quasars, pulsars, and numerous X-ray sources are still unexplained. Some of these objects emit energies at unbelievable and prodigious rates, suggesting that we may be witnessing new, powerful modes of energy production, different from those we have known in the past. Recalling that our present day knowledge of nuclear energy stemmed from inquiries into how the sun produced its radiant energy, we can speculate that today's space astronomy may eventually also yield results of tremendous technical importance. Satellites provide the means for making observations in the radio, infrared, ultra violet, X-ray, and gamma-ray-wave-lengths that cannot penetrate the earth's atmosphere to the ground so space astronomy is giving astronomers powerful new tools for investigating these challenging new questions.

I can candidly admit that many of us, as laymen, do not understand quasars and pulsars and the like—I cannot adequately explain them or their theoretical basis. But, on expert testimony, we know they are important and have implications which are far reaching. It is not difficult to speculate that the experimental conditions offered by a space station has the potential of leading to discoveries equal in magnitude to the breakthrough in our knowledge of atomic energy.

The leadtime for carrying out the development and putting into operation a space shuttle program is 7 to 10 years.

There is no question in my mind that the Soviet Union is pushing hard right now to put a manned earth-resources satellite into orbit in the next few years. They devote a good deal more of their national budget to space than we do. We cannot risk being confronted, once again, with a major Russian victory which may give its developer effective control of space.

When the Sputnik went up years ago, I remind my colleagues, it was the greatest propaganda defeat, in the eyes of the world, that this Nation ever suffered. It took us a decade to regain our position. A stop-start operation, which is what we are proposing by these further cuts in NASA's budget, necessarily involves the risk that at some future time we will have to produce another crash program, at a much greater expense.

I cannot emphasize strongly enough that any amount of reduction in this already austere budget will have serious consequences on our future space capabilities. As a result of the precipitous decline in funds since 1966, we are already witnessing the dismantling of the superb aerospace industry—the Government-academic team which it has taken years to build and which would take years to build again. We are closing some of our finest laboratories and contractor-operated facilities and others are rapidly phasing down. While these slowdowns are causing serious economic problems in the area affected, even more important is the consideration of the longrun loss to the Nation.

As I have said in the past, I think that it is our duty and responsibility in Congress to reorder our national priorities. We are on that road and it is good that

we are. We have very often paid too much attention to the nostrums and catchwords of the past, while at the same time neglecting clear, pressing, and immediate needs that have arisen in the intervening years. The point I would make here is that NASA is not reactionary or backward looking. NASA is the wave of the future and we have it in our power to make our already substantial investment pay off in great dividends, not only for our own country but for humanity as a whole.

We all know many of the hard and tangible benefits that have sprung from the space program. The 50,000 gulf coast residents know that without NASA and its weather satellite detection and tracking, they might have lost their lives during Hurricane Camille.

We know the potential space photography has for monitoring water resources, agricultural activity, and assisting in our fight against pollution and our search for new resources.

We have begun to understand through our study of atmospheric dynamics the tremendous changes on earth has caused in the earth's fragile atmosphere. We can now measure these changes and potentially this understanding can be a powerful tool in environment control and in preserving a livable planet.

The global communications satellite network, that is a direct product of our space effort, is akin to a nervous system of humankind and civilized society—linking the nations of the world and filling a vital need.

The catalog of benefits directly attributable to our space progress is long. It is still growing. The potential for future spin-offs, byproducts, advances and benefits really cannot be estimated.

I think we could devote hours to recounting the dividends in any one of these fields: In medicine, in transportation or communications, in weather predictions, in computer technology, in oceanography; pollution control, the management of our environment, in education, in pure science.

If we call a halt to space exploration now, we have no idea what benefits we may be overlooking or bypassing, postponing or neglecting.

Let us not do that: Let us go on and continue to build on the base we have so laboriously and systematically—and yes, expensively—developed.

Quite apart from the direct and obvious byproducts of our space progress, we should not forget that the program has made a major contribution to our economy. It is a productive program and the investment we have made has multiplied and benefited the whole national economy. It has, over the last decade, cost us, in dollar investments, less than one-half of 1 percent of our gross national product but that investment has directly resulted in increasing the gross national product.

Economists estimate that approximately 50 percent of the real growth in the gross national product in the last decade can be attributed to the stimulus of new technological knowledge from research and development investments. Twenty-five percent of the Nation's total expenditures on research and develop-

ment was carried out under our space program.

In the past, scientific and technological development has resulted, more often than not, from wartime competition—and at a horrible price. I suggest that in our time we have made a major effort to reverse that grisly picture. As President Eisenhower said at the beginning of the space age, space offers an opportunity for peaceful and hopefully friendly competition between the United States and the Soviet Union. The space race has stimulated advances in pure and applied science and related fields between our two countries which has benefited both, without the terror or misery of war. We have no way of precisely measuring the effect of this competition on the relations between the United States and the U.S.S.R. but I think we must recognize that in general terms, the competition has been good and it has helped promote the thaw we all want to see.

All of our intelligence indicates that the Soviets are pushing hard to develop a space station and to regain their lost advantage. As a matter of fact, of course, the most recent Soviet flight that went for 18 days must be directly in the thrust of the effort that the space station and the sky lab we are going to develop, and the space shuttle that is going to serve, it is going to. And certainly this is not the time for us to ponder and to cut out a program that the Soviets are pushing ahead on with full speed.

The Soviets know, perhaps better than we, the impact our spectacular successes in space have had on world opinion—and how their prestige as a leader in science and technology suffered thereby. We have the advantage—the momentum and opportunity now. It would be cruel and thoughtless and irresponsible to dissipate that lead at this time—not because we are unable to maintain it, but because we are unwilling to spend the comparatively small amount of money necessary to carry to a logical fruition that which has already been begun. In the long run, in my view, such a course will operate to our national disadvantage. In the long run, it will be false economy. It is shortsighted in the extreme. To fritter away our space program now is unrealistic and unwise, in my judgment. The budget before us is an austere and reasonable one that will allow us to realize a profit on the past investment.

I would certainly urge my colleagues to resist further cuts, the cut now pending before us in the matter of the space shuttle as well as others that may come after the pending amendment is dealt with.

The cuts in the already austere budget would bring us perilously close to crippling this fine and valuable program for all time.

In summary, I suppose one could really put it in this fashion, that if the pending amendment is agreed to and the space shuttle is cut out of the budget, we might just as well wipe out manned space flight in the years ahead. We would have lost our advantage whereas our competition, of course, will go on with full speed ahead in this very effort.

If the day comes when we cannot match our competition in manned space

flight and we take a back seat and second place in this all important research and development, engineering and scientific and technological venture, then I would say that this Nation would be in second place in a lot of other areas.

Mr. President, I urge my colleagues to reject the pending amendment and any other effort to cut the budget which is already dangerously austere.

The PRESIDING OFFICER. Who yields time?

Mr. ALLOTT. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. ALLOTT. Mr. President, how much time remains?

The PRESIDING OFFICER. The Senator from Colorado has 18 minutes remaining. The Senator from Minnesota has 43 minutes remaining.

Mr. ALLOTT. Mr. President, I yield 3 minutes to the distinguished Senator from Oregon.

The PRESIDING OFFICER. (Mr. DOLE). The Senator from Oregon is recognized for 3 minutes.

Mr. HATFIELD. Mr. President, during my tenure as a member of the Committee on Aeronautical and Space Sciences I have frequently questioned the cost of the Apollo program along with all other space expenditures. My questions have reflected the views of the public with whom I have had contact—their excitement and pride in the Nation's space achievements, but also the large expenditures necessitated by our commitment to the space program.

The question of expenditures is a very real one, and therefore, I was greatly impressed by the NASA presentation on technology transfer before the committee earlier this year. This data on benefits from the space program accruing to all mankind to help solve some of the problems on earth has been printed under the title space program benefits. I commend this document to my colleagues for their study.

Mr. President, I might add that I am having copies of this particular document sent to all libraries in my State of Oregon in order that there may be a broader public understanding of such benefits that accrue to us from space research.

Also during the committee review of the Apollo 13 mission, I asked Astronaut Lovell for his opinion on benefits accruing from the space program. He stated that in his travels throughout the United States he has found the stimulus to young people to pursue an education as one of the specific benefits resulting from the space program. This, I believe, is particularly important to a country that has a responsibility for world leadership.

It is on the basis of these more tangible factors that I urge my colleagues to support the NASA appropriation as reported to the Senate by the Subcommittee on Independent Offices.

The PRESIDING OFFICER. (Mr. DOLE). The Senator from Colorado has 15 minutes remaining.

Mr. ALLOTT. Mr. President, I yield 10 minutes to the Senator from Nevada.

The PRESIDING OFFICER. The Senator from Nevada is recognized.

Mr. CANNON. Mr. President, the junior Senator from Minnesota has proposed an amendment to cut \$110 million from NASA's budget for the space shuttle-space station.

From his statement, I understand that the Senator's main objection is that this money represents the start of a new phase in our Nation's efforts in space, and that this authorization will bind us to a \$14 billion commitment. Unfortunately, the Senator relied too heavily on information from outside sources and much of it is erroneous.

It is important to realize that the money for the space shuttle-space station is only to study these concepts. NASA stated before the appropriate congressional committees that this money was necessary to determine whether a shuttle was technically and economically feasible. Before the Space Committee, in response to close questioning by the senior Senator from Maine, NASA witnesses stated that NASA does not have approval to proceed with the development of either a space station or shuttle.

The Senator from Minnesota states that there should be studies to compare the operation of a shuttle with existing expendable boosters, and that the technical problems that still exist should be resolved before development of a shuttle is initiated, yet his amendment is designed to eliminate the means to fund the study he suggests and to resolve the problems he cites. He would delete the money that is needed to follow his suggestions.

But aside from that, what would the Senator's amendment do?

For a long time now, people have been asking for a greater return on our investment in space, and we have pointed with pride to our weather and communications satellites. Now we are on the verge of developing a totally new system that can place into orbit and return to earth men, spacecraft, experiments, and so forth, at considerably less cost than existing launch vehicles. The space station will be there expressly to develop earth applications.

This shuttle/station will give us the ability to operate in space; to repair the communications or scientific satellite that fails; to examine interesting events in space; to deliver and return film from the earth resources satellites; to manufacture in the space environment; to learn the effect of space on healing; to study the stars.

Let me say, Mr. President, that we hear a lot from those not too well informed about manned and unmanned spacecraft on the promise that unmanned spacecraft are cheaper than manned spacecraft. That artificial division is about to disappear. The space shuttle will be used to put automated spacecraft as well as all men into earth orbit because the shuttle gives every promise of being a cheaper way to get the automated spacecraft into orbit. Since it will be able to do the job cheaper, it is envisioned that all the NASA and Air Force boosters between the Scout and the Saturn V would disappear and their jobs taken over by the shuttle.

It is as foolish to retreat from the next era in space as it would have been to have built the railroad track across the continent and then not have funded the locomotives to take advantage of that track, or to have backed away from the jet aircraft for commercial use when we were doing alright with slower, less productive propeller aircraft.

Mr. President, we are in the space age. As John Kennedy said:

Man, in his quest for knowledge and progress is determined and cannot be deterred. The exploration of space will go ahead, whether we join it or not, and it is one of the great adventures of all time, and no nation which expects to be the leader of other nations can expect to stay behind in this race for space.

If we are to maintain our place in the world, Mr. President, we must study with care the next major step, so to understand clearly where the future in space lies. This money for the space shuttle-space station will make that study.

I urge the defeat of the amendment.

ORDER OF BUSINESS

Mr. ALLOTT. Mr. President, I ask unanimous consent that I may yield to the Senator from Rhode Island (Mr. PELL) for a conference report, the time to be taken out of neither side.

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

NATIONAL COMMISSION ON LIBERTIES AND INFORMATION SCIENCE—CONFERENCE REPORT

Mr. PELL. Mr. President, I submit a report of the committee of conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 1519) to establish a National Commission on Liberties and Information Services, and for other purposes. I ask unanimous consent for the present consideration of the report.

The PRESIDING OFFICER. The report will be read for the information of the Senate.

The legislative clerk read the report.

(For conference report, see House proceedings of June 24, 1970, pp. H5991-H5992, CONGRESSIONAL RECORD.)

The PRESIDING OFFICER. Is there objection to the present consideration of the report?

There being no objection, the Senate proceeded to consider the report.

Mr. PELL. Mr. President, the conferees appointed by the Senate and the House met in committee of conference on S. 1519, the National Commission on Libraries and Information Science Act and have resolved all differences between the two versions of the bill. Of the 10 differences to be resolved, three were of major importance. The other seven differences did not indicate a real difference of position between the two Houses and their resolution created no problem. Therefore, in reporting on the conference, I will confine my remarks to the three major differences.

The Senate bill established the Commission on Libraries and Information

Science within the Office of the Secretary of Health, Education, and Welfare, while the House amendment established the Commission as an independent agency in the executive branch of the Government. The Senate recedes.

The Senate bill authorized the Commission to accept contributions of money and to disburse such contributions for the purposes of the Commission, while the House amendment did not. The House recedes.

Both the Senate bill and the House amendment authorized an appropriation of \$500,000 for fiscal year 1970. The Senate limited the appropriation in the following fiscal years to \$750,000 each year. The House amendment placed no ceiling on appropriations for fiscal years after fiscal year 1970. The conference report adopts this provision of the Senate bill.

As chairman of the conferees on the part of the Senate, I am satisfied that the bill is the best which could have been brought out of conference. All members of the committee of conference signed the report. I recommend its adoption. I move that the Senate adopt the report of the committee of conference on S. 1519.

Mr. YARBOROUGH. Mr. President, before us is the conference report on S. 1519, a bill I introduced for the purpose of creating a National Commission on Libraries and Information Science.

I urge upon the Senate the approval of the report. It will bring to fruition a recommendation that originated in 1966 with President Johnson, when he established by Executive order a National Advisory Commission on Libraries. Its mission was to study the role of libraries in education, and how they should be financed. The Commission report called for a continuous surveillance of library contributions and needs by a permanent Commission.

The bill carries out that recommendation.

Among the findings of financial need which the Presidential Commission reported was a lump sum of \$1.6 billion to stock all school libraries optimally. Construction costs of public school libraries were estimated at \$2.145 billion, and for general public libraries at \$1.132 billion over a span of a decade.

Academic library costs are also large: \$360 million is needed for construction and nearly \$10 billion for books and materials over a 10-year period.

Clearly, the task of analyzing needs, focusing attention, and organizing efforts to support libraries is a long-term one. A sustained effort, unflagging enthusiasm, and professional background in the library field are needed to carry it out.

As provided in the conference report, the Commission will study library and informational needs and the means by which those needs may be met. It will advise Federal, State, local, and private agencies on library matters and develop plans for meeting national and local needs.

The Commission will submit reports to the President and to Congress.

The major difference between the

House and Senate was over its administrative status. The Senate bill put the Commission into the Department of Health, Education, and Welfare; the House bill made it independent. I made the motion in conference that the Senate recede and accept the House view that it be independent.

Mr. President, books are not just for boys and girls. They are for students of every age and every walk of life and in every profession and occupation. President Kennedy reminded us that the doors to the library lead to the richest treasures of our open society: to the power of knowledge; to training and skills; to the wisdom, ideals, and culture which enrich life.

S. 1519 will help open those doors to every American.

The PRESIDING OFFICER. The question is on agreeing to the conference report.

The report was agreed to.

INDEPENDENT OFFICES AND DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT APPROPRIATIONS, 1971

The Senate resumed the consideration of the bill (H.R. 17548) making appropriations for sundry independent executive bureaus, boards, commissions, corporations, agencies, offices, and the Department of Housing and Urban Development for the fiscal year ending June 30, 1971, and for other purposes.

Mr. JACKSON. Mr. President, my able colleague from the State of Washington (Mr. MAGNUSON), is necessarily absent today, but he has prepared a statement that he asked me to insert in the RECORD. As the immediate past chairman of the Appropriations Subcommittee for Independent Offices, and as a member of the Aeronautical and Space Sciences Committee, Senator MAGNUSON's views are worthy of the Senate's attention.

Senator MAGNUSON is opposed to a reduction in the budget of the National Aeronautics and Space Administration—NASA—and if he were here today he would vote to keep the recommendations of the Appropriations Committee intact.

I would like to call the attention of the Senate particularly to Senator MAGNUSON's statement that—

The space station is the next logical step in outer space and the space shuttle is the only logical step in cutting space costs. These programs may never be completed, if the research and development prove them to be unwarranted. But we can and we must give the space station/space shuttle concept a chance. It holds the promise, not only of cutting the cost of space exploration, but of dramatically increasing our knowledge of our planet, our solar system, and our universe. We cannot and we must not ignore the opportunity to obtain that knowledge.

Mr. President, I ask unanimous consent that Senator MAGNUSON's statement be inserted in the RECORD at this point.

There being no objection, the statement by Senator MAGNUSON was ordered to be printed in the RECORD, as follows:

Mr. MAGNUSON. Mr. President, the remarks I have to make today are virtually the same as those I made when the Senate considered these same issues on May 6. At that time,

we were debating an amendment to the authorization bill for NASA; today we are debating amendments to NASA's appropriation for the coming fiscal year.

The amendments today are of two basic types: first, an amendment to limit funds for the space station/space shuttle program, and second, amendments to reduce NASA's funds in general. While I fully agree with the sponsors of these amendments that economy in space is needed, and while I subscribe to the view that our Federal spending priorities must be reordered, I believe that the Senate should reject each of these amendments.

Mr. President, the terrifying adventure of Apollo 13 forced us to think about outer space and man's place in it with an intensity reminiscent of the launch of Sputnik, the first manned flight, or the first landing on the lunar surface. The Apollo 13 mission also emphasized how oriented we are in our thinking to particular missions, particular successes and crisis, and how little public discussion we have devoted to the long-term questions of our space program and its purposes. That the space program has a future beyond the moon—and that man will benefit from that future—has largely been obscured or forgotten.

The pending amendments provide us with an opportunity and a responsibility to consider man's future in outer space. For many years we have heard cries for economy in outer space, cries that have been answered by a continual reduction in the budget of NASA, and cries that have been answered in the reduction in number of planned space missions. As the immediate past chairman of the appropriations subcommittee responsible for NASA's budget, I know that these calls for economy have also been answered by intense scrutiny of NASA's programs.

The current controversy over the space station/space shuttle programs, for example, comes at a time when many millions of Americans are questioning our role in space, the cost of that role, and the importance of that role relative to other pressing domestic needs. Unfortunately, too, the controversy arises during the aftermath of the Apollo 13 mission—a major failure that has added immensely to the number of critics of the space program. It would be tragic, however, if the Apollo 13 mission were used by critics of the space program to transform reasonable calls for economy into unreasonable demands for a fundamental retrenchment in outer space.

I think it is healthy and important to consider and to discuss fully the issues of priorities and of man's role in outer space. But I think it would be most harmful to the quality of that discussion to permit ourselves to be swayed by the emotion that the Apollo 13 mission has created. The space station/space shuttle issue—and in fact the whole NASA appropriation—can and should be looked at in the light of hard facts, not emotion, and I would like to present some of those facts today in connection with the pending amendments.

First, we must realize that the funds we appropriate this year for the space station/space shuttle project do not constitute a commitment to a multi-billion dollar new program. Rather, they are simply funds for advanced research and development of the space station/space shuttle concept—research and development that must be undertaken before we can make an intelligent and rational decision on whether to go ahead with production of these vehicles and outer space facilities. We are not, with these funds, abdicating responsibility for that production decision—indeed, we cannot avoid having to make that decision in future years. Congressional control over spending lies in continual review, annual decisions, and the retention of control over ultimate production decisions. Such control does not lie in

giving a "green light" to such an expensive program, once and for all, at such an early stage in the program's development.

The funds we provide this year should bring the space station/space shuttle program to the point where we can make an intelligent decision in the future. By providing these funds, let me emphasize again, we are not making a final production decision. By not providing these funds, however, we would be making a premature decision not to go ahead with this program. Let us permit the research and development to continue until we reach that production decision point; let us not cancel this program in our haste to come to a premature decision about the program's merits.

Second, to cancel the space station/space shuttle program at this point would not be economical—rather, it would be false economy in the purest sense of the phrase. The program—particularly the space shuttle aspect—is an economy effort, an effort to lower the cost of space exploration by developing reusable space vehicles. Today it costs us almost \$1000 per pound for every object we loft into space; tomorrow, with the aid of the reusable space shuttle, we may cut these costs by 90%. In other words, for the same dollar expenditure the space shuttle will allow us to put almost ten times as many missions into space; the scientific benefits of more missions, explorations, and manned flights will be achieved with dramatically lower costs. Imagine how much more we would know about the moon and the origins of our own planet, for example, if for the price of our past four Apollo missions we could have provided dozens or even scores of such missions.

I would emphasize additionally that the Senate has already taken a major economy step by reducing the House authorization for these programs by nearly \$140 million. The \$110 million remaining for the space station/space shuttle is, in the judgment of both the Aeronautical and Space Sciences Committee and the Appropriations Committee, a sufficient amount to proceed with the research and development of this program.

The space station is the next logical step in outer space and the space shuttle is the only logical step in cutting space costs. These programs may never be completed, if the research and development prove them to be unwarranted. But we can and we must give the space station/space shuttle concept a chance. It holds the promise, not only of cutting the cost of space exploration, but of dramatically increasing our knowledge of our planet, our solar system, and our universe. We cannot and we must not ignore the opportunity to obtain that knowledge.

With respect to those amendments seeking to cut NASA's funds, let me say that in our justified haste to divert funds to meet our growing domestic needs, we should not lose sight of where federal money is really being spent. The NASA budget is conspicuous, but it amounts to roughly 5 per cent of the amount we devote to military spending. The real "domestic surplus" will come from making needed cuts in our military budget, and through the elimination of costly and unnecessary new weapons systems. The \$110 million for the space station/space shuttle program this year is less than one per cent of what we will have to pay for an unproven and potentially obsolete ABM, for example. It represents a small fraction of the money we have wasted in our unsuccessful attempt to develop a new Main Battle Tank. It is less than 20% of what we have been spending every year to develop murderous and unnecessary chemical and biological warfare agents.

My point is simply this. Just because the military budget has proven difficult to cut does not mean we should diminish our efforts to cut it; just because NASA is vulnerable and its budget easy to cut does not

mean we should eliminate vital NASA programs whose cost is almost insignificant in comparison to the billions that go annually to the Defense Department.

Let us realize that man is in space to stay. The benefits of space exploration are largely unknown, but they may prove to be incalculable. The space program not only provides peaceful employment, peaceful applications of scientific knowledge, and peaceful commercial "spin-offs" to the entire nation—it also represents, in further contrast to our military spending, a peaceful and healthy form of competition and national mission in the United States and in the world as a whole. Someday, we all hope, it will provide the basis for peaceful cooperation between this nation and the Soviet Union, and undoubtedly it will aid us in our efforts to save the ecology of this planet.

Mr. MONDALE. I might say to the distinguished Senator from Colorado that it is not my intention to use the full time, and I would be guided by the plans of the manager of the bill.

Mr. ALLOTT. I had promised to yield to the Senator from South Carolina.

I yield 8 minutes to the Senator from South Carolina.

Mr. THURMOND. Mr. President, I emphatically oppose any amendment which would cripple the efforts of NASA to maintain the U.S. position of leadership in the exploration of space.

This is not the time to cut funds for this vital program. If we reduce the NASA program and the Soviets achieve a technological breakthrough in space for military purposes, then our Nation is in great jeopardy, especially in view of the growing Soviet threat.

Mr. President, the Soviets are exploring space for a military advantage. They are working feverishly on their space laboratory. It would be disastrous for our Nation to permit the Soviets to forge ahead in both space and nuclear weapons which they are attempting to accomplish.

Mr. President, aside from the needs of the Nation's security, there are many peaceful benefits to mankind which will result and are resulting from the NASA program. Scientists know that space exploration holds many promises for the peaceful benefits of all nations.

If we would relate the Nation to the body of man we would see that 200 universities throughout the country which worked on fundamental problems for NASA, 2,100 doctorates funded by NASA, improved curricula in science and mathematics throughout our school system, and 34 new scientific laboratories and research facilities on college campuses have certainly improved the educational level of the United States.

In addition, NASA and its contractors have all supplied extensive in-house as well as outside training for their personnel. It is probably safer to estimate that of the half million people who have worked on the space program at one time or another over the past 12 years, at least half of them, or a quarter of a million people, have learned new skills which were essential to meet the challenges of the space adventure. Especially in the southeast, at Marshall Space Flight Center and at Cape Kennedy, a large part of the available labor force were formerly either subsistence farmers or technologi-

cally untrained. The efforts of NASA and its contractors to employ indigenous workers and supply training rather than to import labor have resulted in the employment and training of large numbers of minority groups.

Mr. President, scientific results are already abundantly evident, even though the "time lag" between scientific discovery and application is traditionally very long. Our first satellite discovered the existence of the Van Allen radiation belt beyond the earth. Other such phenomena have been discovered.

Meteorology has been revolutionized by earth orbiting satellites, and weather forecasting and the gains from the greater precision of that art have been enormous.

Astronomy, according to Stanford Research, has become almost a new science within the last decade. It would be reasonable to say that as much has been learned in the past decade as astronomers learned in the previous 2,000 years. But the application of this new knowledge will take time.

Mr. President, one area in which all the rules were broken regarding "time lag," however, was in communications. Almost as fast as it could be built, the first Comsat was in operation, revolutionizing worldwide communications. This is the first major commercial result of the space program, followed closely by its companion, Intelsat.

New metals and alloys were developed which are essential for the extreme requirements in space. There is greater understanding of metal strength and of stress and other forms of corrosion. These problems are still under intensive study by NASA and other laboratories.

Mr. President, medicine, biology, psychology, physiology all taught much to the interdisciplinary teams which prepared our astronauts for their journeys into space and to the moon. NASA has contributed masses of information about the behavior of well men in stressful and unusual conditions.

All of the earth sciences have been revitalized as man finally saw the earth as a whole. Agronomy, geodesy, cartography, oceanography, hydrology—in all of these it is as if the age-old barriers to knowledge have been removed and searchers are at last able to explore without hindrance as they examine the earth from the vantage point of space.

Mr. President, while education and science are essential parts of the national body, we know that within a capitalistic society, nothing is more important than economic health and growth. And in this industrialized civilization, the leading technological nation is consequently the nation most secure in its economic growth. New technology is the seed from which grow the new industries, new products and new jobs which account for the growth and prosperity of the people, and the country. No peaceful object in the history of the world has ever produced even a fraction of the new products, materials, systems, and techniques that continue to flow from the space program.

Paper which will not burn and metals which will not burst—glass that bends

and will not break and films strong enough to carry a man but weigh only a few ounces, are only a few of the hundreds of new materials which have emanated from the demands of space. Thousands of new products have already found their way into our daily lives, and the number increases as the "time lag" is dissipated.

Mr. President, the total results of the expedition into space will really not be measurable within this century—any more than the impact of the discovery of America was measurable by the end of the 15th century. It will not be measurable in numbers of things which have been produced, or even in the amount of new knowledge which has been acquired—but rather, I believe it will manifest itself most significantly in the changes of mankind, all barriers to our free movement throughout our solar system have been removed. Our horizons are the edges of the Universe. Nothing now constrains us from the improvement of life on earth for all mankind.

The PRESIDING OFFICER. Who yields time? The Senator from Minnesota has 43 minutes remaining. The Senator from Colorado has 3 minutes remaining.

Mr. MONDALE. Mr. President, I will ask the Senator from Colorado what the time plans are for the opponents of the amendment.

Mr. ALLOTT. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. ALLOTT. How much time remains?

The PRESIDING OFFICER. The Senator from Colorado has 3 minutes remaining; the Senator from Minnesota has 43 minutes remaining.

Mr. ALLOTT. We have used most of our time. I shall be glad to have the Senator from Minnesota proceed to use some of his time.

Mr. MONDALE. Mr. President, I propose to use only a few moments, and then I shall be prepared to yield back my time.

The comments by the Senator from South Carolina are instructive. I think further analysis is necessary. For example, how many of these useful spin-offs from the space program have been derived from unmanned instrumented flights and how many of them that are of direct use to the people of our country and to mankind have resulted from manned flights?

I think an analysis will show that the overwhelming amount of useful information available for navigation or international communication—knowledge of the Van Allen Belt, for example—have been derived as a result of unmanned instrumented flights—that part of the space program which, by all odds, has been the least expensive and concerning which there is no risk to human life; and that part of the space program which the knowledgeable scientists of this country—those who are not employed by the Space Agency or space industry—think is being starved by the present allocations of the space budget. These scientists believe that unmanned flights will be increasingly starved and will be al-

located a disproportionately smaller percentage of the space budget under the present bias of the Space Agency.

The space program now is dominated by the manned flight lobby and the manned flight industry. Many of the key scientists in the space agency have resigned, and many highly experienced scientists, such as Dr. Van Allen, Dr. Adey, Dr. Gold, and others, are convinced of the biased attitude in the present space program. It is this bias that is being reflected in the pellmell rush to have this shuttle station program even before it is established that such a program is physiologically possible.

The Biosatellite III program, which was NASA's best effort to determine long duration flight problems, resulted in a dead monkey. Now we are told it was because the monkey had a low IQ. Well, it seems to me that before spending several million dollars on that program, we might have administered the Minnesota multiphasic test, or some equivalent, to that poor monkey before we killed him.

Soyuz-9 sent two Russian cosmonauts into orbit. They lasted 18 days; they came down; and they had physiological problems, which have reinforced the fears of many of our scientists—including Dr. Adey and others—about the biomedical problems inherent in long-duration space flight.

We are spending in excess of \$1 billion on a Skylab program—to be completed in 1973—to determine whether what we are attempting to design is even possible, or whether it has to be designed to meet technical problems about which we know little. Yet NASA says, "Go on, let us spend \$110 million for a program which may or may not be useful, or may or may not be possible, because we may get some value out of that program."

We are told that the Defense Department is interested in this program. First of all, NASA is a civilian agency. The organic act setting up NASA, I think, clearly states, or implies, that it is for the purpose of achieving civilian related space objectives. If the shuttle station has a Defense objective, I think it is for the Defense Department to come in and argue for a budget to support this project. They have not done that. Moreover, they canceled their only program akin to the shuttle station—the MOL—because the rest of their budget was more important; and even though, in the past, the Defense Department and the space agency have both contributed funds to joint efforts, in this case the Defense Department is so unimpressed that it refuses to give so much as a penny to the shuttle station program. They have offered feeble verbal support. They have offered to share in any dividends which come out of the experimentation which has cost them nothing; but they offer no money.

I think that shows how highly the Defense Department values the space shuttle station program for its purposes.

Second, it has been suggested that this program offers such rich possibilities of international cooperation that we should be willing to spend the estimated \$14 billion—or double that amount with possible overruns—on this program in

order to offer this chance for the countries of the world to gather together in an exciting international effort.

Since this is such an exciting possibility, the question is how much do other countries wish to contribute to bring mankind together around a space shuttle?

The answer is that we do not know. I strongly suspect—as in the case of our previous space cooperation efforts—that the full tab or most of the tab will rest upon Uncle Sam, at a time when we could very well use the \$14 billion plus for projects and efforts here at home which so desperately cry out for solution.

The next argument is that we will save money with a reusable space shuttle. That is a most interesting mathematical calculation. At this time, we do not know what a space shuttle will ultimately cost to develop. We do not know how much it will haul. We know very little about it. But we have a calculation, nevertheless, that it will save money. I have yet to hear how much a space shuttle will ultimately cost, or how much a space station will ultimately cost. The distinguished chairman of the House subcommittee, Mr. KARTH—who is recognized as one of the strong proponents of the space programs, and one of NASA's strong allies—came out against this space shuttle station program because he said it would be a waste of money. He and six other members of the House Space Committee were opposed to it on many grounds—including the tremendous waste of money involved—and they asked that there be a cost-benefit study to determine the cost of the program, and whether it would be cost-effective.

No such study has been made—instead, there has been merely a repetition of the assertion that for \$14 billion, we are going to save some money on this space shuttle station program.

Finally we are asked to proceed with a program which assumes man's capacity to function effectively in long-duration flights. Earlier in this debate, I placed in the RECORD three letters, one from Dr. Adey, the director of the space biology laboratory at the University of California; another from Dr. Van Allen, one of the most distinguished space scientists in the world; and another from Dr. Gold of Cornell University.

These three distinguished scientists all raised serious doubts about the physiological capacity of man for long duration space flight. They also raised questions about the value of this program and about the relative importance of unmanned instrumented flight over manned flight—which is the key decision inherent in the decision to go ahead.

With these highly recognized and distinguished scientists speaking so strongly against this program, and with only those who have something to gain—that is, the space agency and the space industry—arguing so strongly for it, without even knowing whether it is physiologically possible to do what we propose to do, surely we can wait a few years to determine whether these hundreds of millions of dollars should be spent.

It seems to me that if the word "priority" means anything to any of us we

should delete this \$110 million. If we believe that the Federal budget should be allocated differently—to provide more hope for our young people, with better education and better opportunity, better housing, and with an effort to do something about our environment—both the air and the water; we should not embark upon this costly project. If our domestic problems which involve a cost of hundreds of billions of dollars are to be responded to with an appropriate application of Federal support, surely it is in areas such as these where the cuts must come. This is the truth of the issue of priorities.

This is not vague Fourth of July oratory about spending our money more wisely. It is a key test. These are the kinds of key tests which will determine whether we are the kind of nation we know we should be—spending our money and our resources on those matters that are most important to bringing hope and opportunity to millions of Americans, and doing something about saving the very environment upon which our life depends.

If we find that these things are less important than a space shuttle and a space station and the \$50 to \$100 billion that a manned flight to Mars will cost, then I think we are going to be hard put when we talk to our constituents about the future of this country and what we think is important. If we cannot win this kind of fight, then what is the hope for that revision of priorities?

The PRESIDING OFFICER. Who yields time?

Mr. ALLOTT. Mr. President, I yield myself 1 minute. A matter has just come over the ticker from Cape Kennedy beginning "Paine notes the United States has been involved in more than 250 space agreements with 80 nations." I ask unanimous consent that the text of this news item be printed in the RECORD at this point.

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

Paine notes the United States has been involved in more than 250 space agreements with 80 nations. These include launching foreign satellites on U.S. rockets, placing experiments of other nations on American spacecraft, sharing Moon rocks with scientists of other lands and use of foreign ground stations for tracking and receipt of data from communications, weather and other types of satellites.

"By pooling the resources of many of these countries, we can work on larger projects with greater promise of return to all nations," the administrator said in an interview. "It would create a new capability for man to explore and utilize space."

"The United States is going to build the space station and the space shuttle," he said. "But I would like to see this project carried out as an international laboratory in space. If it's truly going to be a cooperative project, other nations should pick up part of the cost as well as provide the kinds of talent which they have available."

He said many countries could share in the practical benefits of a space station, such as communications, weather observation, survey of Earth's resources, and engineering, medical and scientific research.

Mr. ALLOTT. Mr. President, I am prepared to yield back the remainder of my time, if the Senator is prepared to yield

many great and substantial contributions, but we have to balance expenditures and find some way by means of which we can bring about a balance between the different areas which all cry out for attention but for which there is only a certain amount of money available.

I thank the distinguished Senator from Pennsylvania for making his well thought out and pertinent remarks.

ORDER OF BUSINESS

The ACTING PRESIDENT pro tempore. Is there further morning business? Mr. MANSFIELD. Mr. President, I suggest the absence of a quorum.

The ACTING PRESIDENT pro tempore. The clerk will call the roll.

The bill clerk proceeded to call the roll. Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

COMMUNICATIONS FROM EXECUTIVE DEPARTMENTS, ETC.

The ACTING PRESIDENT pro tempore (Mr. ALLEN) laid before the Senate the following letters, which were referred as indicated:

REPORT OF U.S. GOVERNMENT COMPTROLLER FOR GUAM

A letter from the Assistant Secretary of the Interior, transmitting, pursuant to law, the initial annual report of the U.S. Government Comptroller for Guam for the fiscal year ended June 30, 1969 (with an accompanying report); to the Committee on Interior and Insular Affairs.

RECOMMENDATIONS ADOPTED BY A GENERAL CONFERENCE OF THE UNITED NATIONS EDUCATIONAL, SCIENTIFIC, AND CULTURAL ORGANIZATION

A letter from the Assistant Secretary for Congressional Relations, Department of State, transmitting, pursuant to law, recommendations adopted by a General Conference of the United Nations Educational, Scientific, and Cultural Organization, held in Paris on November 19, 1968 (with accompanying papers); to the Committee on Interior and Insular Affairs.

PETITION

A petition was laid before the Senate and referred as indicated:

By the ACTING PRESIDENT pro tempore (Mr. ALLEN):

A resolution adopted by the Grand Lodge of Ancient, Free and Accepted Masons of Oregon, Forest Grove, Oreg., relating to prisoners of war; to the Committee on Foreign Relations.

ENROLLED BILLS AND JOINT RESOLUTION SIGNED

The ACTING PRESIDENT pro tempore (Mr. ALLEN) announced that on today, July 8, 1970, he signed the following enrolled bills and joint resolution, which had previously been signed by the Speaker of the House of Representatives:

S. 1455. An act to amend section 8c(A) of the Agricultural Adjustment Act to pro-

vide for marketing orders for apples produced in Colorado, Utah, New Mexico, Illinois, and Ohio;

S. 1519. An act to establish a National Commission on Libraries and Information Science, and for other purposes;

S. 3564. An act to amend the Federal Youth Corrections Act (18 U.S.C. 5005 et seq.) to permit examiners to conduct interviews with youth offenders;

S. 3592. An act to amend the Federal Meat Inspection Act, as amended, to clarify the provisions relating to custom slaughtering operations;

S. 3598. An act to amend section 32(e) of title III of the Bankhead-Jones Farm Tenant Act, as amended, to authorize the Secretary of Agriculture to furnish financial assistance in carrying out plans for works of improvement for land conservation and utilization, and for other purposes; and

S.J. Res. 201. Joint resolution to extend the reporting date of the National Commission on Consumer Finance.

REPORTS OF COMMITTEES

The following reports of committees were submitted:

By Mr. BURDICK, from the Committee on Interior and Insular Affairs, with amendments:

S. 2808. A bill to authorize the Secretary of the Interior to construct, operate, and maintain the Minot extension of the Garrison diversion unit of the Missouri River Basin project in North Dakota, and for other purposes (Rept. No. 91-1005).

By Mr. HOLLINGS, from the Committee on Commerce, without amendment:

S. 2293. A bill to amend the National Sea Grant College and Program Act of 1966 in order to extend the authorizations for the purposes of such act (Rept. No. 91-1007); and

S. 3617. A bill to amend the Marine Resources and Engineering Development Act of 1966 to continue the National Council on Marine Resources and Engineering Development (Rept. No. 91-1008).

By Mr. MONTROYA, from the Committee on Appropriations, with amendments:

H.R. 16915. An act making appropriations for the legislative branch for the fiscal year ending June 30, 1971, and for other purposes (Rept. No. 91-1009).

AUTHORIZATION OF APPROPRIATIONS FOR THE CIVIL RIGHTS COMMISSION—REPORT OF A COMMITTEE—INDIVIDUAL AND ADDITIONAL VIEWS (S. REPT. NO. 91-1006)

Mr. HART. Mr. President, from the Committee on the Judiciary, I report favorably, with an amendment, the bill (S. 2455) to authorize appropriations for the Civil Rights Commission, and for other purposes, and I submit a report thereon. I ask unanimous consent that the report be printed, together with the individual views of the Senator from Arkansas (Mr. McCLELLAN), and the additional views of Senators HART, KENNEDY, BAYH, BURDICK, TYDINGS, FONG, SCOTT, COOK, MATHIAS, and GRIFFIN.

The PRESIDING OFFICER (Mr. GOLDWATER). The report will be received and the bill will be placed on the calendar; and, without objection, the report will be printed, as requested by the Senator from Michigan.

BILLS INTRODUCED

Bills were introduced, read the first time and, by unanimous consent, the second time, and referred as follows:

By Mr. MONDALE (for himself and Mr. HART):

S. 4067. A bill to amend title V of the Housing Act of 1949; to the Committee on Banking and Currency.

(The remarks of Mr. MONDALE when he introduced the bill appear later in the RECORD under the appropriate heading.)

By Mr. HATFIELD:

S. 4068. A bill for the relief of Josefa V. Aquino; to the Committee on the Judiciary.

By Mr. THURMOND:

S. 4069. A bill for the relief of Haviv Schieber; to the Committee on the Judiciary.

S. 4067—INTRODUCTION OF A BILL TO AMEND TITLE V OF THE HOUSING ACT OF 1949

MIGRANT AND SEASONAL FARMWORKER HOUSING AMENDMENTS OF 1970

Mr. MONDALE. Mr. President, on behalf of myself and my distinguished colleague, the Senator from Michigan (Mr. HART), I introduce for appropriate reference a bill to amend the Housing Act of 1949 by providing for increased housing opportunities for migrant and seasonal farmworkers.

This country tolerates some tragic inconsistencies. One of them is the terrible living conditions of 1,000,000 migrant and seasonal farmworkers and their families. These are the workers who notwithstanding the vagaries of weather and the hardships of migrant life, plant, cultivate, and harvest the abundance of food that all of us depend upon. They are among the most poorly housed of any working group in the United States today.

Traditionally farmworkers have been provided shelter by their employer, the farmer. While in most situations the housing provided to year-round workers on small family farms is adequate, it has become increasingly clear that most farmers no longer have the economic resources to provide decent housing for their migrant and seasonal workers who are employed for only short periods of the year.

Senator HART is particularly aware of the housing crisis facing seasonal workers in Michigan agriculture, for Michigan employed more migrant workers than any other user State in the Nation. I am pleased that he has joined with me in submitting this bill.

The history of this housing problem must be considered to fully understand the need for immediate enactment of this bill. In 1961, the Federal Government took steps to assist the farmer, organizations of farmers, nonprofit groups, and States and their subdivisions in providing housing for farmworkers by making available insured loans at a rate of interest of 5 percent. In 1965, the Federal Government took further steps by making available grants for up to two-thirds of the development cost of housing projects for farmworkers. Those grants were to go to States and their subdivisions and to broad-based nonprofit organizations. Both of these programs are administered

Senate

WEDNESDAY, JULY 8, 1970

The Senate met at 10 a.m., and was called to order by Hon. JAMES B. ALLEN, a Senator from the State of Alabama.

The Chaplain, the Reverend Edward L. R. Elson, D.D., offered the following prayer:

Eternal Father, in this reverent morning moment, may this place be to us not only a chamber for work but a holy of holies for the heart and a sanctuary for the soul. Aware of the magnitude of the enterprise committed to us here and sensitive to the vastness of the issues, make us more aware of the sufficiency of Thy grace and wisdom and love.

Give us now, O Lord, the clean hands, the pure hearts, and the holy incentives which qualify us to serve the Republic. Link us to great minds and spirits of the past and to the unfulfilled vision of youth in the present. Make our work as sacred as our prayer. Guide us through this day in glad service and with inner peace.

In the name of the Lord of Life. Amen.

DESIGNATION OF ACTING PRESIDENT PRO TEMPORE

The PRESIDING OFFICER. The clerk will please read a communication to the Senate from the President pro tempore of the Senate (Mr. RUSSELL).

The legislative clerk read the following letter:

U.S. SENATE,
PRESIDENT PRO TEMPORE,
Washington, D.C., July 8, 1970.

To the Senate:

Being temporarily absent from the Senate, I appoint Hon. JAMES B. ALLEN, a Senator from the State of Alabama, to perform the duties of the Chair during my absence.

RICHARD B. RUSSELL,
President pro tempore.

Mr. ALLEN thereupon took the chair as Acting President pro tempore.

THE JOURNAL

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the reading of the Journal of the proceedings of Tuesday, July 7, 1970, be dispensed with.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

LIMITATION ON STATEMENTS DURING ROUTINE MORNING BUSINESS

Mr. MANSFIELD. Mr. President, I ask unanimous consent to limit statements to 3 minutes in relation to routine morning business.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

COMMITTEE MEETINGS DURING SENATE SESSION

Mr. MANSFIELD. Mr. President, I ask unanimous consent that all committees

be authorized to meet during the session of the Senate today.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

RECOGNITION OF SENATOR TALMADGE TOMORROW

Mr. MANSFIELD. Mr. President, the joint leadership is unable to determine at this moment the time of meeting for the Senate tomorrow. We will arrive at a joint decision later, but I ask unanimous consent now that following the disposition of the Journal on tomorrow, the distinguished Senator from Georgia (Mr. TALMADGE) be recognized for not to exceed 30 minutes.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

PROGRAM

Mr. SCOTT. Mr. President, will the distinguished majority leader yield?

Mr. MANSFIELD. I am delighted to yield to the Republican leader.

Mr. SCOTT. Would the Senator kindly summarize the order of business today and tomorrow, so that it may appear in the RECORD.

Mr. MANSFIELD. Yes; if I could ask the distinguished chairman of the committee in charge of the bill which will become the pending business, how long he anticipates it will take to dispose of the Agriculture appropriation bill today.

Mr. HOLLAND. So far as the handlers of the legislation are concerned, it will not take very long.

As the distinguished leaders know, we cannot tell what amendments may be offered, nor what suggestions may be made by other Senators, but I do not anticipate any long fight. The bill was unanimously reported by the Appropriations Committee.

Mr. SCOTT. In the past, there have been amendments offered by the distinguished senior Senator from Delaware and I suppose they may be again, but I do not know of any lengthy proceedings involved here.

Mr. MANSFIELD. The Senator from Utah (Mr. BENNETT) will have an amendment. The Senator from South Dakota (Mr. MCGOVERN) will have an amendment. There may be one or two others but, hopefully, we can finish the bill today.

If so, then we would turn to either S. 3302, the bill to amend the Defense Production Act of 1950, to which there will be a number of amendments offered, or the Mathias resolution, which is Senate Concurrent Resolution 64, the so-called repeal of the Gulf of Tonkin resolution.

Mr. SCOTT. Did we not dispose of that once before?

Mr. MANSFIELD. Yes, after a fashion, but with the unanimity we had behind that repeal, we thought we would drive two nails into the coffin instead of one.

Mr. SCOTT. I have no objection. Drive in four or five nails if the Senator wishes.

Mr. MANSFIELD. Two will be enough.

Then the joint resolution dealing with additional expenditures for the United Nations—Senate Joint Resolution 173—plus the two Utah bills having to do with recreation areas—S. 26 and S. 27—and the bill on certain land claims of Alaskan natives—S. 1830. This will go into next week, of course, and it is anticipated that in the first part of next week we will have the legislative appropriations bill—H.R. 16915—ready for debate and disposal.

Mr. SCOTT. I notice in the press that someone, in testifying before a committee in the other body, was complaining that not enough is being done for science and research.

I think it should be noted in the Senate that yesterday we passed the very important NASA appropriation bill, and that we did provide virtually what was asked for by the administration for essential research to continue the ongoing character of the program.

Mr. MANSFIELD. It is my hope that under section 203, which was discussed at some length yesterday, there will be a smooth transition in research and development from the Department of Defense to the National Science Foundation and other agencies charged with responsibility in the basic areas of that category, and that they would not be penalized in the meantime but would continue to be given the consideration which Congress as a whole has indicated it would like them to receive.

Mr. SCOTT. I think it should be stressed one more time, when people ask what we get out of the space program, that aside from the direct purposes of the program, there is a printed document available to anyone who wishes to send for it which recites literally hundreds of fallout benefits from a program of this kind, in the fields of medicine, physics, and chemistry. I was particularly interested to notice that in mathematics, for example, there is one fallout alone which makes it possible to determine much more rapidly than ever before certain mathematical problems relating to the determination of the square root.

This may not sound terribly important, but in a scientific age such as ours, any shortcuts found in mathematical formulas are translated into direct and positive benefits to all of mankind as we proceed with the development of scientific knowledge, so that there are many, many benefits to be derived from this program that do not appear on the face of it.

I thank the Senator from Montana for his information.

Mr. MANSFIELD. I am sure that what the Senator says is correct. I know it is correct. But what we are trying to achieve is a balance between the various programs. The space program has made

by the Farmers Home Administration within the Department of Agriculture pursuant to sections 514 and 516 of the Housing Act of 1949, as amended.

These two programs have been terribly disappointing to those of us interested in seeing that every farmworker, no matter where he is working, has a decent and sanitary place to live. To date, these programs have obligated only \$28 million, or about 45 percent of what the Farmers Home Administration was authorized to obligate. The money has provided new or improved housing units only for about 4,000 families and 3,000 individual workers. This amount just scratches the surface of what is believed to be the total need of the 1,000,000 migrant and seasonal farmworkers and their families.

Perhaps one reason that the Federal programs for migrant and seasonal farmworkers have not effectively alleviated the problem is that a different approach is necessary. Presently, the initiative for new projects comes from the local level from people who do not necessarily have a direct interest in seeing that farmworkers are provided with decent housing. Because of the transient nature of the work, the workers themselves often are not permanent residents. Once they have left, there is little sustained initiative for improving the housing crisis.

Several immediate steps can be taken to partially remedy this situation, although a whole new approach may be needed. We therefore offer the following changes which would amend the present legislation to make it more workable. These changes are not offered as a panacea, but only as a temporary measure to meet the present crisis until a more comprehensive plan can be implemented.

First, the ultimate beneficiaries of legislation the purpose of which is to improve farm labor housing—the farmworkers themselves—are excluded as a group from receiving funds under the present legislation. Yet no other group has a more direct interest in having decent housing than these farmworkers. Therefore, we recommend in this bill that nonprofit organizations of farmworkers be added to the list of applicants eligible to receive loans and grants for constructing or repairing low-rent housing to be owned by the organizations.

Second, we recommend that grants be made for amounts of up to 90 percent of the total development cost of any project. Currently the legislation provides for grants of two-thirds of the development costs. The sad truth of the present program is that only 16 organizations have received grants and only five of them have received grants in excess of 50 percent of the development costs. The grant program was ostensibly passed in order to reduce the size of the loan that would have to be paid from rental income from the project. Grants of 50 to 66 percent of development costs often do not allow projects to charge rents within the reach of farmworkers. Income from the rents are needed to pay for the operation and maintenance of the project and to pay back loans required for the balance of the development costs. Higher grants are

especially necessary in those areas where farm labor housing is needed for only part of the year.

Third, it should be made clear to the Farmers Home Administration that it is Congress intent that grants be made to broad-based, nonprofit organizations. The present legislation authorizes the Farmers Home Administration to make grants to such organizations as well as to State and local public bodies, yet the Farmers Home Administration has recently decided that only public bodies will be considered eligible for grants. In many areas, particularly rural areas, where farm labor housing is needed, public bodies such as Public Housing Authorities do not exist or are insensitive to farmworkers' needs. The exemption of broad-based nonprofit organizations greatly reduces the potential of the program. I might add that by broad-based nonprofit organizations, I refer to a membership of not only farmers, businessmen, and leaders of the community, but also farmworkers.

In addition, we recommend that a broad-based, nonprofit organization be allowed to build housing anywhere in the State of its incorporation where a need can be established. Existing administrative regulations require a majority of the directors of such an organization to live within the geographic area of the site of the project and the farms on which the laborers are to work. This latter amendment could create better and more efficient management in the projects and allow them to be strategically placed in areas throughout the State under a comprehensive plan.

Fourth, it is a well-documented fact that the constant migration of farmworkers has a terribly disruptive physical and psychological effect on them, and especially on children. Whenever possible, farm labor housing constructed under present program strengthened by this bill should be suitable for year around living.

This Nation must adopt as an overall policy goal the elimination of the need for migrant farm labor in all its misery as it exists today. At least we should adopt a policy to reduce the oversupply of labor. And an interim goal not beyond reasonable implementation is to reduce the need for the farmworker to travel great distances from his permanent home in search of employment. Adequate housing programs should make a positive contribution to a policy of stabilizing the migrant population and encouraging the development of a local farm labor work force.

Finally, if the housing constructed will be used only for very short periods of the year by workers, the Farmers Home Administration should allow the loan and grant funds to be used to purchase furnishings such as stoves, refrigerators, beds, bedding and furniture. Presently, only those fixtures which become a permanent part of the realty are allowable.

These are all minor steps which will revitalize a program which is drastically needed if this country is to live up to its responsibilities to farmworkers. We can no longer afford to tolerate the sad truth that many of our working people live in

unmitigated squalor. Programs designed to eliminate that squalor must be made to work, and work well. These amendments will assist that effort.

Mr. President, I ask unanimous consent that the bill be printed in the CONGRESSIONAL RECORD in its entirety at the close of my remarks.

The PRESIDING OFFICER (Mr. HUGHES). The bill will be received and appropriately referred; and, without objection, the bill will be printed in the RECORD.

The bill (S. 4067) to amend title V of the Housing Act of 1949, introduced by Mr. MONDALE (for himself and Mr. HART), was received, read twice by its title, referred to the Committee on Banking and Currency, and ordered to be printed in the RECORD, as follows:

S. 4067

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) that part of subsection (a) of section 514 of the Housing Act of 1949 which precedes the first numbered paragraph is amended to read as follows:

"(a) The Secretary is authorized to insure and make commitments to insure loans made by lenders other than the United States to the owner of any farm or any association of farmers for the purpose of providing housing and related facilities for domestic farm labor employed on a farm or farms within the community; or to any State or political subdivision thereof, or any broad-based public or private nonprofit organization incorporated within the State, or any nonprofit organization of farmworkers incorporated within the State for the purpose of providing housing and related facilities for domestic farm labor any place within the State where a need exists. All such loans shall be made in accordance with terms and conditions substantially identical with those specified in section 502, except that—"

(b) Section 514 (f) (1) of such Act is amended by striking out the semicolon and inserting in lieu thereof the following: "and, in the case of housing for migrant labor, household furnishings;"

SEC. 2. Section 516 of the Housing Act of 1949 is amended—

(1) by striking out that part of subsection (a) which precedes the first numbered paragraph and inserting in lieu thereof the following:

"(a) Upon the application of any State or political subdivision thereof, or any broad-based public or private nonprofit organization incorporated within the State, or any nonprofit organization of farmworkers incorporated within the State, the Secretary is authorized to provide financial assistance for the provision of low-rent housing and related facilities (which may be located any place within the State) for domestic farm labor, if he finds that—"

(2) by striking out in paragraph (2) of subsection (a) "one-third" and inserting in lieu thereof "10 per centum";

(3) by inserting after "thereof" in paragraph (3) of subsection (a) the following: ", and, whenever feasible, such housing and facilities shall be durable and suitable for year around occupancy or use"; and

(4) by striking out in subsection (b) "two-thirds" and inserting in lieu thereof "90 per centum".

Mr. HART. Mr. President, I am pleased to cosponsor the Migrant Farmers Housing Amendments submitted by my distinguished colleague from Minnesota, Senator MONDALE, chairman of the Migratory Labor Subcommittee. His elo-

quent statement on the housing needs of migrant and seasonal farm labor testifies to his broad understanding of this problem.

Migrant and seasonal farmworkers have performed a vital role in modern agriculture in Michigan. Each year thousands of farmworkers leave the "home base" areas of Florida and Texas to work in "user States" such as Michigan, and more migrants have come to Michigan than to any other State. These workers, while meeting the crucial harvest needs in Michigan cherries and other fruits and vegetables, are too often subjected to seriously depressed living and working conditions.

The influx of migrants to supplement the local farm labor force creates severe problems in meeting such basic human needs as health, education, sanitation facilities, and particularly housing. Most local, rural communities are not equipped to meet fully these problems.

And regrettably the housing situation apparently is no better in Michigan than it is in Minnesota, or New York, or Delaware, or Ohio, or Oregon. The plain fact is that we do not have adequate numbers of housing units for these seasonal workers who contribute so much to the Nation's abundance of agricultural commodities.

Also, farmers who employ migrant workers have a unique problem in meeting the housing needs of their employees. Unlike other industries which have not been burdened with the responsibility of providing housing, many parts of the agriculture industry have accepted this responsibility. This has placed a great financial burden on the farmers of Michigan. Many are reluctant to build housing and maintain it in good condition since they know that it may be vacant for much of the year. The economic pressures on the agriculture industry in Michigan are similar to those faced nationwide, and farmers must now meet the costs of ever increasing advances in mechanization. Adding to the farmers' economic dilemma is that our housing laws have failed to meet these special problems of farmworkers.

One effort on the Federal level to improve the quality of housing has met with mixed results. Strict Government regulations of housing conditions have been adopted by the U.S. Department of Labor for interstate agricultural workers recruited through its employment security facilities. This program provides that before an agricultural employer may use State employment security agencies in planning for the interstate recruitment of workers, he must first furnish housing that is hygienic and adequate to the climatic conditions of the area of employment; can reasonably accommodate the workers sought; and will not endanger the lives, health, or safety of the workers. The State of Michigan has also adopted strong regulations on migrant housing.

While the increased enforcement activity under these regulations has served the worthy purpose of eliminating units which should not have been occupied in the first place, an increasing number of well-intentioned Michigan farmers are faced with the crisis of not having an

adequate number of units for migrants. And for economic reasons, they have not replaced condemned housing. The migrant and his family are the ones who all too often end up sleeping on the side of the road, in tents or in cars.

I join in submitting this bill today because I am committed to finding solutions to this pressing problem. It is my sincere hope that Federal funds will soon be made available to alleviate the crisis. Economics too frequently prevent the farmer from making adequate and necessary housing available. Similarly, the farmworker does not have the economic resources necessary to assure himself of adequate housing. I join in the introduction of this bill in the hope that it will provide a vehicle for solving this tragic problem. It will relieve the farmer from having the full responsibility of meeting his workers' housing needs. But equally important, it will provide justice and dignity for the farmworker by enabling him to participate in providing housing for himself and his family.

The amendment would:

First. Permit nonprofit organizations of farmworkers to receive loans and grants;

Second. Increase the limit on grants for migrant housing projects from 66 to 90 percent of cost;

Third. Authorize broad-based, nonprofit organizations as well as official public bodies to receive loans and grants;

Fourth. Require that, whenever possible, migrant housing, constructed with Federal funds, be available for year around living; and

Fifth. Permit purchase of kitchen equipment and furniture with program funds.

These changes are needed because:

First. Farm workers, ultimate beneficiaries of the programs, are now excluded from receiving funds.

Second. Rents are used to reimburse loans and pay operating and maintenance costs. Experience has shown that grants of 66 percent often do not allow projects to charge rents within reach of migrant farm workers.

Third. Many rural areas do not have official local bodies such as public housing authorities to apply for and receive loans and grants.

Fourth. Constant migration has serious disruptive physical and psychological effects on workers and their families. Adequate housing programs should make a positive contribution to stabilizing the migrant population and to developing local farm labor work forces.

Fifth. The law now permits loans and grants to be spent only for fixtures which become permanent parts of the units.

ADDITIONAL COSPONSORS OF BILLS

S. 2662

Mr. NELSON. Mr. President, I ask unanimous consent that, at the next printing, the name of the Senator from Michigan (Mr. GRIFFIN) be added as a cosponsor of S. 2662, to amend the act of August 13, 1946, relating to Federal participation in the cost of protecting the shores of the United States, its terri-

ories, and possessions, to include privately owned property.

The PRESIDING OFFICER (Mr. BURDICK). Without objection, it is so ordered.

S. 3562

Mr. HUGHES. Mr. President, I ask unanimous consent that at the next printing the name of the Senator from Vermont (Mr. PROUTY) be added as a cosponsor of S. 3562 to provide a comprehensive Federal program for the prevention and treatment of drug abuse and drug dependence.

The PRESIDING OFFICER (Mr. GOLDWATER). Without objection, it is so ordered.

S. 3752

Mr. PEARSON. Mr. President, I ask unanimous consent that, at the next printing, the name of the Senator from Oregon (Mr. PACKWOOD) be added as a cosponsor of S. 3752, to amend the Fair Packaging and Labeling Act to require the disclosure by retail distributors of unit retail prices of consumer commodities, and for other purposes.

The PRESIDING OFFICER (Mr. HUGHES). Without objection, it is so ordered.

S. 3936

Mr. ERVIN. Mr. President, I ask unanimous consent that at the next printing the names of the Senator from Nevada (Mr. CANNON) and the Senator from Missouri (Mr. EAGLETON) be added as cosponsors of S. 3936.

This bill, the "Speedy Trial Act of 1970," is designed to give effect to the sixth amendment right to a speedy trial for persons charged with offenses against the United States, and to reduce the danger of recidivism by strengthening the supervision over persons released on bail, probation, or parole, and for other purposes.

The PRESIDING OFFICER (Mr. GOLDWATER). Without objection, it is so ordered.

S. 3976

Mr. HART. Mr. President, I ask unanimous consent that, at the next printing, the names of the Senator from Colorado (Mr. ALLOTT), the Senator from Utah (Mr. BENNETT), the Senator from Idaho (Mr. CHURCH), the Senator from Indiana (Mr. HARTKE), the Senator from Hawaii (Mr. INOUE), and the Senator from Washington (Mr. JACKSON) be added as cosponsors of S. 3976, to make it unlawful to interfere in any way with any person's exercise of his constitutional rights of religion, speech, press, assembly, or petition, and to make available injunctive and other relief in Federal district courts in the event of such unlawful interference.

The PRESIDING OFFICER (Mr. GOLDWATER). Without objection, it is so ordered.

S. 4024

Mr. KENNEDY. Mr. President, I ask unanimous consent that, at the next printing, the names of the Senator from California (Mr. CRANSTON) and the Senator from New Mexico (Mr. MONTOYA) be added as cosponsors of S. 4024, to provide special educational services to veterans.

The PRESIDING OFFICER (Mr. GOLDWATER). Without objection, it is so ordered.

tion of funds appropriated to pay judgments in favor of the Snohomish Tribe in Indian Claims docket numbered 125, the Upper Skagit Tribe in Indian Claims Commission docket numbered 92, and the Snoqualmie and Skykomish Tribes in Indian Claims Commission docket numbered 93, and for other purposes."

We recommend that the bill be referred to the appropriate committee for consideration and that it be enacted.

The three awards represent additional payments for lands ceded by the respective tribes under the Point Elliott Treaty of January 22, 1855 (12 Stat. 927), ratified March 8, 1859, which had been concluded with some 22-named tribes or groups "and other allied and subordinate tribes and bands of Indians," located in the Puget Sound area of the then Territory of Washington.

Funds to cover the Snohomish judgment, in the amount of \$136,165.79, were appropriated by the Act of May 29, 1967 (81 Stat. 30, 42), and the funds to cover the Upper Skagit and the Snoqualmie and Skykomish judgments, in the sums of \$385,471.42 and \$257,698.29, respectively, were appropriated by the Act of October 21, 1968 (82 Stat. 1190, 1198). Financial statements on the judgment funds are enclosed. The beneficiaries in each of the three awards have been determined to be the scattered living lineal descendants of members of the respective tribes as they existed in 1855. For the purpose of expediting the disposition of these funds, the three awards have been combined in one legislative proposal, as the nature of the claims and the situation of the tribal groups are similar. The general information presented in this transmittal letter is applicable to all four tribes involved in these awards. Detailed information specifically relating to the respective tribes is provided in the background data report which accompanies this letter.

Under the Point Elliott Treaty, four separate reservations were established for all the treaty participants—Port Madison or Snoqualmie, Perry's or Swinomish, Island of Chahchoo-sen or Lummi, and Tulalip or Snohomish. Many of the Snohomish Indians and a number of the Indians of the other three tribes settled on Tulalip Reservation along with other groups of Indians who participated in the 1855 treaty, and it is where their descendants still live.

The Indians were given an opportunity to obtain land allotments on Tulalip, and 165 Indians were allotted, which included 76 Snohomish, 33 Snoqualmie, 2 Skykomish, and 16 Skagit. There was no indication whether the persons of Skagit blood were Upper Skagit or Lower Skagit. Lower Skagit, a separate tribe, has a claim pending before the Indian Claims Commission.

A number of the Indians who moved to Lummi, Swinomish, and Port Madison received lands on those reservations and have continued to live as members of the respective groups. Through intermarriage and affiliation with other tribal groups, many of them have lost their original tribal identity. An indeterminate number of the treaty Indians have never affiliated with any recognized reservation group and are now widely scattered. It is believed that the majority of them live throughout the Pacific Northwest. Their ancestors chose not to move to the reservations and continued to live in the area where homes had been developed prior to the 1855 treaty. Later, they were given homesteads in fee simple or trust status on the public domain portion of the area occupied by the aboriginal groups. A considerable number of the Western Washington tribes and bands have managed to maintain their identity in some form, either as an organized or unorganized group, banded together for social purposes or to promote business enterprises.

None of the tribes represented in these awards has a reservation which is exclusively

its own. There is a group of Snohomish Indians which identifies itself as the Snohomish Tribe of Indians, a group of Upper Skagit Indians which identifies itself as the Upper Skagit Tribe, and a group of Snoqualmie Indians which identifies itself as the Snoqualmie Tribal Organization. These organizations have not been recognized by the Federal Government as tribal entities. They have, however, been recognized for the purposes of prosecuting their land claims against the United States. There is no presently existing organization known as the Skykomish Tribe but among the present-day Snoqualmie tribal membership there are persons who have Skykomish ancestors.

The individual members of these organizations are considered descendants of members of former tribes, rather than present-day members of successor tribes. These organizations do not represent all of the descendants of the respective tribes. The majority of the members of these organizations are persons who have never affiliated with any reservation group. The organizations have membership requirements, but such matters as degree of blood and proof of ancestry, etc., have not been verified. Persons have been able to register if they paid a fee.

The Upper Skagit organization does not include in its membership individuals whom the group considers belong to the Suiattle group. The Upper Skagits feel that because the Suiattle-Sauk separated from the Upper Skagits at the time claims were filed before the Indian Claims Commission, they have no right to participate in the Upper Skagit award in docket 92. The Commission has found that the aboriginal Suiattle-Sauk can be properly classified as Upper Skagit Indians. Information on the Suiattle-Sauk Band is included in the background data report on the Upper Skagit Tribe.

Some 35 tribal groups of the Western Washington area, including 12 tribes of the Point Elliott Treaty group, are represented in 31 separate dockets which were filed before the Indian Claims Commission on behalf of aboriginal tribes and groups, including 6 dockets by non-treaty groups and 25 dockets by participants in 5 separate treaties. A list of the tribes and groups who filed claims with the Indian Claims Commission is enclosed.

The Indian Claims Commission has completed 16 dockets and the remaining 15 dockets are pending in various stages of litigation. Seven of the pending dockets involve Point Elliott Treaty groups, and 3 dockets are of unorganized tribes. We have no estimate as to when they will be finally settled.

So far, there have been favorable judgments in 11 dockets and 5 dockets have been dismissed. Congress has enacted legislation providing for the disposition of judgment funds from 7 awards. Five tribal organizations, which have been recognized as successors in interest of aboriginal tribes, have participated in judgment funds from 4 awards, while funds from 3 awards are to be distributed per capita to living descendants of members of aboriginal tribes as they existed at treaty times.

The Snohomish and Upper Skagit organizations favor distribution of the judgment funds only to persons not affiliated with any other tribal group, and believe persons of mixed-blood should not be entitled to share in more than one award. The specific recommendations of these organizations are discussed in the socio-economic report which accompanies this letter. The documents presented by these organizations in support of their positions are attached to the socio-economic report. The Snoqualmie organization has not expressed itself to the matter of distribution of the judgment funds. Bureau of Indian Affairs field personnel have met with these groups and have consistently informed them that the awards probably

would go to all descendants without regard to membership.

Many of the Indians of the Northwest area have blood connections with quite a few other Northwest coast tribes. Such multiple blood ties are common within the membership of many Northwest coast tribes. In all probability mixed-bloods of the 4 tribes involved in the 3 awards can trace their ancestry to one or more of the tribes or bands of the Point Elliott Treaty groups, and possibly to other Western Washington tribes whose claims have been settled or are pending before the Commission. They therefore could claim the right to share solely on the basis of descent in more than one award unless limited by legislation.

Previous judgment disposition acts distributing funds on a descendancy basis to Western Washington tribes contained no restrictions limiting persons of mixed-blood to participate in only one award. Entitlement was solely on the basis of descent and included both reservation-affiliated and non-reservation-affiliated Indians, provided they met the eligibility requirements of the authorization act. We do not propose a change in the class of persons who will be entitled to participate in the distribution of the three awards covered by the draft bill.

We recommend that the scattered lineal descendants be named the beneficiaries of the awards in Snohomish docket 125, Upper Skagit in docket 92, and Snoqualmie-Skykomish Tribes in docket 93. For this purpose, the proposed bill authorizes the Secretary of the Interior to prepare separate rolls of all lineal descendants of members of the respective tribes as they existed in 1855 who meet the eligibility requirements set forth in the proposed bill.

Neither the Tulalip Tribes of the Tulalip Reservation nor the Swinomish Indian Tribal Community of the Swinomish Reservation, as now organized in connection with its reservation, will be the beneficiaries of any claims awards. No tribe or band named Tulalip was a party to the 1855 treaty, and no such band or tribe ever existed. Individual members of these organizations who are able to trace their ancestry to the respective tribes as they existed in 1855 will be entitled to share in the judgment funds.

We have considered the possibility of programming the funds, but find it impracticable since, in each instance, we are not dealing with a tribal group but with scattered descendants. Therefore, the proposed bill provides that the Secretary shall distribute per capita shares of living enrollees directly to such enrollees and gives authority to the Secretary to develop procedures for the disposition of the shares of minors and persons under legal disability.

Information is not readily available on the number of persons who will participate in the distribution of each of the funds. However, the Bureau of Indian Affairs estimates the following number of persons will be on the rolls of the respective tribes: Snohomish Tribe, 2,450; Upper Skagit Tribe, including the Suiattle-Sauk Band, 1,000-1,500; Snoqualmie and Skykomish Tribes 1,000-1,500.

The Indians of the Tulalip Reservation are organized under the Indian Reorganization Act of 1934 (48 Stat. 984), and incorporated under the corporate name of "The Tulalip Tribes of the Tulalip Reservation." Their current membership roll, now under preparation, includes the names of 997 persons, 778 of whom are of Snohomish descent. Of the persons shown to be of Snohomish descent, 185 are also shown as possessing the blood of other tribes, including Snoqualmie, Skykomish, and Skagits.

In 1919, Special Allotting Agent Charles Roblin prepared a "Schedule of Unenrolled Indians," listing tribal groups separately. Roblin's lists included the following number of unenrolled Indians of the tribes involved in these awards: Snohomish, 355; Snoqual-

mle 251; Skagit 471 (appears to include Lower Skagits). Roblin also prepared a list of Suiattle Indians in 1916, which contains 129 names.

There is no single roll or record of the respective tribes which might be used to trace ancestry. For those Indians who are affiliated with the four treaty reservations, there are census rolls and allotment records which contain the names of persons of the blood of these tribes who may be enrolled with other tribes, many of whom may have lost their separate tribal identity.

The Office of Management and Budget advised that there is no objection to the submission of this proposed legislation from the standpoint of the Administration's program.

Sincerely yours,

FRED J. RUSSELL,
Under Secretary of the Interior.

S. 4079—INTRODUCTION OF A BILL TO INCREASE THE AUTHORIZATION FOR ANNUAL CONTRIBUTIONS IN LOW RENT PUBLIC HOUSING

Mr. MONDALE. Mr. President, I am introducing a bill to increase the authorization for annual contributions in low-rent public housing for the fiscal year 1970-71 by \$150,000,000. This action is of urgent necessity because the authorizations available to this program are rapidly being exhausted. Unless such an action is taken now, new commitments for the remainder of this fiscal year just begun will come to a virtual end. The new authorization made available on July 1, 1970, has been fully committed, and new contract agreements will have to be frozen for the remainder of this current fiscal year.

The new authorization for public housing which became available on July 1, 1970, will enable the Federal Government to assist approximately 90,000 dwelling units. At the present time, there are pending program reservations for local communities covering some 180,000 to 190,000 units. In addition to these reservations, there are applications pending from local communities for another 250,000 units that have not been processed because of lack of authorization funds. Furthermore, it is anticipated that local communities will apply for an additional 200,000 units during fiscal year 1971.

Mr. President, many local communities throughout the Nation, including many in my home State of Minnesota, have proceeded in good faith to develop plans for badly needed low-income housing. They are being informed that there is not a sufficient authorization for their reservations to be honored, or their applications to be processed. We cannot permit this situation at a time when the housing needs of low-income families are so great.

I would also point out that, over the past few years, the public housing program has demonstrated a greatly expanded capacity to produce housing. Beginning in 1968, public housing production began to increase at an accelerated rate—in fact, in this 1 year, it doubled its production from 37,000 units to 75,000 units. In the fiscal year ending June 30, 1969, over 82,500 public housing units were placed in occupancy. In the fiscal

year just concluded on June 30, 1970, the final count of units completed is expected to reach 93,000. The pipeline of demand from local communities has now reached the point where the public housing program can achieve the goal for fiscal 1971 established in the 10-year housing goals adopted by the Congress in 1968 of 190,000 units. But, the pipeline must be kept moving. It requires an additional authorization for this fiscal year.

The additional authorization which I am proposing of \$150,000,000 would permit the Federal Government to assist an additional 100,000 dwelling units in fiscal 1971. These units, combined with the 90,000 units estimated to be possible under the existing authorization, would permit the 1971 fiscal year's effort to reach 190,000 units—the target for this year under the 10-year housing goals established in 1968.

Mr. President, failure to provide this authorization would have a debilitating effect on public housing—the only program that is providing housing for truly low-income families. A stagnating period of nearly a year without authorization to proceed could set back all of the hard-won momentum achieved in this program since 1968. The pipeline would be halted, and the enthusiasm of local communities would be cooled.

It is also important to note, that this new authority would not destabilize this year's already precarious budget. The new authorizations which I am seeking would simply allow HUD to enter into new contract agreements totaling this amount. The actual expenditure would come in the future and surely not in this fiscal year.

For all of these reasons, I introduce this bill, and ask for its support. Mr. President, I ask unanimous consent that my bill be printed in the Record at this point.

The PRESIDING OFFICER (Mr. SCHWEIKER). The bill will be received and appropriately referred; and, without objection, the bill will be printed in the Record.

The bill (S. 4079) to increase the authorization for annual contributions in aid of low-rent public housing, introduced by Mr. MONDALE, was received, read twice by its title, referred to the Committee on Banking and Currency, and ordered to be printed in the Record, as follows:

S. 4079

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the first sentence of section 10(e) of the United States Housing Act of 1937 is amended by striking out "\$170,000,000 on July 1, 1970" and inserting in lieu thereof "\$320,000,000 on July 1, 1970".

ADDITIONAL COSPONSORS OF BILLS

S. 3418

Mr. YARBOROUGH. Mr. President, I ask unanimous consent that at the next printing the name of the Senator from California (Mr. MURPHY) be added as a cosponsor of S. 3418, to amend the Public Health Service Act to provide for the

making of grants to medical schools and hospitals to assist them in establishing special departments and programs in the field of family practice, and otherwise to encourage and promote the training of medical and paramedical personnel in the field of family medicine.

The PRESIDING OFFICER (Mr. SCHWEIKER). Without objection, it is so ordered.

S. 3724

Mr. MANSFIELD. Mr. President, I ask unanimous consent that, at the next printing, the names of the Senator from Utah (Mr. BENNETT), the Senator from Oregon (Mr. HATFIELD), and the Senator from Kentucky (Mr. COOK) be added as cosponsors of S. 3724 with respect to ammunition recordkeeping. This measure is known as the McGee amendment.

The PRESIDING OFFICER (Mr. SCHWEIKER). Without objection, it is so ordered.

ENROLLED BILL PRESENTED

The Secretary of the Senate reported that on today, July 13, 1970, he presented to the President of the United States the enrolled bill (S. 3430) to amend the Peace Corps Act to authorize additional appropriations, and for other purposes.

OPPORTUNITIES FOR EMPLOYMENT AND TRAINING TO UNEMPLOYED AND UNDERPRIVILEGED PERSONS—AMENDMENTS

AMENDMENTS NOS. 771 AND 772

Mr. CRANSTON. Mr. President, I am submitting for myself, the Senator from Iowa (Mr. HUGHES) and the Senator from Massachusetts (Mr. KENNEDY) two amendments intended to be proposed to S. 3867, a bill to assure opportunities for employment and training to unemployed and underemployed persons, to assist States and local communities in providing needed public services, and for other purposes.

These two amendments are designed to provide a clear role for community action agencies in the conduct of manpower services programs. The second amendment also would provide recourse to the Secretary of Labor for a small governmental unit which felt that the manpower program being conducted in the area under its jurisdiction was not adequate. Mr. President, I ask unanimous consent that the text of these amendments be printed at this point in the Record.

The PRESIDING OFFICER (Mr. SCHWEIKER). The amendments will be received and printed, and appropriately referred; and, without objection, the amendments will be printed in the Record.

The amendments (Nos. 771 and 772) were referred to the Committee on Labor and Public Welfare, as follows:

AMENDMENT 771

On page 25, between lines 20 and 21, insert the following new paragraph:

"(4) appropriate arrangements with community action agencies, and, to the extent appropriate, with other community-based organizations serving the poverty community, for their participation in the conduct

eliminate discount points. We are well aware that discount points are a cash burden. But points are the leakage in the present system and there is no assurance that whatever the mortgage rate, the points will be eliminated. On the basis of recent concrete experience, we have found that the discount points receded somewhat, only temporarily, and then returned, despite the sharply rising trend of mortgage rates from one new high plateau to another.

Moreover, higher interest rates have added substantially to the costs of construction and even more greatly to the monthly occupancy costs of the home owner and renter. In addition, higher interest rates have added to the cost of the interest rate subsidy in the government's housing programs and have reduced the total number of units that can be realized at any given level of government expenditure. As a result, home building has dropped.

CHAPTER II—LAND

The recommendation on the dual uses of property, though soundly conceived is extremely vaguely stated. Also, it concentrates too much on the central city and does not identify dispersal of population as the more desirable goal. In addition, more emphasis should be placed on the impact of exclusionary local manipulations of zoning and the remedies needed.

CHAPTER III—MODERN TECHNOLOGY AND THE PROVISION OF LOW-COST HOUSING

I believe that the system of off-site certification is essential to the progress of the housing industry. It should be noted, however, that the guidelines governing this system do not make any reference to the need for consumer protection or for the protection of the public interest.

In a free economy, the competitive advantage of one technology against another should be determined by competition.

It is not proper for the government to intervene to tip the competitive balance in favor of a particular system of technology. The economic power of conventional home builders, who have a stake in the housing industry and an immediate concern in the consumer they are serving, is no match for

the economic power of corporate giants who have no experience and no history of interest in the housing industry. Yet, given the advantages offered by the "Operation Breakthrough," the conventional homebuilder can, no doubt, produce as cheaply and with higher consumer acceptance than most of the large corporate finalists in the "Operation Breakthrough" contest.

As Dr. Heinz Umrath, the distinguished European trade union housing expert, has pointed out, the recent experience in the Netherlands show that the conventional residential construction industry there when faced with the threat of industrialization, streamlined its procedures and organized them so well that factories can no longer compete with conventional construction.

These considerations should be viewed in the light of the fact that there has been no opposition on the part of the building trades unions to the use of modular units, prefabrication or of other aspects of technological innovation in residential construction. As a matter of fact, a large number of projects utilizing prefabrication and modular construction has been sponsored by building trades unions in recent years.

CHAPTER VII—INCOME MAINTENANCE

I cannot endorse the Administration's family assistance proposals. While they would extend some assistance to some poor people who now receive no aid, I cannot support the sub-poverty level of payments the Administration has recommended.

Nor can I support the view implicit in the Task Force recommendation (30), on page 15, that simply augmenting the income of the poor will enable them to obtain acceptable housing in the market. An increase in the purchasing power of the low-income people would not, by itself, increase the supply of housing available to them. It will merely bid up the cost of the inadequate supply. A very large increase in the supply of good housing on terms bringing such housing within the economic reach of low-income families is essential to the solution of the housing problem and should be strongly recommended by the Task Force.

housing programs do not adequately serve this single population. By and large the programs are primarily designed to assist families and the elderly or handicapped. Although some assistance is available to non-elderly, it cannot meet the rising demand for housing among this group.

The needs of this population group has become particularly obvious in areas designated for public clearance such as urban renewal areas. As renewal activities begin, municipal officials, who are responsible for relocating the displaced residents cannot find suitable units in sufficient number for the single population. Existing housing programs are deficient in providing for this group and do not adequately meet relocation needs.

The Committee is recommending that legislation be enacted to provide financial assistance through the Rent Supplement and Section 236 programs for the construction of housing for single persons. Such housing would be dormitory-type rental housing with maximum feasible use made of common baths, community kitchens, common dining areas and other shared facilities such as community recreation rooms, workshops or health facilities. It was felt that this physical design would meet the needs of a single person most economically and efficiently. Furthermore, the Committee agrees that competent and responsive housing management with such a diverse and complex tenantry, is essential for the success of a project. Therefore the management fees should be integrated wherever possible, in the allowable project cases.

I think it is a matter of simple equity. It is not a matter that requires extensive hearings. I think all Senators, if they have not already done so, can get testimony from their own communities of the need for this. I have. I have been on the site. I have heard the housing officials and the local officials talk about how they wished they had the option to provide some kind of housing for poor individuals who do not qualify as being over 62 or disabled, but who qualify very definitely in their desperate need. They are excluded now.

I hope the amendment of the Senator from Texas will be defeated.

Mr. TOWER. Mr. President, I yield myself 1 minute.

Mr. President, to my knowledge, I do not think that there were any hearings on this subject, and, as the distinguished chairman of the committee has already indicated, if my amendment is sustained, we will make this a matter for subsequent hearings, and then we can look into the problem to determine to what extent we should legislate on it.

Right now, I would be very loath and reluctant to use up part of the funds provided to benefit poor families and low income families under section 236, the rent supplement, and public housing, when we know the pipelines are already clogged with requests, and we have more applicants than we can service with existing funding. I think it would be tragic for us not to put the emphasis on families first.

Mr. President, I am prepared to yield back the remainder of the time.

Mr. GOODELL. Mr. President, will the Senator from Alabama yield me 1 minute?

Mr. SPARKMAN. I yield 1 minute to the Senator from New York.

Mr. GOODELL. I express my appreciation to the Senator from Texas and

the Senator from Alabama for their assurances that they would give this matter consideration. There is a provision of this nature in the House bill, and there have been hearings on it. Witnesses testified before our committee on the need for this type of legislation.

It is not a complicated thing. It is not as though we were changing any significant or complex sections of the law, and do not know what the impact will be. It is very clear. The impact is that the local communities have a very serious problem housing single individuals, widows, and widowers not over 62, and should have some provision in the housing programs to take care of them.

I would hope we will not wait for a year or two to attempt to meet the problems of this particular group.

Mr. SPARKMAN. Mr. President, I yield back the remainder of my time.

Mr. TOWER. I yield back the remainder of my time.

The PRESIDING OFFICER (Mr. MATHIAS). All time having been yielded back, the question is on agreeing to the amendment of the Senator from Texas (Mr. TOWER).

Mr. GOODELL. I ask for the yeas and nays.

The yeas and nays were ordered.

The PRESIDING OFFICER. On this question, the yeas and nays have been ordered, and the clerk will call the roll.

The legislative clerk called the roll.

Mr. BYRD of West Virginia. I announce that the Senator from New Mexico (Mr. ANDERSON), the Senator from Indiana (Mr. BAYH), the Senator from Missouri (Mr. EAGLETON), the Senator from Mississippi (Mr. EASTLAND), the Senator from North Carolina (Mr. ERVIN), the Senator from Tennessee (Mr. GORE), the Senator from Alaska (Mr. GRAVEL), the Senator from Indiana (Mr. HARTKE), the Senator from Iowa (Mr. HUGHES), the Senator from Massachusetts (Mr. KENNEDY), the Senator from Louisiana (Mr. LONG), the Senator from Washington (Mr. MAGNUSON), the Senator from Minnesota (Mr. MCCARTHY), the Senator from Wyoming (Mr. McGEE), the Senator from South Dakota (Mr. MCGOVERN), the Senator from New Mexico (Mr. MONTAÑA), the Senator from Utah (Mr. MOSS), the Senator from Maine (Mr. MUSKIE), the Senator from Rhode Island (Mr. PELL), the Senator from Georgia (Mr. RUSSELL), the Senator from Mississippi (Mr. STENNIS), the Senator from Missouri (Mr. SYMINGTON), the Senator from Maryland (Mr. TYDINGS), the Senator from New Jersey (Mr. WILLIAMS), the Senator from Texas (Mr. YARBOROUGH), and the Senator from Ohio (Mr. YOUNG) are necessarily absent.

I further announce that, if present and voting, the Senator from North Carolina (Mr. ERVIN), the Senator from Washington (Mr. MAGNUSON), the Senator from New Jersey (Mr. WILLIAMS), the Senator from Missouri (Mr. SYMINGTON), and the Senator from Louisiana (Mr. LONG) would each vote "yea."

Mr. GRIFFIN. I announce that the Senator from Colorado (Mr. ALLOTT), the Senator from Delaware (Mr. BOGGS), the Senators from Arizona (Mr. FANNIN and Mr. GOLDWATER), the Senator from Ore-

gon (Mr. PACKWOOD), the Senator from California (Mr. MURPHY), the Senator from Illinois (Mr. SMITH) and the Senators from Pennsylvania (Mr. SCHWEIKER and Mr. SCOTT) are necessarily absent.

The Senator from Vermont (Mr. AIKEN) and the Senator from Oklahoma (Mr. BELLMON) are absent on official business.

The Senator from South Dakota (Mr. MUNDT) is absent because of illness.

The Senator from Kentucky (Mr. COOK) and the Senator from Ohio (Mr. SAXBE) are retained on official business.

If present and voting, the Senator from Colorado (Mr. ALLOTT) would vote "yea."

On this vote the Senator from Delaware (Mr. BOGGS) is paired with the Senator from Pennsylvania (Mr. SCOTT). If present and voting, the Senator from Delaware would vote "yea" and the Senator from Pennsylvania would vote "nay."

On this vote, the Senator from South Dakota (Mr. MUNDT) is paired with the Senator from California (Mr. MURPHY). If present and voting, the Senator from South Dakota would vote "yea" and the Senator from California would vote "nay."

The result was announced—yeas 40, nays 20, as follows:

[No. 330 Leg.]

YEAS—40

Allen	Dominick	Miller
Baker	Ellender	Percy
Bennett	Fulbright	Proxmire
Bible	Griffin	Randolph
Brooke	Gurney	Smith, Maine
Burdick	Hansen	Sparkman
Byrd, Va.	Holland	Spong
Byrd, W. Va.	Hollings	Talmadge
Cannon	Hruska	Thurmond
Church	Inouye	Tower
Cook	Jordan, N.C.	Williams, Del.
Cotton	Mansfield	Young, N. Dak.
Curtis	McClellan	
Dodd	McIntyre	

NAYS—20

Case	Hatfield	Nelson
Cranston	Jackson	Pastore
Dole	Javits	Pearson
Fong	Jordan, Idaho	Prouty
Goodell	Mathias	Ribicoff
Harris	Metcalfe	Stevens
Hart	Mondale	

NOT VOTING—40

Aiken	Hartke	Pell
Allott	Hughes	Russell
Anderson	Kennedy	Saxbe
Bayh	Long	Schweiker
Bellmon	Magnuson	Scott
Boggs	McCarthy	Smith, Ill.
Cooper	McGee	Stennis
Eagleton	McGovern	Symington
Eastland	Montoya	Tydings
Ervin	Moss	Williams, N.J.
Fannin	Mundt	Yarborough
Goldwater	Murphy	Young, Ohio
Gore	Muskie	
Gravel	Packwood	

So Mr. Tower's amendment was agreed to.

Mr. JAVITS. Mr. President, I send an amendment to the desk for myself, the Senator from Minnesota (Mr. MONDALE), and the Senator from New York (Mr. GOODELL), and ask that it be read.

The PRESIDING OFFICER. The amendment offered by the Senator from New York will be stated.

The legislative clerk proceeded to read the amendment.

Mr. JAVITS. Mr. President, I ask

unanimous consent that further reading of the amendment be dispensed with.

The PRESIDING OFFICER. Without objection, it is so ordered; and, without objection, the amendment will be printed in the RECORD.

The amendment is as follows:

On page 107, after line 8, add the following new section:

UNITED NATIONS DEVELOPMENT DISTRICT

Sec. 1009. Part A of Title I of the Housing Act of 1949 is amended by adding at the end thereof a new section, as follows:

"UNITED NATIONS DEVELOPMENT DISTRICT

"Sec. 119. Notwithstanding any other provision of this title, the Secretary is authorized to make, subject to the limitation on loan payments herein below specified and such other conditions and requirements as he may deem advisable, temporary and definitive loans, in accordance with section 102, to the United Nations Development Corporation, created and operating under chapter 345, Laws of New York, 1968, as amended. Such loans shall be for a project or projects consisting of the development of the United Nations Development District, as defined in said chapter 345, as amended, in conformity with a development plan or plans that shall be approved after public hearings pursuant to said chapter 345, as amended. Such project or projects may include, but not be limited to, the acquisition, clearance, preparation, improvement and development of real property and the construction of public and other facilities and buildings and relocation housing within said district. The Secretary shall not make any such loan unless he has obtained adequate assurance that a relocation program and assistance will be provided similar to that required for urban renewal projects by sections 105(c) and 114. The Secretary shall not make grants of any type, relocation payments or advances for planning to said Corporation. Furthermore, the Secretary shall not make any loan payments under any loan contract executed under this section, except to the extent necessary to pay or cause to be paid to holders (or to their agents or designees) of obligations of the Corporation the principal of and the interest on such obligations pursuant to any contract or other instrument executed by the Secretary under subsection (c) of section 102 hereof. Except as the Secretary shall deem necessary, determinations, approvals or requirements under this title pertaining to loans for other projects shall not be applicable to loans under this section. Wherever 'local public agency' or the plural thereof appears in section 102 it shall be construed to include said Corporation. The interest on any obligations issued by said Corporation for any project assisted pursuant to this section shall not be exempt from taxation under section 102(g) of this title or section 103 of the Internal Revenue Code of 1954, as amended."

Mr. JAVITS. Mr. President, if I may have the attention of the Senate—

The PRESIDING OFFICER. Will the Senator from New York suspend for an inquiry from the Chair? Is this an amendment which the Senator was to offer upon which there is an hour limitation?

Mr. JAVITS. It is, and I yield myself 5 minutes.

Mr. President, this amendment is an element—I emphasize that word—in a large plan which I will describe. The purpose of the amendment and the amendment's terms provide that the Secretary of HUD is authorized—I emphasize the word "authorized," because

it is important—on terms and conditions which he considers proper, to guarantee the bonds, which will probably be mortgage bonds, of a public benefit corporation called the United Nations Development Corporation. The Corporation is organized under a special act of the Legislature of the State of New York and is headed by John J. McCloy, who is very well known to many Members of the Senate. The purpose of this corporation will be to develop two square blocks across the street from the United Nations in connection with United Nations uses. Indeed, the United Nations uses will occupy approximately 60 percent of the development when it first opens, and this percentage will grow substantially as the United Nations needs growth.

The purpose is to have an office building, a hotel, places for visitors, a bus terminal—all of which relate to the tremendous flow of people to and from the United Nations. It is expected to be a very distinguished development. One of the concepts is that it will all be under glass.

The Governor of the State of New York and the mayor of the city of New York have recommended it to us.

An element in the plan is for the Secretary of Housing and Urban Development to guarantee the bonds if he feels that this is the desirable thing to do, that the security is adequate, and so forth.

This amendment has been discussed by me and by others with the manager of the bill and with the Secretary of State—indeed, I just talked with him tonight about it—and with the ranking minority member of the committee. It goes again to the proposition that when we received the United Nations in the United States, we said that we would do everything we could to accommodate them suitably. The needs of the organization have grown very large, and this represents what should be an entirely self-liquidating project. This is a non-profit corporation. But in order to do what must be done, in order, as it were, to redeem our assurances to the organization, this great project is going to get underway; and the authority in the Secretary of Housing and Urban Development represents an important element in this project.

I would say, too, that all the people concerned are very competent and are people of great experience in this field.

I wish to state that it is entirely nothing cannot be done; but if this amendment to the housing bill which is before us, passes he will have the authority if he wishes to exercise it.

Mr. TOWER. Mr. President, will the Senator yield?

Mr. JAVITS. I yield.

Mr. TOWER. Speaking in behalf of myself and I think also in behalf of the distinguished chairman, I believe that the committee probably is willing to take this amendment to conference.

Mr. JAVITS. It is entirely agreeable to me.

Mr. TOWER. If the Senator would like to yield back the remainder of his time—

Mr. JAVITS. I yield back the remainder of my time.

Mr. SPARKMAN. Mr. President, I agree with the Senator from Texas and yield back the remainder of my time.

Mr. GOODELL. Mr. President, will the Senator yield me one-half minute?

Mr. ALLEN. Mr. President, —
Mr. SPARKMAN. One half a minute? I yield 1 whole minute to the Senator from New York. [Laughter.]

Mr. GOODELL. I thank the Senator. To reward him for his generosity, I shall use only one-half a minute.

Mr. President, I have been involved in this deeply. It is a very important issue. There is great difficulty in providing housing and office space for people in the United Nations. This project is self-liquidating. I am a cosponsor of the amendment and wholeheartedly support it.

Mr. PERCY. Mr. President, will the Senator from Alabama yield me 1 minute?

Mr. SPARKMAN. I yield 1 minute to the Senator from Illinois.

Mr. PERCY. Mr. President, I want to associate myself with support of an amendment to the Housing Act of 1970.

This amendment amounts to a pledge of faith in the U.N. in this, its 25th year.

I say pledge of faith because the bill calls for little more. It provides only a guarantee of taxable UNDC bonds in the case of default. It provides no loans, no grants. The guarantee is conditioned by authority for the Secretary of Housing and Urban Development to set terms which will insure prudent expenditures. The guarantee has minimal risk as the project has been designed—both architecturally and economically—to be self-sustaining.

This U.S. pledge is to me a renewal of our commitment to establish a United Nations Organization—an organization that has over the last two and one-half decades served as the principal forum for international discussion. In supporting this amendment, I am, in my own mind, simply following through on the decision we made more than two decades ago, to support the development of a United Nations Organization with headquarters in New York City.

I am not unaware of the shortcomings of the U.N.; I do not consider it a panacea for the solution of our pressing world problems. But what alternative do we have? In a year when we can appropriate \$70 billion from military equipment and personnel, we can afford to accept this amendment which will in all likelihood not cost a cent and which might well take us just one step more toward peace.

Mr. MONDALE. Mr. President, I was pleased to have the cosponsorship of Senator JAVITS when I introduced S. 4145, and I am happy to support him in offering that bill as an amendment to the Housing Act of 1970.

In November we will be celebrating the 25th anniversary of the founding of the United Nations. There is no more appropriate way to commemorate this anniversary than the adoption of this amendment which will do so much to enhance the ability of the United Nations to perform the functions for which it was created. Candor requires an admission



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