

Committee. Mr. O'Brien was on the White House staff during the Kennedy administration.

Mr. BAKER. Was Mr. O'Brien, who made these charges, on the White House staff during the Kennedy administration?

Mr. WILLIAMS of Delaware. During the time he was on the staff, and later he was Postmaster General. I do not quite know in which capacity he was at which date.

Mr. BAKER. Who else was involved in the press release besides Mr. O'Brien?

Mr. WILLIAMS of Delaware. Mr. Mortimer Caplin.

Mr. BAKER. Mr. Mortimer Caplin. Was he Commissioner of Internal Revenue in the previous administration?

Mr. WILLIAMS of Delaware. Yes.

Mr. BAKER. Would Mr. Cohen have necessarily been involved in the promulgation of the regulations of the Internal Revenue Service with respect to the disclosure of personal returns?

Mr. WILLIAMS of Delaware. I would think so. There is no report of his changing the orders promulgated under the previous Kennedy administration.

Mr. BAKER. Who was the third signer?

Mr. WILLIAMS of Delaware. Mitchell Rogovin. He was also during that time in the Treasury Department and later moved to the Justice Department.

Mr. BAKER. Do we have any basis for knowing whether or not these three gentlemen were aware of these operations at the White House during the Kennedy administration—the examination of returns without written request? Has the Senator inquired into that, or does he know?

Mr. WILLIAMS of Delaware. I have. Certainly Mr. Caplin must know because he signed the order saying they could get them without written request. I think I know Mr. Caplin well enough to know that he would not sign a letter without knowing what was in it. One time as Commissioner he said that the White House could examine tax returns without written request—which I join the Senator from Tennessee in condemning as a rather loose arrangement for I think there should be some record. Later after Mr. Caplin left office he comes to the conclusion that such requests should be signed by the President.

Mr. BAKER. If the Senator will yield further to me, I would like to say I associate myself with the Senator from Delaware and my senior colleague in saying that this is an area where there is great potential for abuse. I personally will have to be educated as to why the executive department, or the President, for that matter, should have access to income tax returns, but I am willing to be educated in that respect. However, I will point out that I think the illustrations the Senator from Delaware has made point out the necessity for a close examination of these regulations and point out, as well, that it is a situation of long standing that we should look into.

Mr. WILLIAMS of Delaware. I wish to point out that it is essential that there be some check over both the executive branch and the legislative branch.

The Senate Finance Committee and the House Ways and Means Committee have always delegated this duty to our staffs. I will cite an example. When we had the tax reform bill before us last December, the suggestion was made that a number of individuals as a result of loopholes in the tax law were escaping the payment of income taxes entirely. Of course a loophole cannot be closed unless we know what it is. We have very high caliber staffs on the joint committee, a staff that we trust completely. The committee staff examined many returns to see how that avoidance of tax took place. In that manner we were able to close the tax loopholes. I know I would not, and I doubt if any member of the Senate Finance Committee or House Ways and Means Committee would, examine the returns. There is no reason why we should. We were getting hypothetical cases of how those tax loopholes occur. That is an example of why it is necessary for committees to have access to tax returns.

The Senator from Arkansas (Mr. McClellan) has done a remarkable job with his investigation committee in exposing corruption. The McClellan committee needs to examine tax returns, and he can get them with the permission of the President. I defend his right to see those tax returns.

Sure there are abuses, but until abuses are shown, let us not stop that right.

Other agencies have the right to examine income tax returns.

Health, Education, and Welfare gets those returns. The question was raised: why? A person can collect social security benefits, but if his earnings rise beyond a certain point his payments may be decreased or stopped. So officials in that department occasionally have to spot-check returns.

Do not ask me why, but the Department of Agriculture was listed in 1968 as requesting permission to examine the tax returns of 709 taxpayers.

The Department of Commerce has examined a number of tax returns. We find listed the FDIC. Of course the Department of Justice naturally would; it would be expected. The Federal Home Loan Bank Board. The Securities and Exchange Commission. The Small Business Administration. The Comptroller of the currency. The Federal Communications Commission. The Department of State. The Renegotiation Board. The Department of Health, Education, and Welfare. The Department of Labor. The Tennessee Valley Authority examined tax returns. The Department of the Army. The Veterans' Administration.

These are some of the agencies that examined top returns in 1968.

Several Senators addressed the Chair. Mr. WILLIAMS of Delaware. I would like to finish, if I may.

The Civil Service Commission. The Department of the Air Force requested and examined tax returns. The Postmaster General wanted to examine the returns of four taxpayers.

The Secretary of Transportation. The Bureau of Accounts. The National Selective Service Appeal Board, and the Post Office Department itself. All those

are agencies that in 1968 examined tax returns.

Maybe they are not properly circumscribed. If they are not we as much as anyone else should be to blame. But altogether, these agencies examined in 1968 a total of—

Mr. TYDINGS. Mr. President, will the Senator yield? The Senator has been holding the floor for some time.

Mr. WILLIAMS of Delaware. Yes, I shall yield. They examined in 1968 the returns of 3,393 taxpayers and this figure does not include those requested by the White House. We were told that 1969 would probably show a comparable figure.

Perhaps these agencies need these returns for various reasons. Certainly U.S. attorneys and the various agencies have to have them.

I yield to the Senator from Maryland.

Mr. TYDINGS. Has Mr. Mollenhoff asked for the tax returns for Governor Wallace or any member of his family?

Mr. WILLIAMS of Delaware. I do not know.

Mr. TYDINGS. Has Mr. Mollenhoff asked for the tax return of any Member of this body?

Mr. WILLIAMS of Delaware. I do not know what returns Mr. Mollenhoff asked for. The Commissioner told the joint committee that the returns of no elected official had been requested.

Mr. TYDINGS. Has he asked for the return of any U.S. district judge, or any judge of a circuit court of appeals?

Mr. WILLIAMS of Delaware. As I say, I do not know. The Senator can request the names of all of them.

Mr. TYDINGS. Agreed.

Mr. WILLIAMS of Delaware. Commissioner Thrower told our committee—and that is all I know about it—that under the Nixon administration there were seven requests from Mr. Mollenhoff involving nine taxpayers, I believe. The Senator from Tennessee is nodding his head. That it is nine.

Mr. TYDINGS. How about that letter? Shall we sign it together?

Mr. WILLIAMS of Delaware. Just a moment. A total of nine. And he said also that he felt he could not properly tell us the names, but he did say they did not involve any elected public officials. That means that Senators would not be covered. That was the statement we—

Mr. TYDINGS. How about any sitting judge or justice?

Mr. WILLIAMS of Delaware. I do not know.

Mr. TYDINGS. Would the Senator from Delaware agree that whether it occurred in the Kennedy administration or the Nixon administration, or any other administration, to let a political operative in the White House, with no background in investigative work such as having served in any investigative agency, have carte blanche access to the income tax returns of anyone in the United States, would be a very dangerous thing, and should be corrected by legislation?

Mr. WILLIAMS of Delaware. That is a leading question. The Senator was not here when I read the procedure under previous administrations so I would like

to point out to him that the loose practice has been corrected. I agree with him completely that the manner in which it was handled before was very generous. Since the Senator was not here, I shall read Mr. Caplin's method while he was Commissioner, because I do not think it can be pointed out too often, the loose manner in which it was handled under the Kennedy administration.

Mr. TYDINGS. I heard the Senator read about the Kennedy administration.

Mr. WILLIAMS of Delaware. I read also the way it has been improved under the Nixon administration.

If there are those who do not like the appointees of the President or do not like the President himself, that is one thing. But if this is a case where they do not trust Mr. Mollenhoff they ought to say so and state why.

Mr. TYDINGS. It does not make any difference who it is.

Mr. WILLIAMS of Delaware. Does the Senator know of any abuse in the manner in which the White House is now handling this problem?

Several Senators addressed the Chair.

The PRESIDING OFFICER (Mr. SAXBY). The Senator from Delaware has the floor.

Mr. TYDINGS. When we write to Mr. Mollenhoff, the Senator from Delaware and I together, and get the names of those persons whose returns he requested, we can determine whether or not there are any political implications.

But I recall very well, when I was U.S. attorney, nobody saw income tax returns unless the Attorney General of the United States requested it for a specific investigation. No U.S. attorney or anyone else. The Internal Revenue Service handled them. Whenever income tax returns were used in the Government, they went through channels that were completely circumspect and outside the possibility of any type of political implications.

Now, if President Kennedy or any other President has a system whereby someone, not through the ordinary course of governmental operations, could, *carte blanche*, examine your income tax return or mine, I think that is a very, very dangerous thing. I think the apprehension of it can be most upsetting. We in the United States pay our taxes voluntarily. We are one of the few nations in the world where the taxpayers voluntarily pay their taxes, and we do it because we have confidence that the returns are confidentially handled.

To have it revealed here that the contrary has been done, I think, is very disconcerting, regardless of the administration, or whether the man's name is Mollenhoff, Jones, Smith, or anything else, and ought to be released only under specified statutory provisions, completely outside political channels.

Mr. WILLIAMS of Delaware. I would agree with the Senator and am glad that the Nixon administration has corrected the loose practice previously followed. But when he says "outside political channels" would the Senator say the Senate Finance Committee, which has access to tax returns under the law, the Ways and

Means Committee, which has access to tax returns under the law, the Joint Committee on Taxation, which has access to tax returns under the law, the Committee on the Judiciary, on which the Senator has served—every committee of Congress—

Mr. TYDINGS. Right.

Mr. WILLIAMS of Delaware. Just a minute. Would the Senator say we have to be political in our motivation, or are we to—

Mr. TYDINGS. Absolutely not, because we do it under prescribed rules. In the Committee on the Judiciary, when we have nominations, no one sees that income tax return unless the individual member of the committee goes to the chairman, and he sits down alone, with no staff member. That is specifically within the lines of official work.

But to give to someone who is not in any way working for the Department of Justice, whose chief public mission is political in nature, the right to examine income tax returns, whether it is a Republican or Democratic administration, or any kind, I think, is a very, very upsetting thought.

Mr. WILLIAMS of Delaware. I am glad that the Senator is upset, because I, too, was upset at what was going on under the previous administration. But I want to say—

Mr. TYDINGS. It is a dangerous thing.

Mr. WILLIAMS of Delaware. But the point is, the law gives to the President the right—they have always had that right; that is the law—the President has it as President, and the U.S. attorneys could get these tax returns. They do get them. They have to get them.

Mr. TYDINGS. To try a case the Internal Revenue Service has already made.

Mr. WILLIAMS of Delaware. Surely they do.

Mr. TYDINGS. But they do not instigate it. The case is brought to them by an Internal Revenue Service intelligence agent, who received the case from a revenue agent, who acquired it through an audit. That comes in the normal course to the Department of Justice. The Attorney General has the right to ask the Internal Revenue Service for an income tax return, but that is a part of the day to day operations of the Department of Justice. That has nothing to do with someone who has a political background, who has responsibilities in political campaigns, having the power to go and take anybody's tax return and look it over.

Mr. WILLIAMS of Delaware. Mr. President, let us get it straight. There is much being said here hypothetically.

I said earlier that President Nixon had laid down rules that these tax returns were not to be available under any circumstances to Mr. Mollenhoff or anyone merely on the basis of examining whether Joe, Tom, Dick, or Harry was paying his proper income taxes, but only in cases where there may be abuse of the public trust.

I am just trying to review the record and outline the law, and I do not want to get into a political discussion of whether Members on the other side of the aisle wanted Mr. Nixon as President, or whether they would have had more

confidence in a man Mr. Humphrey would have appointed. That is not the point. The President, not the Senator from Maryland, appoints his Chief Counsel. Every President has appointed someone to represent him. If some Senator feels it is being abused he should spell out the charge. But I will say, as I pointed out before that the Nixon administration has laid down rules whereby this is done in writing, and that is more than was done before. So let us at least give them that much credit.

If there is still abuse, that is another matter. The Commissioner made it clear to our committee. He said that of those that were requested not one of them involved an elected public official. That is all I know.

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

Mr. WILLIAMS of Delaware. In just a moment. There have been seven requests for nine returns, each of them putting in writing the name of the man.

There is this danger about releasing the names, and I understand it. I point out one case they cited and said we could use it, hoping we could do something about it: An allegation came into the executive branch that a member of the Federal bench—the complaint came from someone who thought his sentence, perhaps, was too harsh—but the report came in from this individual that this judge himself was just as bad or worse than the man convicted.

They called for that man's tax returns. They found that in 8 out of 9 of the preceding years before he was nominated and confirmed by the Senate he had not filed a return nor had he paid his income tax. He did file a belated return just before his name was sent to the Senate, and he was confirmed by the Senate, and he is a member of the Court today. The President in power at the time should have checked that or the committee should have known it. I hope we can get that man to resign. If not I hope there is enough interest in the Senate that we can take him off the Bench. He should not be the judge of his fellow man when he himself would not pay his own income taxes.

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

Mr. WILLIAMS of Delaware. The White House has tried to assure that this power is exercised with discretion. No business operations are threatened with tax investigations, nor has the FBI been sent around at late hours in the night.

I promised to yield to the Senator from Colorado.

Mr. ALLOTT. I thank the Senator for yielding.

First of all, the Senator has also referred to this: The man who made this press release, Lawrence O'Brien, occupied a very, very political position with President Kennedy during the time that these orders were made or access was made to the IRS files by Mr. Bellino. Is that not true?

Mr. WILLIAMS of Delaware. That is true. The charges were made out of the office of the Democratic National Com-

mittee by Lawrence F. O'Brien, as chairman of that committee.

Mr. ALLOTT. I think it would be interesting to have Mr. O'Brien answer the question—perhaps the press would be kind enough to put this question to him—perhaps the press would be kind enough to put this question to him—as to whether or not he examined any income tax returns during the time he was with the President in the White House.

Mr. WILLIAMS of Delaware. I would welcome his answer personally. I would doubt very much that he did. I would be surprised. I said earlier that I do not question that Mr. Bellino may have kept this confidential. I do not know of any evidence otherwise. But the fact is that under that Kennedy administration he examined tax returns without written request—if we want to use the word that the Senator from Maryland used—wholesale, by going in and getting any return with no records made. I think that was a very loose operation. I think the man's name should be on record so there would be responsibility if we found they were abusing this and turning it into political persecution—and it could be; let us face it. I recognize that danger. Then we could go back and see who the President's representative was who called for the returns, and why.

Mr. TYDINGS. How would we know?

Mr. ALLOTT. Mr. President, the Senator yielded to me.

Mr. WILLIAMS of Delaware. I do not know how we would know, any more than the Senator or I know, as a member of the committee. The only way I know in which I could satisfy some people would be to say that only the members of the Democratic Party could do this. I am getting tired of this political bickering. The Senator asks how we would know that some man down there is not going to abuse it. We do not know. We do not know that the President of the United States is not going to do something wrong. We do not know that JOHN WILLIAMS or that JOE TYDINGS is not going to abuse our public trust. But let us not start asking questions and question the integrity of a man until we know what we are talking about.

Mr. TYDINGS. We have guidelines.

Mr. ALLOTT. Mr. President, will the Senator yield to me?

Mr. WILLIAMS of Delaware. I have not heard of any case that has been abused.

I yield to the Senator from Colorado.

Mr. ALLOTT. The Senator from Maryland has had an opportunity to intervene in this matter, and I would like an opportunity, also.

I, together with Senator MAGNUSON, who is chairman of the Independent Offices Committee, got a real shock in this area in the hearings of 1965, and I want to refer to specific pages in those hearings, from 1080 through 1105, in which will be found a complete discussion of the access of the Federal Trade Commission—of all things—to the IRS files.

They first denied that they had access to them, and I read Paul Rand Dixon's answer:

What we got off the income tax was names, sir; that's all we get.

Before we got through examining him, we found that they were maintaining a staff of three or four people all the time at the IRS—all the time. This was in 1965. Because of the investigation and the questioning we subjected them to—both Senator MAGNUSON and I—that practice, according to the subsequent statement of Mr. Dixon, next year was not resumed. It was stopped.

Is this not the fact: The very man who set up the regulations—which were no regulations at all, in effect—for Mr. Bellino in 1961 is the man who today signs a letter, which the Senator has placed in the RECORD or has read into the RECORD, which says that this is an illegal act.

Mr. WILLIAMS of Delaware. That is correct.

Mr. ALLOTT. Mr. Mortimer Caplin, to be specific.

Mr. WILLIAMS of Delaware. Mr. Caplin now says that what he did while he was Commissioner was illegal, and he said the requests should be in writing. They are in writing now.

I think this is an area in which we should be ever cautious. I would have appreciated it, and I think I would have equally as such respect for Mr. Caplin's position, had he written the committee rather than writing the Democratic National Committee. I do not know what he figured the Democratic National Committee could do about it, except politics. Mr. O'Brien said:

If this action is not taken voluntarily, we are prepared to initiate legal action that will end this practice.

He was condemning a loose practice that his own administration initiated but which has been corrected long ago by the Nixon administration. But I guess they will not initiate prosecution retroactively on themselves.

I think this matter should be put into proper perspective, and called what it is, namely, gutter politics. They have tried to give the impression throughout the country that these tax returns under the Nixon administration have been used indiscriminately. They have not, and that is the point. And the Commissioner has said that there has been much less use in this administration than heretofore. There have been seven requests with nine returns.

Here is another letter which I will put in the RECORD, dated August 10, 1964. This is addressed to the Honorable Bertrand M. Harding, the Acting Commissioner of Internal Revenue, in Washington:

DEPARTMENT OF JUSTICE,
Washington, August 10, 1964.

HON. BERTRAND M. HARDING,
Acting Commissioner of Internal Revenue,
Washington, D.C.

DEAR MR. HARDING: In connection with an official investigation, I would appreciate receiving uncertified photostatic copies of the income tax returns for the years 1958 through 1963 for the enclosed list of taxpayers.

It is also requested that these returns be forwarded to Mr. Walter J. Sheridan, 450 Milner Building, 210 South Lamar Street, Jackson, Mississippi. In the event these returns are not located, it is requested that

Mr. Sheridan be notified at the above address.

Your cooperation in this matter is greatly appreciated.

Sincerely,

HERBERT J. MILLER, Jr.,
Assistant Attorney General.

I do not know who Mr. Sheridan is. I would hope he was the U.S. attorney.

Let us not try to make a mountain out of a molehill. I have yet to hear one man anywhere speak of a specific example of abuse of handling these returns under the Nixon administration.

I recall that years ago a Member of the Senate was censured for trying to condemn his fellow man by innuendo, without specific charges. If anyone has any question to raise concerning abuse, name the case, and I will help to have it checked. If he is right I do not care who it is; I will help to correct the abuse.

Let us not say, "Did he get the return of Mr. X," and throw out a lot of names. I think it is unfair to any man. Merely asking such a question indicates suspicion on the part of the man who does so. It is unfair.

Mr. ALLOTT. Does not the question alone, "Did you get the return of George Wallace?"—

Mr. WILLIAMS of Delaware. That alone constitutes a semicharge, and I am surprised at the man who did it.

Mr. ALLOTT. Does that not constitute a sort of cloud itself?

Mr. WILLIAMS of Delaware. It is, and it is wrong.

I would say that if any official in the executive branch of the Government—I do not care if it is Clark Mollen or my own brother—is getting tax returns of the average citizen, as a member of the executive branch, not a member of the Bureau of Internal Revenue, for the sole purpose of seeing whether or not that citizen is paying enough taxes or as a political threat, that is wrong. If a man has done something wrong as a Government official or as a prospective Government official, when there is such an allegation involving a Government transaction, it is their business to check. I only wish such a check had been in force under some preceding administration, because then we would not have a Federal judge sitting today, passing judgment on American taxpayers, who in private life did not pay his income taxes.

Mr. SPARKMAN. Mr. President, will the Senator from Delaware yield?

Mr. WILLIAMS of Delaware. I yield.

Mr. SPARKMAN. I want to seek some information because we hope to finish this bill today and we expect a rollcall. I hope that Senators still in the Chamber—

Mr. WILLIAMS of Delaware. I hope so, too. I told the Senator that I would not be but a few minutes, but I do not want to shut off this colloquy—

Mr. SPARKMAN. I realize that, but a good many Senators have asked me when they could get away because we expect a rollcall vote some time today—

Mr. WILLIAMS of Delaware. Well, we are dealing with a very important subject here, and I think they are all anxious to stay around and get a better understanding of the law.

Mr. SCOTT. Mr. President, if the Senator from Delaware will yield, could I ask whether he himself intends to ask for a rollcall on the bill?

Mr. WILLIAMS of Delaware. I understand it will be requested; yes.

Mr. HANSEN. Mr. President, will the Senator from Delaware yield?

Mr. WILLIAMS of Delaware. I yield.

Mr. HANSEN. Mr. President, I thank the distinguished Senator from Delaware.

I should like to compliment him on the job he has done in looking into a situation that, up to now, or rather, before he spoke, might very well have been presumed, in the minds of a great many people, merely to reflect upon the political activities of the present administration.

I join the other Senators who already have expressed their strong convictions that this system is not a reprehensible one, that it is defensible, that it has resulted in real benefit accruing to the people of this country.

Let me say, Mr. President, that I do not think the average taxpayer is too much disturbed about having his tax returns examined. Obviously, most of us would hope that those near neighbors of ours would not have the pleasure of trying to make comparisons between what we may do and they may do; but so far as the average taxpayer in this country is concerned, I do not think that he fears an examination of his return by the President, or by anyone else, because I happen to believe that most of the people in this country are honest.

I do not think it is fair at all to allege that we will destroy the whole system, if we let the cat out of the bag to the effect that former Presidents and former staff members of Presidents have examined tax returns. I do not think that any President, insofar as I know of—not a single one—has exercised that authority capriciously.

I would ask my distinguished colleagues on the other side, and on this side of the aisle as well, whether they are concerned, if it disturbs them that 106 or 108—whatever the number was—persons working for the Internal Revenue Service who have been convicted, a number of whom are now serving their sentences, does that disturb them? It surely does not disturb me and I do not think it disturbs the average taxpayer at all, that in this country of ours the President of the United States and certain committees of Congress are going to be looking into the returns filed by all taxpayers. It does not make one bit of difference if they happen to be, at a precise point in time, the Collector of Internal Revenue for the United States, that they, too, are not going to be exempted from the scrutiny that should be assured all the people will be exercised by this Government, by the checks to which the Senator from Delaware has already referred, which constitutes the best assurance I know of that we will be treating all the people in this country alike. I do not know of a single taxpayer in this country—are there 70 million—35 million?

Mr. WILLIAMS of Delaware. Eighty million.

Mr. HANSEN. Eighty million taxpayers. I should think that when 106 people, who have served the Government of the United States in the collection of taxes, have been convicted of violations, that this was the best way, the best possible way I know of, to convince the more than 210 million, or however many millions of people there are in this country today, that this system is good. We are calling upon the people of this country voluntarily to tell the Government what taxes they owe.

I, too, resent the questions that were put to my distinguished friend from Delaware by saying, "Has this person's tax return been examined?"

We could very easily turn around and ask our friends on the other side of the aisle, "Has that person's taxes been examined?"

I do not know.

All I can say is that Mr. Mollenhoff is answerable to the President of the United States. The President of the United States was elected by a vote of the people of this country. I recognize his right, and I defend him in his right, to name whoever he wishes to serve as his representative. I leave it up to the good judgment of the people of this country. When they no longer want to extend the mandate they granted in 1968, let that judgment be made by the people of this country.

If Mr. Mollenhoff, or whoever may serve under any President, those who served under President Truman, those who served under President Roosevelt—I do not know under whom Mr. Noonan served, the former Commissioner of Internal Revenue who was convicted and who served time; but I am certain it was not the intent of the President of the United States, whoever he was, under whom Mr. Noonan served, to have that kind of business going on. I do not think it is up to us to say that in our judgment, Mr. Mollenhoff is a political operator.

There are many people serving in high positions in Government today. The important thing is that they have the confidence of the President of the United States and that their actions be judged in the light of the good sense of the people of this country; and if they do not like the way that business is being handled, there is provided the opportunity every 4 years to change that around.

I have every confidence Mr. Mollenhoff will act in a most responsible fashion to serve the Presidency of the United States. If it just happens that some read into his actions a political motivation, let it be noted that he has asked for the tax returns of only nine individuals and that he made seven requests to get the nine returns. Compare that, if you will, with what was done under President Kennedy. But I am not objecting to that. I think it is good. I am proud that Senator McCLELLAN has done the great job he has in this country. I am just delighted. I think that all the people of this country are far better off, because he had the right, as Chairman of the Committee on Government Operations, to make the investigation he has. Had he denied that right, this country would be far worse off than is now the fact.

I do not think there is any validity to the charge. It would occur to me that if I wanted to be political, that what may have started out as an allegation that seemed to have some political connotation, in the light of the discussions which have been made by the distinguished senior Senator from Delaware, has now been turned right around. I do not blame those who complained. It is like the man who caught a wildcat and would like someone to help him turn it loose.

Mr. WILLIAMS of Delaware. Mr. President, I shall yield the floor in just a moment, but I want to make just one point here, in case what has been said may be interpreted as a criticism of Mr. Bellino who was the man examining the returns under the preceding administration without written requests. I knew Mr. Bellino when he was serving as the counsel of the Committee on Government Operations. I knew him personally. I had tremendous respect for Mr. Bellino. I am confident, based on my knowledge of him and on the Senator from Nebraska who was also on the committee and who knows Mr. Bellino, that he did not turn this into a political persecution operation. I have that much confidence in him. I want the RECORD to show that. I did not raise the questions, but I do think it would have been better to have had his requests in writing.

President Kennedy had the right to outline, as the law says, the regulation under which it operates, and as the regulations were outlined there would be no written request. I wish there had been. I am glad that the present administration is using written requests only; but, nevertheless, I do not attribute to Mr. Bellino any suggestion that he was doing anything in his capacity other than that which he should have done as a representative of the President.

At the same time I would hope that those who frankly admit they have not been able to raise any charge of improper handling of these returns as far as Mr. Mollenhoff is concerned would extend to him the same degree of respect. There is no evidence that I can find which would show that Mr. Mollenhoff has not acted with discretion. What are they scared about?

If there is something wrong and Senators want to change the law let us get to it. We have the same objective no matter which side of the aisle we are on. We are not going to accomplish anything on a partisan basis. We would not render any service to our country.

In the heat of such a political discussion we might leave the impression that the integrity and the secrecy of tax returns are not being properly respected. I think that they are. There is no evidence to the contrary. And let us not make any charge by innuendo.

Such low tactics are below the dignity of the Senate.

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

Mr. WILLIAMS of Delaware. I shall yield to the Senator from Nebraska and shall then yield the floor.

Mr. CURTIS. Mr. President, I thank the Senator. I am sure I speak for many

in the Chamber in expressing gratitude to the Senator from Delaware for setting the record straight.

It is very clear that the actions of Commissioner Thrower, the Office of the President, the President himself, and Mr. Mollenhoff were in accord with both the law and the regulations.

So far as Clark Mollenhoff is concerned, he does not need any defense. Clark Mollenhoff is a man of the highest integrity and character. He is a lawyer and is well trained. There is not a man in Washington that has researched as many investigations as Clark Mollenhoff has.

People who might wonder about Clark Mollenhoff are not those that are afraid that he would be a party to something wrong, but they are rather afraid that he might be pursuing the public interest.

I again commend the distinguished Senator from Delaware for clearing up an item that might be disturbing the American people.

I am just politically minded enough to want to say a kind word about Lawrence O'Brien. The chairman of a political party has a very tough job. He has to build the business day after day. And some days business is poor.

He has to support candidates that are strong, and he has to support candidates that are weak.

The chairman has got to stand there and push ahead all the time.

I hope that those who are his superiors will not be too rough on him for his error in this matter.

Mr. Caplin and Mr. Cohen particularly should have caught the error, because Mr. Caplin is on record in writing for a position which is apparently totally contrary to what he advised Mr. O'Brien.

I hope that those who are Mr. O'Brien's superiors will be forgiving because the burden on the chairman of either party is very heavy. He has to try to support candidates and some of them are not very good candidates.

Mr. WILLIAMS of Delaware. Mr. President, I thank the Senator. I concur in that statement. I thought the record should be set straight because these questions have been raised.

I have had many Senators who are not on the committee ask whether there has been a violation of the law. And I thought the record should be set straight.

I want to say that there is no evidence to substantiate such a political attack as that made by Mr. O'Brien. No suggestion has been made in any committee meeting that I have attended indicating that anything improper has been done in the handling of these returns by the executive branch under the preceding administration, under this administration, or by any congressional committee.

When the question was raised as to HEW, someone asked, "Why do they need tax returns?" We found that they need them to check the information on social security benefits.

There may be a reason for all of this. If abuse is shown anywhere we want to handle it, but let us handle it in the best interest of the revenue service, not as a political issue.

I thought that we should get the record straight from the beginning so that we would know that it is not something unusual when tax returns can be examined by a representative of the President. It has always been done. It should be done. I would not have much respect for any man in the White House who did not discharge his responsibility when something was called to his attention.

I have the utmost respect for both Mr. Bellino and Mr. Mollenhoff, but there can always be something to go wrong. We should be on guard for that.

I think that the chairman of our Finance Committee, who is also the chairman of the Joint Economic Committee, should be commended for calling the committee together promptly in order to determine the basis of Mr. O'Brien's charges.

If someone raises a question of abuse tomorrow I would say that we should examine it. It should be examined. If there is any basis for it we should clear it up and correct it. If the manner in which the returns are being handled by the agencies or by the various divisions of the executive branch of the Government or by congressional committees is improper let us face it.

I know the chairman will bear me out. We were all surprised when we found the vast number of executive departments that had had access to the returns over the past several years.

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

Mr. WILLIAMS of Delaware. I yield.

Mr. LONG. Mr. President, I am happy that the Senator brought this matter up. It is a matter that should be considered by the Senate. It should be discussed.

About a week ago, Chairman MILLS, after having heard the story that Mr. Mollenhoff had access to income tax returns, suggested to me that we should meet. I agreed and we would have met perhaps a week sooner had we been able to get all the Members together quicker.

Certain things came to my attention which I thought we should act on. For one thing, it is important for all to understand that no citizen has any right to object to the President or to a Government agency, such as the Justice Department, taking a look at his tax return on a completely responsible basis. For one to look at a man's tax returns for an improper purpose, of course, is something that everyone has the right to object to.

I believe we would all agree that the Bellino precedent is really not very good. It is not good to send someone over without a written authorization from the President and without any written authorization at all to look at anyone's tax returns. Obviously, that is not a good practice.

My impression is that this precedent did not continue under the Johnson administration.

Mr. WILLIAMS of Delaware. The Senator is correct.

Mr. LONG. Mr. President, it would be fair to say that President Johnson did not follow this practice at any time. If he had, we would find out, I would think.

Mr. WILLIAMS of Delaware. Mr. Pres-

ident, I made that statement earlier.

Mr. LONG. Mr. President, in this particular instance, I would suggest that we should pass a law to say on what terms and conditions a person designated by the President is entitled to see someone's tax returns.

As far as I am concerned, the President, himself, is entitled to see everyone's tax returns. But I do not think that when that authority is delegated, it ought to be spelled out in writing. The President ought to sign a document saying, "I designate Mr. Mollenhoff, or whoever it may be, to be my man to look at certain tax returns for these specified purposes."

Then we would know who the man is and why he wanted to see the returns.

I hope that the Senator will agree that when one goes to look at a tax return, he ought to make such a request in writing and state why he asked to see the return, and whose return it was, so that if he is doing this thing in an irresponsible way, this fact could be expected to come back and haunt him, in the manner in which this Bellino matter came back to haunt him.

The Senator knows as well as I do that what we have here might not be as much a matter of serious concern as the fact that Governors have this tax information available to them, perhaps altogether too loosely.

It seems to me the procedure we spell out for the President should apply to Governors as well. If someone wants to see a tax return, there should be a record that he wanted to see it, why he wanted to see it.

As the Senator from Delaware knows, members of the Committee on Finance and the Joint Committee have the right to see tax returns. I do not recall of any case where we asked to see the actual name of the individual involved or the company. We normally say we would like to know if company A did this, and if they did, then how much was involved and the other pertinent facts.

Mr. WILLIAMS of Delaware. The Senator is correct. In addition, if a return did have to be examined we had Mr. Woodworth or his staff do it as the case of Mr. John Doe. It would be highly improper for the Committee on Finance or any other committee of Congress or anyone in the executive branch, wherever it may be, to start examining tax returns on an indiscriminate basis. That is not what we are here for. We have the Internal Revenue Service to do that. In the Committee on Finance we were examining returns to see if there were legal loopholes in the law that needed to be corrected from a legislative standpoint only. The various agencies should look at them only in the administration of their duties and not on the basis of anything else, and as I understand it that is what is being done.

If there is evidence of violations by any agency of government I would be the first to rise to oppose it because I would not want that to happen. We do have to protect the American taxpayer. We do not want this money on a voluntary basis, but at

Umpqua and Willamette valleys through which Interstate Highway 5 is routed. In a more minor vein, the Camas Washington Kraft Paper mill continues to remind Portlanders that State boundaries do not apply to the atmosphere. Pertinent to the above, it is my feeling that paragraphs #1 and #2, National Air Quality Standards, Congressional Record, March 6, 1970, page S3183, are needed and the preceding sections concerning the testing of fuels and additives as well as motors will serve a useful purpose. It is important that the results of Federal research in this field of atmospheric pollution be made available to the states as soon as possible. Oregon like most states has its synergistic type problems arising from its industrial and motor vehicle emissions. Any help we can get from research will be most useful. Senate Bill 3466 appears to be a good and thoughtful start on this national problem of air pollution.

S. 3467—No comment.

S. 3468—There are a number of small communities especially on the coast of Oregon which would benefit by this Act. Their capacity to finance sewage treatment facilities is impaired for one reason or another and I am sure that this Act would aid them provided they could qualify.

It is my feeling that the states might well pass on such qualifications and needs for the reason that they already are concerned with the problem. It is assumed that Oregon will have considered the matter of allocating normal State and Federal grants to these "hardship" communities and would be in an excellent position to pass on their qualifications for a loan from the Environmental Financing Authority. It is also my feeling that some provision for such a procedure should be written into the Act. It appears that such a provision would effect a saving in administrative expense.

S. 3469—This proposal of the Federal Government to embark on research in the field of solid waste disposal and recycling in my judgment is a most timely and vital undertaking. My only comment is to the effect that its funding may be too modest. To this point I would like to comment further.

In my undergraduate days at U. of O. Dept. of Geology we were taught that the iron ore reserves of our country were of such a quantity that the nation had no need for concern. One world war and several "police" actions later we have exhausted the vast iron ores of the Messaba Range. Not only have we squandered our iron resources but with them copper, lead, zinc and a host of other metallics and non-metallics all vital to our national survival. In the face of this we are discarding in the form of junk each year millions of tons of manufactured metals. Not only is this improvident but it is adding bulk to the ever-growing mountains of solid wastes we produce. It is imperative that we address ourselves to this problem and promptly. I would strongly urge that funding be ample to meet the needs of a vigorous program provided for in this Act.

S. 3470—This Act serves a useful purpose and appears to be well conceived.

S. 3471 and 3472—Oregon is continuing to make good progress in cleaning up its waters. We have made the fullest use possible of Federal help. The problem most vexing has been a lack of grant monies to help fund all the needful proposed projects. We have tried to work out grant allocations on the basis of need priorities. This has had its discouraging moments. I strongly urge that funding be increased and maintained at a substantially higher level for at least four or five years. I feel that the President's proposal of ten billion dollars for funding over the next four years is reasonable.

I have no other comments on the text of the Federal Water Pollution Control Act. It has worked rather well and, had it not been

for the strain on our treasures and resources occasioned by the S. E. Asian "police action", would have accomplished much more. There were times when its implementation became a bit "sticky" as in the rather passionate insistence on the part of the S. F. office that we forthwith set water standards for the "Lots River" in the Klamath area. This stream is well named, for its natural bed is lost in a maze of irrigation ditches as its meager waters are put to use eleven times before it gives up its aqueous ghost in a swamp of tule and bull rushes.

It was heart warming to hear from you again and along with thousands of my fellow Oregonians I deeply appreciate the good work you are doing there. Please remember me to Rep. Wendell Wyatt.

Kindest personal regards,

HERMAN P. MEIERJURGEN.

OREGON ENVIRONMENTAL COUNCIL,
Salem, Oreg., April 8, 1970.

HON. MARK O. HATFIELD,
U.S. Senator,
Senate Office Building,
Washington, D.C.

DEAR MARK: Thank you very much for sending a copy of the Congressional Record containing the Administration's "environmental package."

After reading Senator Scott's remarks about the bills I can see no reason why we cannot give them our full support. We are very pleased that you are cosponsoring the bills.

S. 3468, Environmental Financing Authority to assist in the financing of waste treatment facilities seems most appropriate due to the vote in Oregon on Ballot Measure No. 4. The OEC has taken a stand in support of Measure 4 and in favor of the City of Portland's measure which will allow the city to increase the residential sewer use fees and to divorce the charge from the water use bill.

I found one change that I think should be made to the Clean Air Act, S. 3466. The Act provides that the Secretary may enter a factory to inspect prototype vehicles and to inspect vehicles being manufactured. This provision is absolutely necessary to insure that the manufacturers are living up to the letter of the law. The value of the inspection process seems to be negated by the requirement that the Secretary can only obtain the right of entry upon written notice to the manufacturer. What the Secretary sees at the factory can be carefully controlled by the manufacturer if he has ample warning that an inspection is in the offering. I hope that this clause can be removed from the Bill.

Thank you again for drawing our attention to these important new bills.

Sincerely,

LAWRENCE F. WILLIAMS,
Executive Director.

CEDAR-RIVERSIDE RENEWAL PROJECT, MINNEAPOLIS

Mr. MONDALE. Mr. President, I have noted with great interest an editorial published in the Minneapolis Tribune on Wednesday, April 15, 1970, regarding the exciting urban renewal project in the Cedar-Riverside area of Minneapolis. There is a great need for housing in the project area because of the close proximity to the University of Minnesota, Augsburg College, and several fine hospitals. The private and public interests have recognized this need and as a result the first phase of this project is to replace the existing 92 units with 1,260 housing units, many of which will be low-rent public housing and units available for low- and moderate-income occupants. This will greatly benefit the many students and other low- and moderate-

income people that live in this area. It makes me very happy to see urban renewal being used to provide much needed housing and at prices that the residents of the area can afford.

I commend this fine editorial to the Senate's attention and ask unanimous consent that it be printed in the RECORD.

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

THE "NEW TOWN" FOR CEDAR-RIVERSIDE

For more than 10 years, there were hopes and plans for redevelopment of the Cedar-Riverside area of south Minneapolis. For more than 10 years, opposition and controversy blocked the plans as the area grew more blighted. But the controversy is over now, the Housing Authority announced Tuesday its qualified approval of first-stage plans and, if all goes according to schedule, construction will begin this year on a \$25-million housing project.

Undertaken through an unusual combination of private and public action, the project defies the standard criticisms of urban renewal and offers the prospect for a dramatic "New Town" in the central city.

The usual criticism of urban renewal is that it destroys more housing than it replaces, lowers the supply of low-income dwellings and leaves vacant land that produces no taxes. In this case, a private group known as Cedar-Riverside Associates plans in the first phase to build 1,260 housing units in place of the existing 92 units. Of the total, 100 units will be low-rent public housing for families and 500 units will be for low- and moderate-income occupants under a federal subsidized-interest program. Rent supplements could be used on some of the 500 units to bring down monthly charges even more. The rest of the units will be for middle- and upper-income tenants to provide a good economic mix and a full range of housing for students, faculty, university and hospital employees of the area.

Another criticism of urban renewal is that it too often produces projects that are poorly designed and lacking in cohesion. In this case, Cedar-Riverside Associates called upon top-rate consultants who have planned and designed an impressive project combining cohesiveness and diversity. The project includes high-rise and low-rise buildings, parking facilities, commercial space, a plaza and walkways. The developers also plan to provide facilities for a public school, recreation, health and other social services.

The proposed public outlay in the initial project seems reasonable when compared with costs in other renewal programs and the amount of private investment being generated. A requested land write-down of \$700,000 for the subsidized housing is only half of the usual renewal write-down on a total-project basis. Another \$490,000 is sought for site improvements and \$1.3 million is requested for the public plaza and walkway system. These costs would be quickly repaid and then some in the estimated annual tax return of \$600,000 from the completed first stage.

The so-called Cedar West project appears to be a promising start for redevelopment of private properties in the Cedar-Riverside area. If local and federal approvals are given on funding proposals, and financing is obtained as expected, the city's West Bank renewal will be under way, at long last.

U.S. POLICY TOWARD AFRICA

Mr. BROOKE. Mr. President, some weeks ago the Secretary of State spent more than 2 weeks touring many of the nations of Africa. His tour was followed

I think these comments underscore what a number of us have believed from the outset. That is, the oil import controls are an improper exercise of the statutory authority to protect the national security. Mr. Trupner did say in the same interview that the Canadian imports were a threat to national security because they were making the government's job more difficult in moving toward an orderly import program. Unfortunately, the administration has given no evidence, whatsoever, that it is moving toward an orderly import program. Instead, it has abandoned the exhaustive, year-long study by the Cabinet Task Force on Oil Import Controls by relegating it to yet another study group. In the meantime, it has added to the basically illogical structure of the program by imposing controls on Canadian oil for the first time since the oil import control program was adopted by President Eisenhower in 1959.

Mr. President, I ask unanimous consent that the article written by Mr. Stephen M. Aug be printed in the RECORD.

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

SQUABBLE OF U.S. OIL FIRMS LED TO CANADIAN IMPORT CURB
(By Stephen M. Aug)

A State Department specialist on fuel and energy imports conceded today that a squabble among "a group of American companies" producing oil in Canada led to the first formal limits on the amount of Canadian oil that could be imported into this country.

James E. Akins, director of the State Department Office of Fuels and Energy, said at a news briefing that one reason for the March 10 White House decision slicing about 100,000 barrels a day from the amount Canadians had been exporting was that the higher import level "disrupted the relationships among the American refiners."

Some domestic refiners, he said, had been getting their oil cheaper than others because the Canadians had been exporting about 800,000 barrels a day to the United States.

STUDY OPENED

At the same time, Akins said that once an agreement is concluded between the United States and Canada calling for a joint policy on energy—oil, gas, electricity—"there can be a relaxation" of the import quota on oil. But, he added, "there is no question of twisting an arm" to try to force Canada to agree to such a policy.

The briefing had been called to inform newsmen of what President Nixon's Oil Policy Committee had been considering since its formulation in February. Nixon had ordered the committee—which comprises members of several cabinet agencies—to study recommendations made after a year-long study of oil import policies, and to determine which could be carried out.

The principal recommendation of the study was that the present oil import quota program be scrapped in favor of tariffs on oil imports.

William C. Trupner, an official of the Office of Emergency Preparedness, who is directing staff work for the policy committee, declined to give a timetable for effecting the changes recommended—or to say whether he felt the tariff system ever would go into effect. "We possibly can look forward to effecting a lot of long-term changes by 1975," he said.

Trupner said staff papers have been prepared on such problems as:

1. Improve treatment of petrochemical feed stocks—petroleum and oil products used for chemical, rather than other uses.
2. The possibility of increasing imports of No. 2 fuel oil that would lower the price of this fuel which is much in demand especially in New England.
3. What to do about Foreign Trade Zones.
4. Residual oil importation. Residual oil is used by power plants, and there is a growing demand for such oil that is low in sulphur content as a means of reducing air pollution.

Most of the questions at the briefing, however, dealt with the Canadian oil import quotas.

Akins said Canada's recent decision to assert sovereignty over Arctic waters, and the U.S.-Canadian differences over the border off Maine "had nothing to do with the oil import decision." He said the Canadians "don't connect the two issues and neither do we."

SECURITY INVOLVED

Trupner said one reason for limiting Canadian imports was "a threat to national security . . . the flow of oil so far in excess of the previously agreed upon level was so disrupting the distribution of oil throughout the United States that it was making our job more difficult . . . in moving toward an orderly import program."

Asked about the effect of the move on consumers—Canadian oil is about 50 cents a barrel cheaper than domestic oil—both Trupner and Akins said there would be none. Trupner said the import committee has "a responsibility to take the leadership in assuring that the consumer interests are protected beyond the price at the pump." Akins said there was no evidence savings by refiners using the cheaper Canadian oil were being passed on to consumers.

He said of the import-limiting move: "In a way it was a protectionist measure . . . this is not necessarily a sin."

OREGONIANS COMMENT ON NIXON ENVIRONMENTAL LEGISLATION

Mr. HATFIELD, Mr. President, when I joined the Senator from Pennsylvania (Mr. SCOTT), as a cosponsor of the Nixon administration "environmental package," I wrote a number of Oregonians to ask their comments on these proposals.

Three of the replies are of particular importance. Gov. Tom McCall commented favorably on these proposals. A respected member of the Environmental Quality Commission, Mr. Herman P. Meierjürgen, of Nehalem, addressed favorable comments to this group of bills. Mr. Larry Williams, who wears two hats—of the Sierra Club and of the Oregon Environmental Council—also supports these proposals. This is an indication of the support for such legislation in Oregon.

I might add that the ballot measure referred to in the letters is yet another measure of the commitment to clean water and clean air in my State. House Joint Resolution 14, also called Ballot Measure 4, will be voted on at our Oregon primary, and I certainly hope Oregonians will support it completely.

I ask unanimous consent that the three letters be printed in the RECORD.

There being no objection, the letters were ordered to be printed in the RECORD, as follows:

OFFICE OF THE GOVERNOR,
Salem, Oreg., April 10, 1970.

Hon. MARK O. HATFIELD,
Senate Office Building,
Washington, D.C.

DEAR MARK: I appreciated having my attention called to the package of environmental protection legislation contained in S. 3466 through S. 3472 as reported in the Congressional Record. My comments follow:

S. 3466: Providing that automobiles have mandatory testing for emissions to meet standards is desirable. I think a good way to proceed would be to require tuning to acceptable emission standards prior to annual licensing.

I support the idea of government establishing the formula for fuel, and I presume states could set higher standards. In any event, any existing state standards should be recognized, so federal action would not result in a lowering of current state requirements.

S. 3467: This appears to be in good order, and I have no comment.

S. 3468: I would like to see provisions for financing construction projects also provide for refinancing which can be extremely helpful in both inflationary or recessionary periods. The concept of this legislation is similar to our HJR 14 upon which voters in Oregon will cast ballots in the May primary and, of course, it is my earnest hope that this financing program receives overwhelming support.

S. 3469: I would suggest that this legislation be broadened to provide for pilot programs, along the line of setting up a complete solid waste management industrial complex which could assist in answering many questions.

S. 3470: If there is any opportunity to bring all of our water programs together, this might be a vehicle to start in that direction. It also occurs to me that since land use planning is the single most important action we need to implement for achieving proper development with environmental protection, this act could assist by providing a 10% bonus in grants where land use planning and zoning had been accomplished.

S. 3471: This appears to be acceptable, and I have no comment.

S. 3472: I enthusiastically support this action which would give a firm commitment to an expanded program of funding and, of course we would endorse the higher percentage of federal participation which, in effect, could reduce the local share to 25%, and which would tie in admirably with HJR 14 financing to which I have already referred. Best wishes.

Sincerely,

Tom, Governor.

DEPARTMENT OF
ENVIRONMENTAL QUALITY,
Portland, Oreg., April 9, 1970.

Hon. MARK O. HATFIELD
U.S. Senator,
Washington, D.C.

DEAR SENATOR HATFIELD: Yours of March 24 relating to the "environmental package" proposals is hereby acknowledged and comments concern them follow:

S. 3466—The Environmental Quality Commission of Oregon has recently begun the task of establishing ambient air standards for the State. Early attention has been given to particulates from all sources including motor vehicle emissions. To follow soon are levels of fluorides and other industrial air pollutants. The problem is most complex and I feel that any standards we set will be revised many times before they become reasonably acceptable.

The need for the Federal Government's entry into this field is self-evident. Interstate auto traffic is heavy in our State during the tourist season and a nation wide exhaust emission standard is imperative. The problem is now noticeable in the Rogue

with a great deal of interest by the African peoples and by many of us here at home.

Since his return, the Secretary has reported his findings to the President in a widely circulated and discussed policy statement which reveals his personal interest in, and sensitivity to, the issues confronting this emerging continent. I have heard many fine reports from African friends, from journalists who accompanied Secretary Rogers, and from "Africanists" in this country, on the Secretary's trip. I have also had an opportunity to read the policy statement for myself. Its emphasis on economic development, its expressions of concern and support for self-determination, are all indications of a renewed and determined American commitment to support change and improvements in the conditions of African life.

I commend the Secretary for his interest and involvement in shaping our policy toward an area of the world which has contributed much to world culture and which offers great promise for the future.

In addition, I ask unanimous consent that an article on our African policy, written by William C. Selover of the Christian Science Monitor, be printed in the RECORD.

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

U.S. HEEDS REALITIES ON AFRICA (By William C. Selover)

WASHINGTON.—In markedly subdued tones, the Nixon administration has quietly launched its "new approach" to the troubled, emerging continent of Africa.

Fortunately, even the State Department's own experts on Africa are left wondering what's so new.

In the long-awaited report on his precedent-setting tour of Africa, Secretary of State William P. Rogers outlined the administration's Africa policy.

Essentially, it is this:

Continue to provide foreign aid at "not less than the present level."

Create a fresh "climate" in Africa's developing nations where U.S. private investors may freely do business.

Actually, most observers agree that little in the report is new.

EMPATHY GENERATED

But it comes on the heels of the first visit ever by an American secretary of state to that continent. And the Rogers statement does, in fact, go into some detail about precisely the steps the United States Government can take to aid Africa by indirect means, such as relaxed trade and tariff policies.

This is considered here all to the good.

Mr. Rogers reportedly empathized deeply with the sentiments of emerging black-led nations during his visit. The U.S. decision to close the American consulate in Rhodesia was reportedly urged by the Secretary of State in strongest terms on his return.

All of this gave some hope to African diplomats here that the United States was genuinely interested in an area that has always suffered from U.S. neglect.

But informed State Department sources are concerned that America's first veto ever, cast last month at the United Nations (It was against an Afro-Asian proposal condemning Britain for failing to use force to overthrow the white minority regime on Rhodesia) may have destroyed all the goodwill built up by the Rhodesian decision among

the African leaders. In this context, African reception to the Rogers statement here is cautious—even disbelieving.

U.S. sources argue privately that the veto was not necessary, since Britain blocked the resolution by its negative vote anyway.

On the other hand, the veto signaled a new era of candor and realism in U.S. relations with Africa. And this may gain some points for the United States, officials here speculate.

"We were arguing against the resolution in the halls of the United Nations. Everybody knew that," said one State Department official. "To abstain after that would have been hypocritical."

Apparently, the Secretary of State also believes that it would be hypocritical to promise an enlarged foreign-aid package to Africa, while sentiments in Congress are set against such moves.

Again Mr. Rogers' strong endorsement of greater private investment is another signal of cold realism creeping into United States policy in Africa.

In effect, without any hope of increasing direct government aid, which runs to about \$350 million a year, the Secretary of State simply salvaged the situation by finding an alternative.

PRIVATE INVESTMENT STRESSED

"We believe," he reported, "that private investment can and should play a growing role, above and beyond public assistance, in African development."

At the same time, Mr. Rogers shifts some of the burden on African governments.

Businessmen, he said, "pay great heed to African government programs to foster a favorable investment climate."

He suggested that "an investment code, assurances from the African government and reasonable entry, work, and tax arrangements can make the difference between an American's willingness or unwillingness to work out an investment."

In 1968, the last year for which figures were available, U.S. foreign investment in Africa amounted to \$2.673 billion. But an enormous part of that went to areas outside of the developing, black-led nations. Some \$692 million, for instance, went to South Africa and, \$678 million went to oil-rich Libya.

GROWTH SOUGHT

But there has been a steady growth of private investment in nations recently independent. By the end of 1968, for example, the total value of U.S. private investment in member countries of the Organization of African Unity amounted to about \$2 billion.

Mr. Rogers believes this figure can be increased dramatically.

Already, according to Mr. Rogers, programs are under way to stimulate private American investments in manufacturing, agro business, and commerce.

Mr. Rogers believes that the U.S. has been increasingly successful in getting American investors to look at large-scale agriculture projects in Africa. In the last three years, he says, American companies have conducted 27 preliminary studies of such projects which led to 10 in-depth studies and 4 investment commitments. Several more, he says, are being negotiated.

OTHER FIELDS URGED

Also, he reports new efforts to get "medium-size American investors" to explore other African markets—such as flour milling, bus transportation, food processing, shrimp fishing, and plywood manufacturing.

The Secretary of State also believes that the new Overseas Private Investment Corporation, which will provide guarantees, equity, local currency loans, and investment advice, will be "an important element in stimulating further American private investment in Africa." The Overseas Private Investment Corporation was proposed earlier and

approved by Congress in Mr. Nixon's overall foreign-aid reform.

TARIFF STEPS WELCOMED

He also offered the President's "generalized tariff preferences for all developing nations" as one step to freer trade with African states, and he welcomed the steps by the Central African Customs and Economic Union to reduce general tariffs on most imported goods by 50 percent.

"This measure," he says, "offers the prospect of greater American trade with these countries."

"We seek a relationship of constructive cooperation with the nations of Africa," Mr. Rogers explains, "a cooperative and equal relationship with all who wish it. . . . We want no military allies, no spheres of influence, no big-power competition in Africa."

SUPPORT FOR CLEAN LAKES

Mr. MONDALE, Mr. President, this month, concern over our environment reached its highest level in history.

Millions of citizens rallied across the Nation April 22 to dramatize the urgency of the crisis. I am hopeful that this great display of public support for a better environment will be translated into affirmative action by the Congress this year. Passage of a number of pending bills could lead to the stabilization and improvement of the condition of our air, land, and water.

I am particularly concerned about the steady decline of our waterways in recent years. Earlier this month I introduced a measure designed to revitalize the polluted lakes of America, and I am gratified by the support it has received.

Twenty-six Senators are cosponsoring it. I have received favorable mail on it. The bill has also been editorially endorsed by several major newspapers in my home State.

The latest editorial is from the Rochester, Minn., Post-Bulletin of April 16.

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

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

MONDALE'S BILL OFFERS HOPE FOR MINNESOTA'S, NATION'S AILING LAKES

Sen. Walter Mondale's introduction last week of legislation in Congress to speed lake improvement and restoration could do much to soothe Minnesota's troubled waters.

Following in the wake of the recently passed Water Quality Improvement Act—which provides pilot research on lake pollution abatement—the new legislation would increase federal aid to upgrade treatment plants now discharging effluent into endangered lakes. It also provides funds to aid reclamation of presently polluted lakes.

With an estimated 100,000 lakes throughout the nation in trouble, the legislation is obviously of more than just Minnesota's interest, but this state could certainly benefit from its passage.

Under Mondale's proposal, federal grants for treatment plants located near lakes could amount to 65 per cent of the cost, provided the state furnished 20 per cent. To be eligible, enforceable water quality standards must be set and maintained. Only treated water could be discharged and pre-treatment of industrial waste would be required where necessary.

Other provisions would authorize cooperation between the state and the Corps of Engineers and the Bureau of Reclamation, and

would call for added research in lake reclamation: A separate fund could provide, over a four-year period, for dredging and removal of sludge and for shoreline improvement.

Minnesota—with many lakes—has many problems, and the soft-water lakes in northern Minnesota are particularly vulnerable to pollution. One reason is that they lack minerals to precipitate out some of the pollutants, as is the case in the hard-water lakes of this area.

But even in southern Minnesota—with higher populations, more industry and intensified agriculture—the problem of lake pollution is acute, largely because lakes have no means of disposing of chemical additions as do rivers.

Belated recognition of the state's lake problems is found in the Minnesota lakeshore zoning provisions, now going into effect. But this is a preventive measure, and of little benefit to the lake already in trouble. It is here that the Mondak legislation could prove of real value to lakes in Minnesota and many other states.

Pollution from growing numbers of lake-side homes, municipal and industrial waste and agricultural runoff have clogged too many Minnesota lakes with silt, weeds and algae. Their reclamation is generally beyond local means and the Mondak legislation holds the only present prospect of any substantial relief of the problem.

A few years ago a bill to reclaim lakes, without offering industrial or agricultural benefits, would have stood scant chance of passage. But newer awareness of broader ecological values has increased its chances substantially. Certainly it would be of benefit to Minnesota and many other states and deserves support.

HELIUM CONSERVATION

Mr. HRUSKA. Mr. President, a decade ago, the Senator from Colorado (Mr. ALLOTT) played an important part in launching a program to stop the needless waste of a rare and unique resource, namely, helium. This wondrous natural resource was contained in certain natural gas deposits in high enough quantities to make it economically extractable prior to the burning of the natural gas. Ultimately, these particular natural gas fields will be exhausted; but, the purpose of the helium conservation program is to extract and store as much of this vital resource as can be cheaply extracted from these unique gas fields which are rich in helium content.

As originally envisioned, the program was to be totally self-financing. The Government would buy the helium at approximately \$11 per thousand cubic feet and would sell it for \$35 per thousand cubic feet. The price spread was intended to take care of the storage charges and the cost of borrowing money, since Government purchases would exceed annual helium requirements. Government storage now exceeds 24 billion cubic feet of contained helium.

However, as we all know, the cost of borrowing money has gone up dramatically over the past few years and this has cast a heavy burden upon the self-liquidation of the helium conservation program. In addition, certain of our short term space and military needs have fallen off sharply, thus reducing revenues from sales. Further, some Government contractors have purchased helium from private suppliers at a price

lower than \$35, but considerably more than the \$11 paid by the Government. This has tended to further reduce Government sales of helium. It should be noted, however, that supplies of helium outside of the Government conservation program are quite limited by comparison. Nonetheless, this temporary incursion on the helium market with respect to Government contractors has weakened the fiscal posture on the conservation program, at least temporarily.

There are those who have advocated the termination of the helium program and the liquidation of the helium asset. I reject such suggestions and believe that it would be folly to follow such a course. Senators know that helium has many exciting potential uses, many of which will have a direct bearing upon the restoration of the quality of our environment and the improvement of our standard of living. To mention just a few of the many environmentally oriented applications of helium would include: the generation of electrical power by both nuclear and magnetohydrodynamic methods, super conductive transmission of electricity, and helium is essential in cryogenics and in the exploration of the deep sea.

Mr. President, on March 23 and 24 at the Helium Symposium, held in Washington, D.C., many important papers were presented concerning future uses and sources of supply of helium. I recommend them to all who are interested in the important role helium will play in our quest for a more livable environment.

I ask unanimous consent that one of those statements, an address by Senator GORDON ALLOTT at the symposium luncheon, be printed in the RECORD.

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

ADDRESS BY SENATOR GORDON ALLOTT

As a co-author of the 1960 Helium Amendments, the Act which set up the Helium Conservation Program a decade ago, I have more than a passing familiarity with the wondrous natural resource and its value for the future.

Speaking before this group presents an almost irresistible temptation to make some jokes about the relationship between your product and the politician's job. I am going to resist that temptation. I do not want to do anything that would lead you to believe that politicians specialize in speeches that are like helium—lighter than air. Besides, I can't think of one that would get off the ground.

But if I might be permitted a pun, I want to say how pleased I am to be addressing such a "resourceful" audience. You are the sort of people who turn America's natural materials into real natural resources. You are responsible for keeping America productive.

This is a great responsibility.

As part of your task, you must spend a good deal of time thinking about underground matters. But, as I am sure you know, you and others like you are right in the middle of an above-ground storm. This storm is associated with this year's magic word—"ecology".

There are those who think we honor the earth—and do mankind a favor if we left the earth—including the material beneath the surface untouched by human hands.

There are some extremists who would like to cast people like you in the role of villains. Well, I want to leave no doubt where I stand on this matter. I support the resourceful

people who are developing America's resources.

You know, the West is still one area of America where opinions are firm and clear—where men are not afraid to say what they think—and where differences can sometimes be pretty stoutly battled, at least in the political arena.

But one area in which we have developed a common concern is the importance of natural resources, whether they be water, timber, grazing lands or minerals in the earth.

There is a very basic cause for this common theme—it is a matter not only for the growth development of our respective states, but of survival.

Some of our western states are very arid and the matter of water supply has been a vital concern ever since the land was settled. In fact, the settling of the West would not have been possible had it not been for the adoption of an innovative concept of water law and conservation. It remains so today. In any case, we in the West know by hard lesson that water is life.

The great national park system got its start in Yellowstone, Wyoming, and Taylor Grazing Act resulted from western desires to conserve the grass lands and prevent over grazing. Conservation lessons in the West have come from necessity—the mother of invention.

For years, however, easterners were not deeply concerned with this kind of problem. The eastern industrial states and their representatives in Congress often looked at the West's concern over conservation and resources as a parochial outlook, something that went over with the home folks, but not really "national".

All that has changed now. The East is learning the same lessons the West has learned over the past century. Conservation is a national problem, with a global impact.

In our area we had to learn, sometimes by the most painful of trial and error methods, of the need to balance human actions in the conservation field. We had to learn first to solve the basic problem, then to weigh the effect on the surrounding ecology; we had to assess our neighbor's problems as well as our own.

Thus, we have had to balance construction of dams against the flooding of wildlife habitats, or destruction of scenic areas. However, in some instances we found we could not only provide people with water and power, but could also improve the habitats of fish and wildlife. We have had to point the way in meeting the challenge of conserving our resources and providing for our human needs. Only recently has this come to be regarded as national in scope. For resources have a way of transcending local boundaries, and becoming the concern of the region and the Nation.

Thus, it is no accident that the West—where magnificent vistas abound—became the region that had to learn pragmatically about a word that is now capturing the imagination of the writers in New York.

We sometimes find it amusing to hear the same oracles expounding upon the virtues of conservation who not so long ago were calling western conservation programs "boondoggles".

The word is "environment" and whether it happens to be an "in" word or not makes no difference—environment is important and increasingly so to the quality of life in this Nation.

You know, ten years ago the only time you heard the word "environment" was when someone else used the word "heredity".

But this problem of ecology, of managing the environment, is indeed a critical challenge for every one of us.

This land of ours, which we have taken for granted for so long, has only so much to give. It is not an unlimited treasure to be plundered at will.

The Chemehuevi Tribe, as an organized modern entity, has not existed for many years. A sizable number of individuals, although probably still a minority, are present-day members of the Colorado River Indian Tribe. An accurate summation of Indians who possess Chemehuevi Indian blood will not be known until the roll proposed in this Act is prepared. We would estimate that on the basis of preliminary surveys, the rolls should contain the names of 1200-1400 Indians of Chemehuevi ancestry. Because an up-to-date roll of Chemehuevi Indians does not exist, we would propose adding on page 3, following section 5, a new section 6 as follows:

"Sec. 6. The Secretary may make appropriate withdrawals from the judgment funds and interest thereon, using interest funds first, to pay costs incident to carrying out the provisions of this Act."

The Chemehuevi Indians have been badly fractionated over the years. In May 1968, interested Chemehuevis were drawn together for the purpose of selecting a committee to seek solutions to their problems. This committee, which includes a cross-section of all groups of Chemehuevis has worked hard in attempting to organize a modern tribe under a constitution and bylaws. On August 24, 1968, a Special Committee passed Resolution R-68-1 requesting a per capita distribution of their judgment fund. The resolution is enclosed.

A socio-economic report from the Chemehuevi Tribe is not enclosed. As indicated previously, the Indians of Chemehuevi ancestry are in the process of organizing as a modern entity. A majority of those who will probably be eligible under new membership rules are presently members of other tribes. Until organization is completed and the beneficiary interest in the Chemehuevi Reservation is settled, we shall not have the information available to make a socio-economic report.

The Bureau of the Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely yours,

FRED J. RUSSELL,
Under Secretary of the Interior.

SENATE RESOLUTION 424—RESOLUTION SUBMITTED TO EXTEND DEEPEST SYMPATHY TO THE PRESIDENT AND THE PEOPLE OF PERU

Mr. SCOTT submitted a resolution (S. Res. 424) to extend deepest sympathy to the President and the people of Peru, which was considered and agreed to.

(See reference to the above resolution when authorized by Mr. SCOTT which appears later in the RECORD under the appropriate heading.)

INCREASE OF THE PUBLIC DEBT LIMIT—AMENDMENT

AMENDMENT NO. 743

Mr. CURTIS (for himself, Mr. HRUSKA, Mr. FANNIN, Mr. PROXMIER, Mr. THURMOND, and Mr. WILLIAMS of Delaware) submitted an amendment intended to be proposed by them, jointly, to the bill (H.R. 17802) to increase the public debt limit set forth in section 21 of the Second Liberty Bond Act, which was ordered to lie on the table and to be printed.

POSTAL REORGANIZATION ACT—AMENDMENT

AMENDMENT NO. 744

Mr. FANNIN submitted an amendment, intended to be proposed by him, to the bill (S. 3842) to improve and modernize the Postal Service and to establish the U.S. Postal Service, which was ordered to lie on the table and to be printed.

INDEPENDENT OFFICES AND DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT APPROPRIATION BILL, 1971—AMENDMENTS

AMENDMENT NO. 745

Mr. MONDALE, Mr. President, the independent offices and Department of Housing and Urban Development appropriation bill for fiscal year 1971 has been reported by the Senate Appropriations Committee. I am today submitting an amendment to this bill, for myself, Senator CASE, Senator JAVITS, and Senator PROXMIER.

The purpose of this amendment is to prohibit the use of any part of the NASA appropriation for design and definition of the space shuttle/station. Accordingly, the amendment reduces the appropriation for research and development by \$110 million, the amount requested by NASA for design and definition of the shuttle and station.

The proposed shuttle is to be a reusable space vehicle, designed to transport men between earth and a space station in earth orbit. NASA hopes that the station will be capable of supporting men in space for long periods of time.

This project represents NASA's next major effort in manned space flight. The \$110 million requested in fiscal year 1971 for design and definition is only the beginning of the story. NASA's preliminary cost estimates for development of the space shuttle/station totals almost \$14 billion, and the ultimate cost may run much higher. Furthermore, the shuttle and station are the first essential steps toward a manned Mars landing—a program which could cost anywhere between \$50 to \$100 billion.

I have seen no persuasive justification for embarking upon a project of such staggering costs at a time when many of our citizens are malnourished, when our rivers and lakes are polluted, and when our cities and rural areas are decaying.

Proponents of the space shuttle station argue that the \$110 million requested for this project is only for design and definition—that it is only "preliminary work" to determine whether we should proceed further with the project.

But this is not a minor expenditure; \$110 million is more than the administration has budgeted for fiscal year 1971 to combat air pollution; it is more than the cost of the special milk program, which the President wants to terminate as an "economy measure"; and it is twice what we spend for one of our most effective antipoverty efforts, the legal services program.

And if the past is any guide, NASA will ask Congress next year for several hundred million more for this project, and return again and again for hundreds of millions to continue its development. Congress will then be told that it is too late to stop the project—too late because of the enormous funds already invested.

I do not think that the American taxpayer is ready to back into a commitment to spend billions of dollars to support men in a suitable space environment when our environment on earth desperately needs attention; and I do not think that he is ready to back into a commitment to land a man on Mars.

Even if it were clear that the American people were willing to pay for this "new era in manned space flight," it is premature to begin development of the shuttle and station. For this project is based on the assumption that man can function effectively in a space environment for long periods of time. At this point, however, the feasibility of long-term manned space flight is undetermined. Indeed, the recent Soyuz space mission raised doubts in the minds of both Soviet and American scientists about man's adaptability to such long-term space flight.

NASA hopes to settle this question with its "sky lab" missions—which will place men in earth orbit for up to 56 days. But these experiments will not be completed until 1973, and until this time, many unanswered questions about the biomedical effects of long-duration space flight will remain.

Thus, even aside from the basic question whether this country should begin a new, large-scale manned space effort, it would be a mistake to begin such an effort in this fiscal year. After spending millions of dollars to develop a space shuttle/station, it may be determined that long duration space flights are not feasible.

I do not oppose future space exploration. As a former member of the Senate Aeronautical and Space Sciences Committee, I know the value of such exploration. But I also know that some of our most eminent scientists strongly maintain that we must achieve a better balance between manned and unmanned flights. For example, Dr. James Van Allen and others argue that unmanned flights are far cheaper and yield better scientific data than manned flights.

Unfortunately, NASA plans to move further in the direction of emphasizing manned space flights. The space shuttle/station will insure the dominance of the manned space program for years to come. In reaction to NASA's preoccupation with manned flights, an impressive list of scientists have already resigned from the space program—including the chief scientist, the director of the Lunar Receiving Laboratory, and two scientist-astronauts.

Congress must reexamine the premises of our entire space program. In particular, before appropriating funds for development of this space shuttle/station—which will create a commitment to costly manned space operations—we must first

determine whether man can even survive long-duration flights. At that time, we can then decide whether this Nation is willing to bear the burden of the enormous costs required for such an ambitious manned space effort.

I urge all those who are concerned about distorted priorities to support our amendment.

Mr. President, I ask unanimous consent that the text of the amendment be printed at this point in the RECORD.

The PRESIDING OFFICER (Mr. Boggs). The amendments will be received and printed, and will lie on the table; and, without objection, the amendments will be printed in the RECORD.

The amendments (No. 745) are as follows:

On page 20, line 11, strike out \$2,606,100,000 and insert in lieu thereof \$2,496,100,000.

On page 20, line 12, insert before the period a colon and the following: "Provided, That this appropriation shall not be available for the design or definition of any space shuttle or space station".

AMENDMENT OF THE FOREIGN MILITARY SALES ACTS—AMENDMENTS

AMENDMENT NO. 746

Mr. JACKSON (for himself, Mr. McGEE, and Mr. Packwood) submitted an amendment, intended to be proposed by them, jointly, to the bill (H.R. 15628) to amend the Foreign Military Sales Act, which was ordered to lie on the table and to be printed.

NOTICE OF MOTION TO SUSPEND THE RULE—AMENDMENT TO DEPARTMENT OF AGRICULTURE AND RELATED AGENCIES APPROPRIATION BILL, 1971

AMENDMENT NO. 747

Mr. HOLLAND submitted the following notice in writing:

In accordance with XL of the Standing Rules of the Senate, I hereby give notice in writing that it is my intention to move to suspend paragraph 4 of rule XVI for the purpose of proposing to the bill (H.R. 17923) making appropriations for the Department of Agriculture and related agencies for the fiscal year ending June 30, 1971, and for other purposes, the following amendment, namely:

Page 26, after line 23, insert the following:

INDEMNITY PAYMENTS TO DAIRY FARMERS

For necessary expenses involved in making payments to dairy farmers who have been directed to remove their milk from commercial markets because it contained residues of chemicals registered and approved for use by the Federal Government, \$500,000: *Provided*, That none of the funds contained in this Act shall be used to make indemnity payments to any farmer whose milk was removed from commercial markets as a result of his willful failure to follow procedures prescribed by the Federal Government.

Mr. HOLLAND also submitted an amendment, intended to be proposed by him, to House bill 17923, making appropriations for the Department of Agriculture and related agencies for the fiscal year ending June 30, 1971, and for other purposes, which was ordered to lie on the table and to be printed.

(For text of amendment referred to, see the foregoing notice.)

ADDITIONAL COSPONSOR OF AMENDMENT

AMENDMENT NO. 739

Mr. MANSFIELD. Mr. President, I ask unanimous consent that, at the next printing, the name of the Senator from New York (Mr. JAVITS) be added as a cosponsor of amendment No. 739 to the postal reform bill.

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

NOTICE OF HEARINGS IN UTAH ON TAR SANDS BILLS

Mr. MOSS. Mr. President, on behalf of the Subcommittee on Minerals, Materials, and Fuels of the Senate Interior Committee, I announce that public hearings will be held July 13 in Salt Lake City, Utah, on S. 581 and S. 582. These are twin measures I introduced to permit the development of the very substantial tar sands, or bituminous sands, deposits of Utah. These deposits are a highly valuable resource for meeting our ever-increasing needs for supplies of oil and gas within our own country.

When in 1960 I participated in writing the bituminous sands amendments into our major overhaul that year of the Mineral Leasing Act, I thought the legal problem was solved concerning the development of these deposits. However, in operation, problems arose over the potentially conflicting rights of the oil and gas lessee and those of the bituminous sands lessee.

The bituminous sands lessee can mine the sands and extract oil from them. But does he have the right to extract the oil from the sands by the in situ method? Or does this right belong to the oil and gas lessee who traditionally has been able to introduce pressure maintenance, fire flooding, or other methods to increase recovery from an oil well? Since both of these leases are issued on the same tract of land, this is a very real problem.

In 1966, in answer to my request, an opinion was rendered by the Department of the Interior that the bituminous sands lessee could develop a deposit by the in situ method. But because of the possible legal complications arising from this problem, the Department of the Interior has not issued any more bituminous sands leases. This is holding up the development of one of Utah's great mineral resources.

In this Congress the bills I introduced, S. 581 and S. 582, offer a choice of different legislative solutions.

The first authorizes the Department of the Interior to issue a single hydrocarbon lease which would cover all hydrocarbon removal from beneath the surface. The second bill authorizes the Department to issue both a bituminous sands lease and an oil and gas lease covering the same tract of land, but issued to a single party.

Only one of these bills needs to be passed since they are different solutions to the same problem. The hearing in Salt Lake City is being held to engender discussion of the problem so that we can find the best solution.

Persons interested in offering views or recommendations at these hearings are requested to notify the staff of the

Interior Committee, room 3106, New Senate Office Building, or my Salt Lake City office, 5430 Federal Building.

NOTICE OF HEARINGS ON CALIFORNIA OIL SPILL BILLS

Mr. MOSS. Mr. President, on behalf of the Minerals, Materials, and Fuels Subcommittee of the Senate Interior Committee, I announce that public hearings will be held in the Interior Committee room July 21 and July 22 on a number of bills growing out of the tragic oil spill last year from a Federal lease off Santa Barbara, Calif. The most recent of these bills, S. 4017, is a measure drafted and submitted by Secretary Hickel and introduced on June 24 by Senator MURPHY of California.

S. 4017 provides for a legislative taking of 20 of the 72 Federal leases in the Santa Barbara Channel, and the unitization of three producing leases there. Compensation to the holders of the canceled leases, which probably will amount to some hundreds of millions of dollars, is to be made from a special fund established in the Federal Treasury by the bill. Money for the fund will come from increased production of oil and gas from naval petroleum production No. 1, known as Elk Hills, and sold on the open market by competitive bidding.

In addition to the administration bill, Senator CRANSTON's S. 3093, creating marine sanctuaries, will be the subject of the July 21-22 hearings, as will S. 3516, by Senator MUSKIE; S. 3351 and S. 2516 by Senator MURPHY also; and S. 1219 by Senator CRANSTON.

While S. 4017 was submitted by executive communication which constitutes a statement of the administration's position, no reports have been received on any of these other measures except S. 1219, on which the administration's position was negative.

The Interior Committee is inviting Secretary Hickel to appear personally at our hearing and discuss this measure as well as the other bills. It is the committee's earnest hope that the Secretary will accede to our request and be with us personally.

It will be recalled that the subcommittee has held two previous hearings on matters related to the Santa Barbara spill. On May 19 and 20, 1969, we held hearings in Washington, and on March 13 and 14 this year we went out to Santa Barbara and held hearings in the area itself.

All interested Members of Congress are invited to participate in these hearings, as are members of the public who wish to express views or offer constructive suggestions. It is requested that the committee staff be notified.

ADDITIONAL STATEMENTS OF SENATORS

NEVER FORGET

Mr. HRUSKA. Mr. President:

The world will little note, nor long remember, what we say here, but it can never forget what they did here.

So said our President at Gettysburg, many years ago, as he dedicated that

the Senator from Rhode Island (Mr. PASTORE), and his distinguished ranking minority colleague, the Senator from Colorado (Mr. ALLOTT). They have performed a most noteworthy service for all Americans.

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

Mr. CRANSTON. I yield to the Senator from Arkansas.

Mr. FULBRIGHT. Mr. President, again I want to say how much I appreciate the work the Senator from California has been doing in this matter of additional funding for Veterans' Administration hospitals.

On several occasions I have spoken on the need for additional funding for Veterans' Administration hospitals. I spoke at length on this subject on June 9 and indicated my support for Senator CRANSTON, who was taking the lead in trying to obtain more funds for upgrading and improving veterans care.

I understand that the Appropriations Committee has recommended an increase of \$100 million in the medical and hospital appropriation categories, and this amount, plus the \$25 million added in the House, should permit significant improvements in the care available in our VA hospitals.

I am pleased that the committee has made this recommendation and hope that it will be approved by the Senate. Further, I hope that having approved this additional \$100 million, which is vitally needed for maintaining and improving VA hospitals, that the Senate conferences will not recede from this figure when the bill goes to conference.

Mr. President, I ask unanimous consent to have printed in the RECORD a table showing the estimated allocation to Arkansas if the additional funds recommended by the Senator from California (Mr. CRANSTON) are approved.

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

Estimated allocation to Arkansas of Veterans' Administration fiscal 1971 budget increase

Additional medical care personnel	\$104,300
Elimination of equipment, maintenance and repair backlog	881,500
Elimination of dental case backlog	38,500
Air conditioning	280,000
Total	\$1,304,300

Mr. FULBRIGHT. Mr. President, again I thank the Senator for yielding to me and for doing what he has done in bringing this matter to the Senate.

Mr. CRANSTON. I thank the distinguished Senator from Arkansas very much for his helpful support throughout this effort.

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

Mr. CRANSTON. I yield to the Senator from Florida.

Mr. GURNEY. Mr. President, I wish to commend the distinguished Senator from California (Mr. CRANSTON) for the lead he has taken in obtaining more funds for Veterans' hospitals. Certainly these funds are greatly needed.

We have had many recent reports concerning conditions in our veterans hospitals. My distinguished colleague from California (Mr. CRANSTON) recently testified before the Independent Offices Subcommittee of the Committee on Appropriations and gave a vivid and revealing recitation of how conditions have been allowed to deteriorate in many of the veterans hospitals. In my judgment, it is shameful for our Nation to let the deplorable conditions arise and persist. For several months now, I have been in contact with officials at the Veterans' Administration, Department of Health, Education, and Welfare, and the White House. On each occasion, I have been assured of their respective concerns for the problems and have been equally assured that help was forthcoming. The overriding problem is money. President Nixon has asked for additional money for fiscal year 1971 for the hospitals.

Our appropriations subcommittee under the leadership of my distinguished colleague from Rhode Island (Mr. PASTORE) has recommended an increase of \$100 million and the full committee in its June 24 report, backed this increase. I rise now to support the committee recommendations.

We are in the midst of reassessing our national priorities. In doing so, we must not forget that our veterans deserve great consideration because of their sacrifices and their devotion to our country. We must assign our wounded or disabled veterans the highest priority—they deserve it and we are letting them down if we do not recognize it. It is universally recognized in this Chamber, I think, that the men who have shed their blood for the country are entitled to the best medical care we can provide.

Let us honor our commitment to our wounded men and do what is necessary. Our committee and our distinguished colleagues on the committee have studied the matter, examined the complaints and reports of deteriorating care and have made their recommendation. It is a reasonable and a sensible and a humane recommendation. Let us act on their recommendation and vote it into law.

I would make one additional point—we can safely delay many projects such as dams, or office buildings with no loss to anyone—except in time. If we neglect such a project one year, we can get to it the next. This is not the case with veterans medical care—once that care is denied, it is denied for all time. Caring for wounds and war injuries and service-connected disabilities cannot wait. Help is needed now and at once. We cannot safely put off til next year what has to be done right now. Let us give our veterans the consideration they deserve.

Mr. CRANSTON. Mr. President, I thank the Senator for his support. I am grateful to him.

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

Mr. CRANSTON. I yield to the Senator from Minnesota.

Mr. MONDALE. Mr. President, it is a great honor to serve as a member of

the Subcommittee on Veterans' Affairs under the creative leadership of the Senator from California. I am convinced the victory which we are winning today for improving hospital care for veterans would not have occurred had it not been for the gifted leadership which the Senator from California brought not only to the work of our committee but beyond that to a broad public understanding of the disastrous conditions in medical care for GI's in our veterans hospitals around the country.

Mr. President, rarely have our distorted priorities been as acutely and vividly revealed as in the recent discoveries of the kind of care being given to our sick, disabled, and wounded veterans. A touch of tragic irony is added to the ever-growing debate over national priorities when we consider how much we will spend to wage wars, and how little we are spending to repair the bodies and minds of our men who must fight them.

While reasonable men may debate the course of the war in Indochina, I think there can be no debate over the enormous debt we owe to the men who have given—and lost—so much fighting in this and other wars. This is not a matter of foreign policy, defense policy, military spending, or the wisdom of what we are doing or have done in Indochina.

This is a matter of human beings—victims of current and past wars—800,000 a year—who enter our veteran's hospitals for care.

Nations make war and peace, but men, young and old, continue to pay the awful price long after they have left the battlefield. Today we give billions of dollars to the battlefield, but we have unconscionably short-changed the hospitals and care facilities which we owe these men.

The Senator from California (Mr. CRANSTON) has done a magnificent job this year as chairman of the Labor and Public Welfare Subcommittee on Veterans' Affairs. He has conducted extensive hearings which have brought to light the shockingly inadequate care our veterans are now receiving. He has also calculated the amount of funds necessary this year to begin overcoming these inadequacies and begin providing the quality of care which we owe these men.

Mr. President, the Senator from California calculated that \$174 million should be added to the administration budget request in order to meet these needs in the VA medical and hospital care programs. When we consider the \$290 million requested for the SST, the \$1.5 billion for the next step in the ABM, \$3.5 billion for new space adventures, and nearly \$30 million just for Pentagon public relation—I hardly think we should question \$174 million more to begin righting our past neglect.

However, I realize that the budget is extraordinarily close this year. Far more important, I realize that the Appropriations Subcommittee on Independent Offices cannot, by itself, reorder our national priorities.

The chairman of this Appropriations Subcommittee, the Senator from Rhode Island (Mr. PASTORE) had done his best in meeting the recommendations of the

Based on the categorization in my testimony, which was in turn based upon our oversight investigation, I have prepared an allocation of the \$100 million to meet those needs of highest priority. I trust that in determining the final allocation of any additional appropriations

the Veterans' Administration will give due consideration to these recommendations.

Mr. President, I ask unanimous consent that a table showing a proposed reallocation of the additional funds recommended by the Appropriations Committee

in the medical care and construction items among the categories recommended in my earlier testimony be printed in the RECORD at this point.

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

REVISED RECOMMENDATIONS FOR \$100,000,000 V.A. FISCAL YEAR 1971 APPROPRIATION INCREASE BASED ON CRANSTON MAY 27 RECOMMENDATIONS TO SENATE INDEPENDENT OFFICE APPROPRIATIONS SUBCOMMITTEE

Item	Cranston original recommendation	Allocation based on committee amendment	Item	Cranston original recommendation	Allocation based on committee amendment
A. MEDICAL CARE ITEM					
1. Funds for 5,000 additional general medical care personnel to bring overall hospital staff ratio up to 1.7:1 (administration added funds for 3,600 positions and House committee/Teague amendment added funds for 1,000 more, equaling 4,600; cumulative personnel increases sought by VA in fiscal year 1968 (3,389), fiscal year 1969 (3,376) and fiscal year 1970 (3,586) total 10,351 less 866 added in fiscal year 1970 yield a deficiency of 9,485; leaving about 5,000 more funded positions needed at approximately \$10,300 per position).....	\$51,500,000	\$25,000,000	5. Education and training:		
2. Funds for salaries to double present spinal cord injury staffing ratios by end of fiscal year 1971 (see item A.5.d. for training funding for these new personnel) (present VA SCI staffing level is 1.02:1 bed; whereas ratio) (excluding research and teaching personnel) at Institute of Physical Medicine Rehabilitation (NYU) is 2.17:1; total salary costs for present SCI 1145 FTE positions is \$11,271,000 for fiscal year 1970; approximately one half of this—increased to \$12,000,000 to cover 6 percent pay raise—is needed for salaries to reach 2:1 ratio).....	6,000,000	3,000,000	(a) Physician's assistants (210 students, 84 instructors, supplies, and nonrecurring costs).....	\$4,830,000	\$2,000,000
3. Funds to eliminate equipment and maintenance and repair backlogs (\$49,000,000 backlog reported to House Veterans Affairs Committee by Administrator of Veterans Affairs on Apr. 14; \$5,000,000 added in fiscal year 1970 supplemental and assuming \$12,000,000 in \$50,000,000 requested by President and granted by House and \$10,000,000 in House committee/Teague amendment were for this purpose, there now is \$27,000,000 provided for this purpose; this leaves \$22,000,000 needed for equipment; in addition, HVAC questionnaire to hospital directors showed in 1970 deferred maintenance and repair needs totalling \$24,600,000 which are as yet unfunded).....	46,600,000	40,000,000	(b) Allied Health Training (1274 trainees, 189 instructors, supplies and other costs, in over 20 specialties).....	9,293,000	2,000,000
4. Funds for dental care to eliminate June 30, 1970, case backlog and meet revised fiscal year 1971 caseload projection based on recent fiscal year 1970 experience (end fiscal year 1970 case backlog estimated at 44,700 examinations and 8,600 treatments and for fiscal year 1971 25,000 more examinations and 20,000 more treatments than originally projected; each fee examination costs \$20.88 and each fee treatment costs \$232.43, requiring \$8,722,000; House committee/Teague amendment restored \$3,000,000 for this purpose, leaving \$5,722,000 still needed).....	5,722,000	5,000,000	(c) Pilot program to train health specialists in intensive care (60 trainees, 24 instructors, equipment, space renovation, miscellaneous).....	1,000,000	1,000,000
			(d) Training of spinal cord injury personnel to double ratio at SCI centers (1145 trainees, 200 instructors, space renovation, supplies, miscellaneous).....	4,000,000	2,000,000
			Subtotal.....	19,123,000	7,000,000
			6. Activation of 1,000 additional nursing care beds (through conversion of unused present hospital beds; fiscal year 1971 includes increase of such 1,155 beds).....	5,915,000	0
			Total.....	134,860,000	80,000,000
			CONSTRUCTION OF HOSPITAL AND DOMICILIARY FACILITIES ITEM		
			1. Expedite design for air conditioning of 43 VA hospitals qualifying for air conditioning but unairconditioned and without designs (listed in app. II; at \$140,000 per design).....	6,000,000	6,000,000
			2. Modernization of Brentwood NP Hospital.....	5,000,000	5,000,000
			3. Design plan for replacement hospital at Brox, New York (8 percent of estimated cost).....	4,000,000	4,000,000
			4. Design plan for replacement hospital at Wadsworth, L.A. VA Center, California (8 percent of estimated cost).....	4,000,000	4,000,000
			5. Unallocated.....		1,000,000
			Total.....	19,020,000	20,000,000
			Grand total.....	153,880,000	100,000,000

Mr. CRANSTON. Mr. President, I do not propose to detail at this time the situation we found in VA hospitals during the investigation or the specifics of the increased demand made on VA hospitals by returning severely wounded Vietnam veterans. Both of these matters are fully discussed in my May 27 testimony which I have incorporated by reference in this statement.

I do wish to stress, however, that the Vietnam war is the most crippling and seriously disabling war we have ever fought. Nearly 150,000 men have been wounded in the Indochina war seriously enough to require immediate hospitalization, and most of them at some point will seek VA hospital or outpatient care. Their demands for this care from the VA are increasing daily and will continue to increase in the next several years.

The work that we have begun today in adding this \$100 million will help meet that demand in the coming fiscal year. But we must insure that the VA hospital and medical system continues to be funded at a level to build upon this strong start in future fiscal years.

I pledge that we on the Veterans' Affairs Subcommittee, continuing our close cooperation with the House Veterans' Affairs Committee, will follow up on our

oversight investigation this past year and be vigilant in examining the VA budget request for fiscal year 1972 and subsequent years.

In my 17 months as chairman of the Subcommittee on Veterans' Affairs I have concluded that one vital precept should govern congressional attitudes toward veterans' programs. That is the principle that the cost of first quality medical care, just as for equitable education and other readjustment benefits, and disability and indemnity compensation, should be counted as a basic part of the cost of war. They are just as integral a part of the cost of war as the money we spend on the weapons and armaments for combat.

I think that two administrations in succession have overlooked this fact. This is a nonpartisan matter. It began under the preceding Democratic administration. It continues under the present Republican administration. In their understandable desire to retard inflation, they ask double sacrifices from the men who have answered their country's call to battle. The war they are fighting is itself a principal cause of inflation. To use inflation as a reason for denying these veterans the level of services and benefits they deserve, is intolerable.

The addition of these badly needed additional funds thus represents not only a signal victory for all veterans but also for all Americans who share fully a total commitment to provide the very best care for those men called upon to make such grave sacrifices in battle.

However, our work is not finished today, for these gains can be dissipated unless the House Appropriations Committee in conference accepts the Senate increase and unless the Bureau of the Budget then releases the funds to the Veterans' Administration. I believe that the overwhelming support within the Senate for this \$100 million increase will be clearly demonstrated on the floor today and should serve as the strongest possible mandate to our eventual Senate conferees on this appropriations bill to hold the line on that \$100 million at all costs. I also believe that overwhelming support should provide clear indication to the administration of the urgency of releasing of all of the funds finally appropriated.

In closing, Mr. President, I wish once more to express my great appreciation for their help and dedication to the cause of caring for our war wounded to the great chairman of the Independent Offices Appropriations Subcommittee,

with the Senate on the disagreeing votes of the two Houses thereon, and that Mr. MILLER of California, Mr. DADDARIO, Mr. DAVIS of Georgia, Mr. FULTON of Pennsylvania, and Mr. MOSHER were appointed managers on the part of the House at the conference.

ENROLLED BILLS AND JOINT RESOLUTIONS SIGNED

The message further announced that the Speaker had affixed his signature to the following enrolled bill and joint resolutions:

H.R. 16739. An act to extend until July 3, 1974, the existing authority of the Administrator of Veterans' Affairs to maintain offices in the Republic of the Philippines;

H.J. Res. 224. Joint resolution to change the name of Pleasant Valley Canal, California, to "Coalinga Canal"; and

H.J. Res. 746. Joint resolution to amend the joint resolution authorizing appropriations for the payment by the United States of its share of the expenses of the Pan American Institute of Geography and History.

MESSAGES FROM THE PRESIDENT

Messages in writing from the President of the United States, submitting nominations, were communicated to the Senate by Mr. Leonard, one of his secretaries.

EXECUTIVE MESSAGES REFERRED

As in executive session, the Presiding Officer (Mr. BYRD of West Virginia) laid before the Senate messages from the President of the United States submitting sundry nominations, which were referred to the appropriate committees. (For nominations received today, see the end of Senate proceedings.)

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.

AMENDMENT NO. 745

Mr. MONDALE. Mr. President, I call up Amendment No. 745, and ask unanimous consent that its reading 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 20, line 11, strike out "\$2,606,100,000" and insert in lieu thereof "\$2,496,100,000".

On page 20, line 12, insert before the period a colon and the following: "Provided, That this appropriation shall not be available for the design or definition of any space shuttle or space station".

Mr. MONDALE. Mr. President, this amendment is jointly sponsored by Senators CASE, JAVITS, PROXMIRE, and myself. It would reduce the NASA fiscal year

1971 appropriation for research and development by \$110 million—the amount requested by NASA for design and definition of the space shuttle/station. The amendment also would prohibit the use of any part of the NASA appropriation for that purpose. This is the identical issue which the Senate debated on the NASA authorization a few weeks ago.

There are two basic aspects of this space shuttle/station project. The first is to develop a chemically fueled, two-stage reusable shuttle, which will operate between the surface of the earth and low earth orbit. The second is to develop a space station module as a permanent structure in orbit designed initially for the support of six to 12 occupants; ultimately, NASA hopes to erect a space base by joining together these space station modules, and this base will be capable of supporting between 50 and 100 men in earth orbit.

At the very minimum, this project represents what NASA itself calls "a new epoch in manned space flight." It is the beginning of a new phase of the manned space program—a phase as large or larger in scope than the Apollo program.

The \$110 million requested for the coming fiscal year is only a small part of the project's ultimate cost. NASA's preliminary cost estimates for development of the space shuttle/station total almost \$14 billion, and if the past is any basis for estimating, I believe that the cost could go far in excess of \$14 billion. For example, the original \$6 billion estimate for the shuttle has now risen to \$10 billion, and NASA officials readily concede that these preliminary estimates are unreliable. Indeed, preliminary cost estimates in the space field are uniformly low, often only a fraction of ultimate cost. It is quite likely, therefore, that the ultimate cost of this project will greatly exceed \$14 billion.

The space shuttle/station is intimately related to an even more ambitious effort. There is every reason to believe that NASA proposes to embark this year upon a new space program based upon new hardware, almost entirely in support of manned missions, with a manned Mars landing as the ultimate objective. The space shuttle station is the first step toward this objective.

Without the space shuttle and without the 100-man space station to assemble the various spacecraft and other paraphernalia to get men to Mars, no Mars program is possible. NASA has testified that as soon as the space shuttle and space station have been developed, it plans to spend for a manned Mars exploration program \$100 million in fiscal year 1977, \$300 million in fiscal 1978, and \$1 billion in fiscal 1979. In other words, the Space Agency hopes to be spending \$1 billion a year, at a minimum, in fiscal 1979, for the purpose of manned flight to Mars. If this is so, a space shuttle/station will be the initial phase of a program with an estimated cost of \$50 to \$100 billion over the next 15 years.

Once again, the Senate is asked to back into an enormously expensive program, with tremendous implications not only for the Space Agency but also for the allocation of this Nation's scientific and industrial resources; and we are asked to

do so on a fairly innocent \$110 million basis, which in fact involves a commitment eventually of somewhere between \$50 and \$100 billion.

Proponents of this project strongly deny that its approval in any way amounts to approval of a manned flight to Mars. But they concede that the space shuttle and station are essential first steps for such a flight.

To make the case for our amendment, however, it is not necessary to demonstrate the relationship between the shuttle/station and a planned manned landing on Mars. For no one denies that the space shuttle/station is the beginning of a new and expanded manned space program. Thus, our approval of this appropriation must be considered as initial congressional approval of this "new epoch in manned space flight."

Our amendment is a bipartisan effort to prevent Congress from sliding into such a commitment—a commitment which eventually will cost the American taxpayer billions of dollars.

The proponents of the space shuttle/station insist that the \$110 million requested for design and definition does not commit us to its development. They contend that this money is for further "study," not development, and that the crucial decision whether to proceed with this project will be made next year by NASA and Congress.

Implicit in this argument is the notion that \$110 million is a minor expenditure. It is not—\$110 million is more than the administration has budgeted in fiscal year 1971 to combat air pollution; it is more than the \$84 million special milk program, which the President wants to terminate as an "economy measure"; and it is twice what we spend for one of our most effective antipoverty efforts, OEO's legal services programs.

In any event, it is clear that the requested funding for design and definition of this project is for more than basic research—conducted in NASA's own laboratories. Design and definition is what NASA calls "Phase B" of a planned project. In fiscal year 1970, NASA spent \$18.5 million to complete "Phase A," that is, to determine the feasibility of the shuttle and station. NASA now wants to move to "Phase B," and it has already awarded contracts for this purpose to several aerospace companies.

An \$18.5 million expenditure has thus escalated into a request to spend an additional \$110 million. Private contractors are involved, and industry is eagerly anticipating large contracts in the future.

If the past is any guide, NASA will ask Congress next year for several hundred million more for this project, and return again and again for hundreds of millions to continue its development. Congress will then be told that it is too late to stop the project—too late because of the enormous funds already invested.

It does not make a great deal of difference, then, whether one characterizes the \$110 million in this bill as "development" or a "study." In either case, the approval of these funds might well put

us on the road toward another multi-billion dollar manned space program.

While maintaining that no commitment is involved in approving this appropriation, the project's proponents also argue that the shuttle will actually save the taxpayer's money. They contend that the shuttle, unlike present boosters, will be reusable, and could thereby reduce the cost per pound of payload in orbit by a factor of 10. But for reasons which I shall set forth for the RECORD, this assumes a tremendous increase in space flights in order to reduce the per-pound costs by that amount.

To begin with, it will cost billions of dollars to develop the space shuttle. Once developed, it has been estimated that the shuttle will cost hundreds of millions to procure, whereas the launch vehicles to be replaced by the space shuttle—Delta through Titan—cost from \$3.5 million to \$20 million for each vehicle. Given these extremely high development and procurement costs, the alleged "savings" by the use of the shuttle will occur only if the scope of U.S. space activities is greatly expanded in future years.

NASA officials are relying on such expansion. They have testified that a minimum of 30 flights per year by NASA and an equivalent number in support of DOD programs are anticipated.

The leading House opponent of the space shuttle/station—Congressman JOSEPH KARTH of Minnesota, who is chairman of the Subcommittee on Space Science and Applications and a strong supporter of the space program—made the following observation about NASA's calculations:

During the entire decade of the sixties, NASA exceeded 30 launches per year only once—36 in 1966—including Scouts and Saturn V's which are not to be replaced by the space shuttle. Assuming the space shuttle's payload capacity (of placing 50,000 pounds in orbit) would be fully utilized on each of the projected 80 yearly flights, this adds up to 3 million pounds of payload launched into orbit each year.

How do 3 million pounds of payload in orbit compare with the space program of the past? In terms of cumulative payload launched, 1969 was NASA's biggest year with 442,358 pounds, over 97 percent of which was attributed to the four Apollo flights.

Congressman KARTH notes that the NASA budget—which has declined annually since 1965—must increase dramatically during the next few years to support this project if the space shuttle is to fly by 1977; and their budget would have to increase even more after the shuttle becomes operational in order to support the kind of ambitious program it is designed to serve.

I question whether the United States can afford such an ambitious space program and whether the American taxpayer would be willing to support it. Rather than testing the taxpayer's endurance, we should follow the course recommended by seven members of the House Committee on Science and Astronautics—that is, cost effectiveness—studies should be conducted comparing the operation of the space shuttle with the continued use of existing expendable

launch vehicles before sizable amounts of money are applied to the project.

I think it is clear that if we appropriate the funds requested here, we will be committing this Nation to a vastly more expensive and ambitious effort than the project's proponents would have us believe. But aside from the potential cost of both the shuttle and station, there are other basic reasons for opposing this project.

To begin with, it is premature to begin design and definition at this time. This project is based on the assumption that man will be able to function effectively in a space environment for long periods of time. Yet, at this point, we simply do not know the feasibility of long-duration operations in such an environment.

A 1969 report by the House Subcommittee on Space Science and Applications stated that:

If there is an ultimate limiting factor (to exploring space), it may well be the length of time through which man can endure the influences of the hostile environments encountered beyond the earth. The extent and limits of human frailty or endurance have not yet been established.

Weightlessness and other special effects of the space environment may be extremely deleterious and even fatal to man after extended space flight.

I find this very peculiar—that NASA is asking for \$110 million to design a space station when the feasibility for long duration manned flight is unknown.

We have made some effort to test this with the Bio-satellite III mission which sent a monkey into earth orbit. This flight resulted in the death of the monkey after 8½ days of a scheduled 30-day flight. Medical experts believe that the monkey died of an excessive loss of bodily fluids due to weightlessness.

According to news accounts, the Soviet cosmonauts aboard Soyuz 9 have been troubled with instability of the cardiovascular system and difficulty in sleeping after their record space flight of nearly 18 days. A number of American scientists feel that the medical results of this flight reinforce their view that many unanswered questions remain about the biomedical effects of long-duration space flight.

I ask unanimous consent that a more detailed description of the medical effects of long-termed space flight be inserted in the RECORD at this point.

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

To date, astronauts have flown for periods up to 14 days with no irreversible deleterious effects. Medical authorities have testified, however, that they do not yet understand the biological or physiological effects of extended manned space flight.

There are many unknowns regarding the possible effects of prolonged weightlessness on major physiological systems of the human body, e.g. gastrointestinal, nervous, urinary, inner ear (balance), biological clock, etc.

But the most severe effect of weightlessness appears to be on the cardiovascular system. Prolonged weightlessness results in what is called the Gauer Henry reflex. Briefly, this is described as follows: In a state of weightlessness a person's blood tends to concentrate around the heart, in the area of the chest cavity, and away from the body's ex-

tremities. Nervous sensors in the vicinity of the heart respond to the pooling of this excessive volume of blood around the heart by actuating a reflex mechanism which, in order to reestablish an appropriate level of fluid in that area causes large-scale losses of blood, primarily through perspiration. A new equilibrium is thereby established in which the total blood supply of the individual is substantially reduced.

A potentially dangerous situation occurs when the individual is brought back to Earth and subjected to one or more "g's." The reason it is dangerous is that the reduced blood supply tends to be drawn away from the heart and to the lower extremities when the body is subjected to "g" forces. The heart may be so starved for blood at this point that it may cease to function.

It is not known whether or how the body will adjust to these changes from weightlessness to a "g" environment, or what procedures or techniques may be needed to overcome the problem, and the Skylab project is designed to resolve this and similar questions. Skylab is specifically designed to test man's ability to survive and work in space first for 28 days and then 56 days. Essentially, Skylab will produce sufficient physiological data to determine whether extended manned space flight is feasible.

The Biosatellite III mission is instructive on the effects of weightlessness on the cardiovascular system. That mission resulted in the death of a highly instrumented primate after eight and one-half days of a scheduled 30-day flight. Medical experts associated with Biosatellite III believe that the monkey died as a result of weightlessness and the Gauer Henry reflex.

Mr. MONDALE. Mr. President, NASA, of course, is most concerned about these important medical problems. The Skylab project, scheduled to begin in 1972, will be an earth orbiting manned station designed to determine the feasibility of manned operations in a space environment over extended periods of time. This project will utilize modified hardware already developed in the Apollo program.

The Skylab will be placed into earth orbit and each of three manned missions will rendezvous and dock with the workshop. The first of these missions will last for 28 days, and the second and third will each last for 56 days. According to the report of the House Space Committee, these missions "are a prelude to the operation of a space station and space shuttle" and their "greatest importance will be to demonstrate during long duration manned flights the interassociation of man and his experiments."

These Skylab missions are crucial to the future of long-duration manned space flight. For after hearing the testimony of a series of medical experts, the House Subcommittee on Space Science and Applications found that "the warning flags are already flying" with respect to the possible deleterious effects on men exposed to the hazards of long duration flight. The subcommittee's report came to the following conclusion:

The ability to predict man's enduring tolerance to the environment of space, particularly prolonged weightlessness, is limited. The consensus is that current knowledge based on flights up to 14 days is adequate to proceed with planning the proposed 28-day Skylab mission. But it is illogical to conclude from the results of successful short flights that long duration flights can be scheduled without risk of unacceptable consequences. Accordingly, present knowledge is considered

inadequate to safely proceed with the proposed 56-day flight, or longer flights to the planets, without adequate testing and satisfactory monitoring of astronauts on the 28-day flights, in carefully planned scientific experiments beyond any yet undertaken in manned flight.

In short, until this Sky Lab experiment is completed in 1973, we will not know whether or not man will be able to use the shuttle/station. If the Sky Lab missions demonstrate that man cannot operate effectively in space for long periods of time, then the enormous funds allocated for the space shuttle/station will have been wasted—regardless of whether the expenditure is labeled as a "study" or as development.

And even if it is demonstrated that man can survive in such an environment, the station will undoubtedly have to be tailored to solve various biomedical problems. It is therefore senseless to spend millions of dollars on design and definition before we know the answers to these problems.

As one Congressman noted, it is strange, indeed, to begin funding for a giant space station before we have even flown the small one which is supposed to test the concept of space station flight.

In addition to the unknowns about man's adaptability to long-duration space flight, extremely complex technical problems are posed by the shuttle and station. NASA acknowledges that design and development of the shuttle represents a new and formidable technical challenge, which will require maximum innovation on the part of the aerospace industry. Congressman KARTH pointed out that before the space shuttle can become a reality, many difficult technological advances must occur in such areas as configuration and aerodynamics, heat protection, guidance and control, and propulsion. As a result of these technical complexities, a recent issue of *Aviation Week and Space Technology* notes that:

There has developed within NASA a schism in approach to design—in size, configuration and operational requirements.

NASA originally planned to complete design and definition of the shuttle in 11 months. But according to recent news stories, this phase of the shuttle has been extended by another 6 months or perhaps longer in order to solve any persistent problems.

If it is true, as NASA claims, that the space shuttle station is not a crash project, then the results of the Sky Lab experiments should be considered and these technical problems should be resolved before moving to design and definition.

Even if it is demonstrated that man can adapt to extended space flight and that these technical problems can be overcome, serious doubt remains about the wisdom of funding a space shuttle station. For this project will insure the continued dominance of manned flights over unmanned flights—despite the fact that there are many persons, both defenders and critics of the space program, who argue that this program must achieve a better balance between manned and unmanned flights.

For example, in remarks before the House Committee on Science and Astronautics, the eminent space scientist, Dr. James A. Van Allen, stated.

If, on a purely pragmatic basis, one or more men in the spacecraft is the cost effective technique for conducting any one of these missions, let it be done in that mode.

But if, as I anticipate, this is not the case, let us not grieve nor devote ourselves to the invention of specious and inane reasons to the contrary. Rather let us get on with our . . . objectives in the most sensible and rational framework that we can devise.

Brian O'Leary, a former scientist, astronaut, and now an astronomy professor at Cornell, recently wrote that—

We should encourage science looking for a mission rather than a mission looking for science; we should ask how we can best perform a mission manned or unmanned, not what we can do with the man.

In these times of conflicting, uncertain goals both inside and outside NASA, I think the unmanned planetary program provides a good example of what can be done. The Mariner 6 and 7 flyby missions gave us remarkable pictures and valuable scientific information, yet each cost less than 15 percent of the price of sending two test pilots to the moon.

And Max Born, a distinguished physicist and Nobel Prize winner, has commented that the manned space program was a "triumph of intellect but a failure of reason." To him, the manned missions are senseless, because their cost so far outweighs their scientific value and the money is so badly needed elsewhere.

NASA has, in effect, ignored this type of criticism and is making no effort to redress the present imbalance between manned and unmanned flights. While NASA's projected budgets go from \$4 billion in fiscal year 1972 to \$6.8 billion in fiscal year 1979, the unmanned effort will remain at a constant level. NASA would like to see us spend \$6.8 billion starting in 1979. I wonder how much they have programmed for 1984. In fiscal year 1979, it is estimated that 68 percent of NASA's total budget will be spent on manned flight missions—including the space shuttle/station and the planning for a manned Mars landing.

Because of NASA's preoccupation with manned flights to the detriment of scientific investigation, an impressive group of scientists have already resigned from the space program. This list includes the chief scientist, the director of the Lunar Receiving Laboratory, the principal investigator of Apollo lunar surface geology, the curator of the lunar samples, and two scientist-astronauts.

Mr. President, I am about to read from letters I have just received from nationally recognized space scientists criticizing the manned flight programs.

From this whole pattern comes a clear and unavoidably clear conclusion that in the space program, the scientists themselves have lost the battle.

This is now no longer a scientific space program. It is a program by and for the space agency and the space industries which produce manned flight equipment.

I hate to make that charge, but I think the evidence from the resignations and the projected budget of NASA can lead to no other conclusion.

I think that if we continue on the course recommended by the Space Agency, it will be one of the most inexcusably wasteful programs ever conducted in the history of the United States.

It seems to me that it would be unwise to proceed further, especially at a time when we are confronted with so many overwhelming domestic problems.

I go through my State—north and south and east and west—and I hear the same problems mentioned that all of my colleagues do.

They mention the problems of inflation, unemployment, housing, decent farm prices, and the exploding cities all around the Nation.

Not once has a constituent come up to me and said, "We need a space shuttle station."

No one has said that except the manufacturers and the space agency. They are looking for something to do now that the manned lunar project is coming to an end.

I suggest that there is a better need for this money—an expenditure of \$14 billion by NASA's own estimates—and it certainly will exceed that by several percentage points if our space experiences have taught us anything at all.

For all of these reasons, then, I believe that we should prohibit the use of any funds for design and definition of the space shuttle/station—pending the completion of the Sky Lab missions, the solution of technical problems, and a complete examination of the proper balance between manned and unmanned flights in the space program of the future. If we fail to do so, we will have missed a unique opportunity to reassess our entire space program.

It should be emphasized that the decision to delete funds for design and definition of the space shuttle/station will not kill the project. NASA officials have testified that approximately \$80 million will be spent during fiscal year 1971 in direct support of this project by NASA's Office of Advance Research and Technology. This research is aimed at solving the difficult technical problems presented by the space shuttle/station.

Before undertaking the design and development of this project, we should first determine whether OART can resolve some of these technical difficulties.

It should also be kept in mind that deferring this project will not put an end to space exploration. The United States can have a meaningful and worthwhile space program in the next decade based upon existing technology and equipment.

But since the space shuttle/station involves the development of new technology and new equipment, it requires careful scrutiny. It is proposed as our next major effort in manned space flight—and it comes at a time of growing doubt in the scientific community about the value of future manned space flights, and at a time of even greater doubt about a manned flight to Mars.

Yet, there has been virtually no national debate as to whether our Government should undertake such a program.

I am convinced that if the American people understand the full implications of this space shuttle/station, they will decide that it is not in our national interest to proceed with the program at this time.

For, in the end, it comes down to a question of priorities. It is interesting to note that the report of the House Space Committee, in describing the space station, stated that its "living quarters will be attractive and comfortable." At a time when millions of Americans are living in substandard and rat-infested dwellings which are not "attractive and comfortable," it seems senseless to spend billions of dollars erecting decent housing hundreds of miles from earth.

I referred earlier to letters which I had received from some of the top scientists in the field. I received one from Dr. Van Allen, who is at the University of Iowa, after whom the Van Allen Belt has been named. He is one of the Nation's most prestigious scientists. He is consultant to the Space Sciences Board of the National Academy of Science, a consultant to the President's Science Advisory Board, discoverer of the Van Allen Radiation Belt in space, and chairman of the Department of Physics and Astronomy of the University of Iowa.

In his letter he says:

On these grounds I hold that large-scale engineering studies looking toward the development of a space shuttle are not sufficiently well-grounded in purpose or significance to justify a substantial commitment of national resources at this time.

Mr. President, I ask unanimous consent to have the letter from Dr. Van Allen printed in the RECORD.

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

THE UNIVERSITY OF IOWA,
Iowa City, Iowa, June 29, 1970.

HON. WALTER MONDALE,
Senate Office Building,
Washington, D.C.

DEAR SENATOR MONDALE: I am writing to give you my views on the proposed space shuttle program of the National Aeronautics and Space Administration, as outlined in testimony before the Committee on Aeronautical and Space Sciences of the United States Senate on 20 and 27 February 1970.

During over 24 years of professional experience in space research, I have come to the considered view that automated, commandable space equipment provides a much more economical method than do manned systems for the conduct of both utilitarian and scientific missions. Nothing within the Mercury, Gemini, and Apollo programs has changed my mind. On the contrary they have reinforced my stand in a massive way.

The current and proposed space shuttle studies are being conducted on a competent engineering basis and may very well demonstrate the technical feasibility of developing such a system for \$6,000,000,000 or thereabouts.

The real questions are, however, the following:

(a) Do manned systems possess any unique, useful capabilities in space that an unmanned system can not be built to possess?

(b) Are manned systems at present or in the foreseeable future economically competitive for any specific purposes with automated, commandable systems?

(c) Can men operate alertly, intelligently, and healthfully for long periods of space flight?

I believe that the answers to Questions (a) and (b) are almost certainly "No". The answer to Question (c) is still unclear.

On these grounds I hold that large scale engineering studies looking toward the development of a space shuttle are not sufficiently well grounded in purpose or significance to justify a substantial commitment of national resources at this time.

Sincerely yours,

J. A. VAN ALLEN,
Head of Department.

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

Mr. MONDALE. I yield.

Mr. PROXMIRE. Mr. President, I congratulate the Senator from Minnesota on an excellent speech.

The Senator said that in going around his State, Minnesotans were saying that they need better farm programs, better housing programs, and better education programs. I find the same thing in my State.

The Senator pointed out that no one in his State had told him that our country needs a space shuttle or space station.

I suppose that one can say that only the scientists can appreciate the scientific value of this work. Yet the Senator from Minnesota documented the fact that scientists themselves are opposed to the expenditure of this money.

I think that this is certainly not the way to spend our money in space. We ought to spend it in unmanned exploration rather than in manned exploration—manned exploration is more glamorous but does not have the same payoff.

Mr. MONDALE. Mr. President, I have received a letter from Dr. W. Ross Adey, director of the space biology laboratory at the University of California at Los Angeles.

He was the principal investigator for NASA for the Biosatellite III program.

That is the mission that was aborted when the monkey died after 8½ days of flight.

Dr. Adey concludes in his very strong letter that the space program has become overwhelmed by the manned space lobby and by the so-called engineering efforts of this kind, and that scientists and scientific efforts have been largely diminished.

He concludes in this way:

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. At the same time, avoiding commitment to heavy expenditure in this area would afford an excellent opportunity to redress the traditional imbalance between manned spaceflight programs and other more modest but highly important developments. These include fundamental space biology related to medical problems of man in space, and studies in the physical sciences in planetary programs, as well as in areas of the NASA Space Applications program.

I will not take the time of the Senate to read the entire letter. However, this is one of the most highly regarded and ex-

perienced scientists this Nation has, and he is writing and asking us to strike this program.

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

Mr. MONDALE. I yield to the Senator from Rhode Island.

Mr. PASTORE. Mr. President, the Senator from Rhode Island finds himself in a rather awkward position, not only with reference to managing the bill, but also with regard to this particular amendment and several other amendments that will be proposed during the progress of debate. Other members of our committee will rise to take the opposite view.

If the amendment proposed by the Senator from Minnesota comes to a vote I propose to vote for the amendment. I so notified the Senator and the committee.

When the matter came up in committee it was soundly defeated. As a matter of fact, on the authorization it was beaten by a vote of 56 to 29, I think. The Senator from Minnesota is renewing his request for the elimination of this program. As I have said to Dr. Paine and to many of my colleagues, that this is not only the age of Aquarius, but it is also the age of priorities.

Whether or not there is a scientific feasibility here, of course, remains to be seen. I think our scientific community is able to accomplish anything that is possible. We proved it when we went to the moon.

President John Kennedy came before a joint session of Congress and said that we would go to the moon in 10 years. There was not a Congressman there who did not throw his hat in the air. Well, he did go to the moon and came back. We picked up a few rocks, and we went again and picked up a few more rocks. Now, we know the world and these rocks are 1 billion years old; maybe we will find that they are 5 billion years old. How far that will go in feeding the hungry, housing the unhoused, and cleaning the pollution on man's earth is hard to determine.

I am not against the space program but I do think the space program should be placed in its proper perspective. So here we are. What are we going to do about urban renewal; and what are we going to do about legislation for sewage disposal in some of our rural areas? We have all these other priorities. I think we need to orient the space program according to our needs.

I am afraid some of our colleagues who are for the space program get the idea that every time we want to cut out a nickel from the budget request on NASA it is doing the entire scientific community and the space program a disservice. That is not intended by anyone.

This bill provides for \$3½ billion, which is a lot of money. It is true the amount is one-half of what it was 5 or 6 years ago. Well, 5 or 6 years ago we had not gone to the moon and the whole program was geared to going to the moon. No one found fault with that, but now we have been to the moon twice.

I said before the committee, "The God, we were able to bring those men to

on Apollo 13 when things went wrong." But I am afraid, judging from the investigation made on that abortive moon shot, that we must analyze what we have been doing. I think we are going a little too fast and biting off more than we can chew. I think we should more or less de-escalate our outer space activity and escalate a little more on space activity, because not only is space closer to man and his problems on earth, but we also have communications, aerospace, and all these other matters that are closer to us and have a greater impact on man's happiness, his welfare, and his well-being.

The House cut the budget of the President's Space Council by \$160,000 but we restored it in committee. The Space Council which is now headed by Astronaut Anders, who pledged to me that he is going to be absolutely independent and that he is going to take a good look at this matter of priorities in space. We expect some very good recommendations from him.

All I have to say, and I think the most dramatic argument made by the Senator from Minnesota, is that it is not so much that this is not feasible, but can this not wait a little longer? Could we not use this money to build homes for those who need them, to clear the air where it is needed, to clean up our waters, which need it so much, and all the other things to help men here on earth?

I am afraid if NASA keeps going at the rate it is going it is going to hurt itself. On Apollo 13 NASA could hardly get anyone interested in what was going on. It was only when the astronauts became involved in that near tragedy and had to be brought back to earth that America became conscious of what was going on and we fixed our eyes on television screens all over again. But I remember people were becoming more or less disenchanted. I agree with the Senator from Minnesota that when one walks down the street in Providence, R.I., and talks to the people, they are not against the space program, but they do want to know why. At the pace we are going, even though it is less than it was a year ago, the fact remains it is over \$3 billion.

While we do not want to injure the program, at the same time we should keep our priorities in proper focus, and I think this is one program that can wait. This is what I asked Mr. Paine when he came before our committee. I asked if this is a dream in the scientist's eye or does there appear to be something desirable in this. He gave me a long answer and said that if we do what we have to do, and do that design and that design, it might be feasible.

However, the fact remains that at one time we had the ANP program to build a nuclear engine for an airplane. After we had spent millions of dollars we asked, "Who can stay up that long?" You could not keep a man up that long so we discarded the program. Then, we had the C-5A program. Senators remember the argument on the floor of the Senate.

I hope in this case we do not spend \$110 million and decide next year to cut it anyway. That has been the argument that has been made: If we find it is not feasible we can cut it back. If that

is an argument to save money, I do not know.

Mr. MONDALE. Mr. President, will the Senator yield at that point?

Mr. PASTORE. I yield.

Mr. MONDALE. I think it is important to point out that when the word "science" is used, the most recognized independent scientists in this country all say we do not know if it is going to work or not.

Mr. FULBRIGHT. Mr. President, will the Senator yield for one comment?

Mr. MONDALE. I yield.

Mr. FULBRIGHT. I am reminded of what happened in connection with the ABM. When Mr. Foster was pressed as to whether any scientists outside the Pentagon approved that plan he named some. Those two men, Dr. Keller and Dr. Weinberger, came to our committee and they said Mr. Foster was completely mistaken and they did not believe it would do what the Pentagon expected. In other words, there was a direct contradiction in that testimony.

Mr. MONDALE. I suspect there is a relationship between the people who want to build the ABM and those who want to build the space shuttle station. They are pressing hard for these programs.

But that does not mean that it is not the responsibility of the Senate to impose priorities on what is most important.

Mr. FULBRIGHT. I agree completely with what the Senator said and I believe the Senator from Rhode Island said it extremely well. I shall certainly support them.

Mr. MONDALE. Mr. President, I would like to read from this additional letter from Dr. Thomas Gold, who is director of the Center for Radio-physics and Space Research for Cornell University.

He is not merely a scientist; he is Chairman of the ad hoc Space Science Panel of the President's Science Advisory Committee, consultant to the National Aeronautics and Space Administration, and a member of the NASA Lunar and Planetary Missions Board. He writes a very strong letter opposed to the expenditure of \$100 million on this space shuttle program. He says this, among other things:

Manned earth orbital flight is of very doubtful value for either science or applications. The prestige value, once no doubt very great, is by now very low also and will not be heightened very much by merely increasing the number of men or the size of the ship.

When the success of the first Apollo landing had been achieved and when the end of the program was in sight, the whole question of the justification for a large manned operation should have been reviewed. The inertia of a large organization is a poor reason for the continuation of a program. I am sure this view is shared by most of the scientific community and even by many people within NASA. The argument only has been—

I would like to underscore this—

The argument only has been that the availability of funds is so dependent on the popular appeal of manned flight that the

alternatives were to do a job that is worth doing by uneconomical means or not at all.

In other words, this is a top space scientist saying that relying on the manned flight program is the only way money can be wrenched out of Congress, even though manned flights are uneconomical.

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

Mr. MONDALE. I yield.

Mr. PROXMIRE. Mr. President, in supporting the argument of the Senator from Rhode Island, with which I agree, I point out that he asked, "Why can't this wait?"

I would like to ask the Senator from Minnesota if it is not true that the space program, and particularly this program, might be better served if we did wait because of the fact that the Russian flight, the Soyuz flight, as well as the other flights the Senator from Minnesota referred to, indicate it is very possible, and perhaps even likely, that if man goes into space for any substantial length of time, it might have very serious adverse physiological effects on him. The findings indicate that the men in flight had some cardiovascular problems and weight loss. This is certainly a problem to be looked into to ascertain the results on man if he should stay up long enough to make this space shuttle program worthwhile. We have a Skylab experimentation program that could give us answers before we go ahead with this expensive space shuttle project.

Mr. MONDALE. We are in a difficult position in that NASA is seeking a space lab experimentation for the year 1972-73 to determine biomedical facts necessary for long duration space flights—to determine if such flight is indeed possible. And at the same time there is a request for \$110 million to design a space vehicle before we know whether such flight is possible. That is set forth in a letter from Mr. Adey, who is in charge of UCLA's space biology lab. We are asked to provide \$110 million, which we should not do until we know the results of the Skylab experiment. How can we provide \$110 million for a given design when we do not know if it is possible to do it?

Mr. PROXMIRE. It may be \$110 million this year, and \$220 million next year, and then we may have to stop the program because we find that man cannot live under those conditions.

Mr. MONDALE. That is right.

Mr. PROXMIRE. Senators have urged us to support this program with the argument that it has international benefit, that it is not a program which has any peculiar benefit to the United States of America, and we ought to get international participation. We had been told over and over again, when we tried to get that cooperation on the moon shots, but that we had gone so far along on the program, and in view of the fact that only three astronauts were involved, it was not practical to get European countries to participate and to pay for the program. Now, I am told, there is great interest in this program on the part of western European countries, but if we go ahead and make this investment in the program, once again we will be

told, "We have put up all the money and it is too late for them to come in." So here is another reason why it would be wise to postpone a program of this kind, costing \$110 million, until we can determine whether or not we can get international participation.

Mr. MONDALE. No doubt it will be recalled that at the time we debated the issue during consideration of the authorization bill, mention was made that it would be a wonderful program for the Russians to participate in. The question was asked, "Has anybody asked the Russians if they want to cooperate?" No one had asked the Russians. It would be unrealistic to think, after we have spent \$30 million on the program and the Russians had not participated with us, that suddenly, we might want to ask the Russians to cooperate. That is just dreaming.

Mr. PROXMIER. I recall there was argument in the Appropriations Committee that the main benefit of this program would be military. I recall arguing that, from my standpoint, the military argument might be a telling and persuasive one if we could get a convincing documentation to that effect. But the fact is that if this program were primarily of military benefit, then it ought to come in the defense appropriations; second, the military has rejected a similar program, the manned orbiting lab, on the ground that it was not of sufficient consequence to be included even in a \$70 billion budget.

It is true that there was some testimony, in the voluminous hearings, indicating that this space shuttle/station might be of military value, but the argument was generalized and not specific. There was no indication that I could get of what the particular benefits would be to us either from an intelligence or any other standpoint in the military area. Military value may be a persuasive argument, but this Senator cannot buy it until I know just how, when, where this military value is. I hope we have not reached the point where a Senator simply says military and receives \$110 million for a project. And that is the case here.

On the question of military intelligence this may make the investment worthwhile. But we are not getting such a justification now. If it is of military value, we should ask the Defense Department to pay for it, and why should not the military be running it? On the other hand, if it is just a generalized and vague potential for the military not sufficient for the Defense Department to invest its own funds in, then it seems to me we are right in rejecting the argument that it is of military value.

Mr. MONDALE. As to the argument about international cooperation, we ought to know that there is a good reason for other nations to cooperate and participate in the cost of this program. It seems to me when \$14 billion is being requested, we ought to have something more substantial than vague comments. The same applies with reference to the defense dimensions of the problem. That seems to be without basis.

As the Senator from Wisconsin pointed out, the Defense Department effort in

this field, which was the manned orbiting lab, was eliminated by the Department itself as one of the most useless expenditures in its total budget. It cut out the manned orbiting lab.

In addition, NASA and the Department of Defense have often cooperated on space programs which had both civilian and defense factors involved. In this case, the Defense Department is not putting up one penny for the development or design of a space shuttle program. If the Defense Department thought it was important in the military sense, surely, as we have seen in the past, it would be very much interested.

This shows in perhaps a more eloquent way what the Defense Department really thinks about the military implications of the space shuttle station program. Also, I am told that the Defense Department made the decision that they could learn more from instrumented surveillance and other kinds of space vehicles than from these kinds of manned laboratories in space—once again showing that not only in the pure science field, but in the defense field as well, the advantages are to be found in unmanned instrumented flight, rather than in these doubtful, uneconomical, and dangerous long-duration manned flights.

I quote from the letter of Professor Gold, of Cornell. He said:

The biomedical problems of prolonged space flight are almost certainly severe. The fact that short duration flights have not incapacitated men seriously must not be taken to mean that very long duration flights will be safe. The indications are indeed that major problems do arise, and medical science cannot at the present time foresee their solution. From this point of view also it would be foolish to commit large sums to the development of space technology for long duration manned flights, which it may then not be possible to undertake.

Mr. President, I ask unanimous consent to have printed in the RECORD at this point the letter of July 3, 1970, from Prof. Thomas Gold, of the Center for Radiophysics and Space Research, Cornell University, and the letter dated June 20, 1970 from Dr. W. Ross Adey, director, Space Biology Laboratory, University of California at Los Angeles.

There being no objection, the letters were ordered to be printed in the RECORD, as follows:

CORNELL UNIVERSITY, CENTER FOR
RADIOPHYSICS AND SPACE
RESEARCH,

Ithaca, N.Y., July 3, 1970.

Senator WALTER MONDALE,
Old Senate Office Building,
Washington, D.C.

DEAR SENATOR MONDALE: This is to present briefly my views as to the future importance to exploration, science, and technological development of manned and of unmanned, instrumented space flight.

1. The exploration and science of the planets is, in the foreseeable future, wholly in the hands of the unmanned instrumented space program.

The reason for this is that space flight by means of the presently known technology to the planet Mars will involve a round trip of more than 1½ years. This is so far removed from present day capabilities, and the uncertainties of prolonged manned space flight are so great, that no space program at the present time should be based on such a prospect.

The suggestion that this prospect is a driving force behind the present space program has been made, but it is, in my view, irresponsible.

Planets other than Mars have circumstances that make a manned visit quite impracticable, and for the most part much longer travel times still would be involved. Asteroids and the satellites of the major planets are, it is true, no more inhospitable than the moon, but both because of their distance and the smaller intrinsic interest they have for us, the prospect for a manned visit is even smaller than for Mars.

On the other hand, complex remotely controlled instrumentation can be devised and is indeed being devised to perform almost all the actions in a remote location that a man could perform working under the constraints of space or Martian environment. One foresees a very successful period of instrumented discoveries in space, perhaps in the long run of great value to mankind.

2. Manned earth orbital flight is of very doubtful value for either science or applications. The prestige value, once no doubt very great, is by now very low also and will not be heightened very much by merely increasing the number of men or the size of the ship.

Many attempts have been made to find real uses for a group of men in earth orbital flight, but these have largely failed. Man in a spaceship is capable only of a rather limited and well-defined set of actions, and almost in all cases remote control mechanisms can be provided whereby all the information that would be available to him is equally available to the man on the ground, and whereby the actions that he could have taken can equally be initiated by the man on the ground. The man on the ground has, so to speak, remote eyes and hands in the space vehicle.

It is my opinion that all scientific experiments proposed for earth orbit can be done both more cheaply and better with suitable instruments. Repair and updating of expensive instruments is the one area where the methods of remote control would have to be advanced the most before they would be superior to the presence of a man in the remote location. Economically this will not make a case for a large manned space flight program. In any case, the remote control can be improved to take over this activity also.

3. The Apollo program was devised firstly as a great demonstration of capability and secondly for the exploration of the moon. Once this decision was taken, there was no point in competing in the lunar exploration with remotely controlled instrumentation. There will be good reasons, however, in continuing the exploration of the moon by unmanned devices at the end of the Apollo program.

When the success of the first Apollo landing had been achieved and when the end of the program was in sight, the whole question of the justification for a large manned operation should have been reviewed. The inertia of a large organization is a poor reason for the continuation of a program. I am sure this view is shared by most of the scientific community and even by many people within NASA. The argument only has been that the availability of funds is so dependent on the popular appeal of manned flight that the alternatives were to do a job that is worth doing by uneconomical means or not at all. That of course is a situation which the Congress could rectify.

4. Money spent on manned and on unmanned space flight has totally different consequences for general technological evolution and the economy. A large fraction of the money spent on manned flight goes into devising very large vehicles and the environment required by man. Compactly little of this technology is applicable in other fields.

Sophisticated instrumentation, complex electronics, computers and remote control devices appear now to be the major line of evolution of technology, an evolution that promises to improve greatly all of industry. The economic value of these advances will be immense, and the leadership of the United States in these areas is essential if the country is to remain the major economic and military power in the world. The space program has significantly contributed in the last ten years to this technological evolution, and a large instrumented space program would be a decisive factor in the future.

In the field of economically valuable applications no case has been made for manned flight. Communication satellites and, before very long, direct broadcasting and TV to the individual consumer would provide a very large political and economic stimulus for instrumented space technology. Meteorological satellites and other sensing systems from orbit will of course also improve, but almost certainly without any need for the presence of a man in orbit.

5. The biomedical problems of prolonged space flight are almost certainly severe. The fact that short duration flights have not incapacitated men seriously must not be taken to mean that very long duration flights will be safe. The indications are indeed that major problems do arise, and medical science cannot at the present time foresee their solution. From this point of view also it would be foolish to commit large sums to the development of space technology for long duration manned flights, which it may then not be possible to undertake.

I hope these remarks are helpful to you, and I would of course be happy to give you and your colleagues in Congress more details and substantiation for them if this were desired.

Yours sincerely,

T. GOLD,
Director.

UNIVERSITY OF CALIFORNIA,
LOS ANGELES,
June 29, 1970.

Senator WALTER F. MONDALE,
Old Senate Office Building,
Washington, D.C.

DEAR SENATOR MONDALE: With Senate action now pending on the Space Shuttle, I submit for your consideration the following viewpoints as important in the determination of priorities in the space program in the coming decade. I write as a concerned biomedical scientists who has participated in the space program for the past ten years, both as an investigator in manned and unmanned flights, and as a member of committees and review bodies with an advisory role to both government and NASA.

Priorities in the space program since its inception have placed major emphasis on manned programs, with particular emphasis on the engineering aspects of needed hardware for reliable mission accomplishment. Although there can be no quarrel with the development of spacecraft engineering with reliability assured for manned flight, the price paid has been very high, so high that it appears to have been markedly detrimental to a balance between manned and unmanned space developments. Moreover, emphasis within the manned program has been on man as a test pilot in evaluation of engineering goals, rather than as a biological system himself, requiring the same careful long-term and detailed evaluation if the goal of long-term space flight is to be accomplished.

Biomedical information currently available is not adequate in critically important areas—the design or construction of space stations or interplanetary spacecraft. Specifically, we do not know whether it will be neces-

sary to provide artificial gravity by some form of rotation of part or all of the spacecraft. Biomedical evidence from the U.S. manned program, and particularly from the recent U.S. monkey biosatellite flights, and from the Soviet Soyuz-9 manned flight, all indicate that there are significant problems of cardiovascular instability, body weight loss, and associated disturbances in daily body rhythms and certain nervous functions.

Yet to build spacecraft with a full artificial gravity as on earth, provided by rotation, predicates systems of very large dimensions for acceptable human comfort. Moreover, levels of gravity much less than 1 G may be adequate to prevent medical deterioration, and it is possible that drug and hormone therapy, properly developed, may greatly assist on long missions.

No adequate biomedical basis for these engineering systems is now available, either in the NASA or in the biomedical community. Therefore, it is imperative that NASA collect comprehensive biomedical data as an engineering baseline for design of future spacecraft for prolonged human occupancy.

It is here that there are grounds for concern. NASA has a long history of making commitments to biomedical investigations, which have been repeatedly reduced or even shelved in favor of mission goals of a primarily engineering character. The proposed medical studies in the Skylab missions were initially designed to overcome many deficiencies in the current status of space medicine and physiology. Every effort should be made to safeguard the prime importance of the biomedical aspects of these missions.

In this context, development of a Space Shuttle should be reviewed in terms of its potential contribution to acquisition of needed biomedical information. Its use as an adjunct to physical and life science investigations should be evaluated against likely progress of biomedical research in the Skylab program in the absence of such a vehicle. Medical and psychological studies planned for Skylab will provide much needed information relevant to design of spacecraft for prolonged human occupancy. They are expected to settle many basic issues concerning needs for artificial gravity.

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. At the same time, avoiding commitment to heavy expenditure in this area would afford an excellent opportunity to redress the traditional imbalance between manned spaceflight programs and other more modest but highly important developments. These include fundamental space biology related to medical problems of man in space, and studies in the physical sciences and planetary programs, as well as in areas of the NASA Space Application program.

Thank you for your consideration.

Sincerely,

W. ROSS ADEY, M.D.
Director, Space Biology Laboratory.

Mr. MONDALE. Mr. President, if there was ever \$100 million that could be cut painlessly from a \$200 billion budget, this is it. It is, in my opinion, without redeeming features. It would call for the design, at a cost of \$110 million, of a project about which the top scientists in this country are doubtful. The \$110 million is for the beginning of a program which will cost at least \$14 billion. It seems to me that our resources should be spent in meeting our real human needs—not in this highly wasteful and doubtful space effort.

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

Mr. MONDALE. I yield.

Mr. PASTORE. Does the Senator intend to ask for the yeas and nays on this amendment?

Mr. MONDALE. Yes. Mr. President, I ask for the yeas and nays.

The yeas and nays were ordered.

Mr. MONDALE. I yield to the Senator from Florida.

Mr. HOLLAND. Mr. President, we are arguing again the question that was brought up by my able friend the Senator from Minnesota at the time of the passage of the authorization bill. This question was debated at great length at that time, and the Senator's position was rejected by the Senate by a vote of 56 to 29.

I understand that the present amendment, while, of course, in different words, relates to exactly the same matter. It proposes to reduce the appropriations for NASA by about \$110 million, to use a general figure, coupled with additional wording in the bill to prevent the use of any other NASA appropriations for the space shuttle program, if I am correct in my understanding.

Mr. MONDALE. There will be \$80 million in this bill—which is not being contested—for general research on the space shuttle station program.

Mr. HOLLAND. Well, on the other provision that was inserted, in addition to the \$110 million being cut off, which is put in for the research on the space shuttle, the wording reads as follows:

Provided, that this appropriation shall not be available for the design or definition of any space shuttle or space station.

Mr. MONDALE. The Senator is correct.

Mr. HOLLAND. Mr. President, this is substantially the same question that we debated at length, that the Senate rejected as an amendment to the authorization bill by a vote of 56 to 29. I am not surprised at the Senator's bringing up the question again, because we all know of his perseverance. I have frequently had occasion to congratulate him upon being persevering. But frankly, I cannot understand his doing it at this stage, when we have had a demonstration in the last few days of the fact that our friends the Soviets are working on exactly this same kind of proposal.

They put up a manned space flight, and kept it in flight several days longer than the longest one that we had had before, testing one of the things that would have to be tested before the space shuttle could become practicable, and that is whether or not men can live in space—in orbital space, not way out yonder, but nevertheless clear out of the atmosphere of the earth—for longer periods of time than had customarily been thought, or than had been tried.

We all know perfectly well that the long-continued journey through space by the two Russian astronauts, or cosmonauts, as they call them, which terminated only a few days ago, was precisely for that purpose, because after it was concluded and after it was a success, the Soviets announced that that was the purpose, and that it was a success, that it had shown that their cosmonauts—who are human beings just like American astronauts—could live and come back

healthy from much longer periods of time weightlessness in outer space than had ever been shown to be the case before.

Now we are being asked to desert and forget about the only part of the space program which is designed to work toward that same end, by putting a space vehicle in orbit around the earth which can be used as a shuttle station, so that men can go there, can stay there long periods of time, and can be relieved, then, by others who will come back to earth in the same vehicle that took the reinforcements up.

The purpose of the space shuttle—and incidentally, this \$110 millions does not commit us to it; it commits us to research to see whether it is possible or not, or whether there is reason to proceed with it, let us have that understood—has nothing to do with the projected trip to Mars or to outer space, which was argued quite extensively in the debate on the authorization bill. This has nothing to do with anything else than the question of whether or not we can have a laboratory moving out there around this earth at a reasonable distance, from which men can see and direct instruments, can see perfectly and can take pictures of any part of the earth which is visible, and can do any number of other things by way of communicating their information as well as the pictures of what they have discovered back to this earth.

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

Mr. HOLLAND. The question is whether or not we shall proceed with the research to determine whether such a laboratory is feasible, and whether it is feasible to have reusable space shuttles through which we will reduce enormously the cost of vehicles by which we send up men. They are not reusable now; they are throw-aways, and one of the principal objectives in the whole thing is to keep them from being throw-aways, and to be able to use them over and over again, since they will be constructed of the most indestructible metals that have been found to be possible by way of alloying other well-known metals. Therefore, they can be reused, provided they can be returned, and go back and forth on repeated trips to the space laboratory.

Mr. MONDALE. Will the Senator yield?

Mr. HOLLAND. Just one moment, and I shall be happy to yield.

That is the question. And when I get through with that part of the question, I want to go very fully into the connection with the defense effort, because there is a very real connection with the defense effort.

I heard one of my good friends, the Senator from Wisconsin, indicate that he thought it was a rather evanescent connection. I do not believe he used that word; he probably used a better word.

Mr. PROXMIRE. Mr. President, I concede that "evanescent" is a better word.

Mr. HOLLAND. What is that?

Mr. PROXMIRE. I accept the Senator's word. I did not use it, but I think it characterizes well the nature of the connection.

Mr. HOLLAND. I thought perhaps I was interpreting the Senator's meaning

more correctly than his own wording had stated it. At any rate, that is the real meaning of the space shuttle—to reduce greatly the cost of sending men up and bringing them back by making the vehicle useful not just for one trip but for many, many return trips. The purpose of the research is to see whether that is feasible and also to see how feasible it is to keep the men up in the space laboratory for long periods of time.

As I have just remarked—and nobody can contradict me on it, because they all know it is true—the Russians have just demonstrated better than we have been able to demonstrate here before that man can live for much longer periods in a weightless condition and in orbit around the earth than we had up to this time believed was possible.

Before I go into the military aspects of the matter, I yield to the Senator from Minnesota.

Mr. MONDALE. I think that what the Soyuz-9 manned flight demonstrates is that there are serious questions surrounding the physiological capability of prolonged space flight by man.

Dr. Ross Adey, who was principal investigator of the Biosatellite III program, says this in his letter of June 29. He is Director of the Space Biology Laboratory at the University of California. He says:

Biomedical evidence from the U.S. manned program, and particularly from the recent U.S. monkey biosatellite flight, and from the Soviet Soyuz-9 manned flight, all indicate that there are significant problems of cardiovascular instability, body weight loss, and associated disturbances in daily body rhythms and certain nervous functions.

That was not the point I wish to make, however, when I rose.

Mr. HOLLAND. I thought the Senator was rising for a question, but I am glad for him to go further.

Mr. MONDALE. I just wanted to make that point, because I think Soyuz-9 strengthens the case against spending money for design for the space shuttle program at this time.

Mr. HOLLAND. How many days longer did they stay up than anyone else before?

Mr. MONDALE. They were up for 18 days—4 days exceeding ours—and they experienced substantial physiological problems, as Dr. Adey points out.

The point I wanted to make concerns a fact that I think has to be clarified. The Senator from Florida has said that this \$110 million was for the purpose of continuing research to determine its feasibility. I regret to differ with the Senator from Florida. There is \$80 million in this appropriation which we are not seeking to delete, which is for the purpose of determining the research issues at stake surrounding the space shuttle station program.

In addition, there is the on-going Skylab program, to be completed in 1973—to determine, with existing equipment, the potential of man in long duration flight of up to 56 days. These expenditures will determine the possibilities of long duration manned flight and other questions concerning what must be done in the design of a space station in order to achieve long duration flight.

What I object to in this \$110 million is that it is for the purpose of developing

a design, which is why our amendment says that none of this money may be used for the purpose of design or definition. I think that has to be clarified, because this \$110 million is not for research. It is for design and definition.

Mr. ALLOTT. Mr. President, will the Senator from Florida yield?

Mr. HOLLAND. I yield.

Mr. ALLOTT. I wanted to address myself to this. This is not design. I am afraid the Senator is in error. When I discuss this later, I will try to refer to the proper documents.

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

Mr. HOLLAND. I yield further.

Mr. MONDALE. I am searching for the language which NASA itself uses. But this is for design and definition. It is not for research. There is \$80 million in this budget, which we are not seeking to delete, for the purpose of research. They have completed phase A, which they said determined the feasibility of the shuttle station, and they now want to move to phase B for the purpose of design and definition. So there is a fact issue that ought to be resolved. I think we went through it last time.

Mr. HOLLAND. Mr. President, while the Senator is looking up the earlier debate, I will tell him that it is on page S6791 of the RECORD of May 6.

Mr. MONDALE. I am looking for the specific language of the NASA agency, which I hope to find in a moment.

Mr. HOLLAND. Mr. President, I will continue, and I will be glad to yield again to the Senator when he finds what he is searching for.

This very point was discussed in the debate we had during the authorization argument. The able Senator from Minnesota raised the exact point and had quite a discussion on it, on pages S6790 and S6791, in the debate of May 6. After the Senator from Minnesota had made a long statement on the matter, the Senator from Mississippi made this statement, which I think pretty well winds up the matter:

Mr. STENNIS. Mr. President, the Senator has made my point. The basic research will go on anyway, but it cannot be applied to the space shuttle, which cannot get the benefit of it, unless we have this program for the \$110 million. We will not get the benefit or the fruits of it. If we are to have this space system, we will have to move first into the field of definition studies.

And the Senator from Minnesota simply thanked the Senator from Mississippi for his explanation of the matter with these words:

Mr. MONDALE. I thank the Senator.

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

Mr. HOLLAND. I yield.

Mr. MONDALE. I think that underscores my understanding of the debate. He is referring to the fruits that come from research, and he refers to the word "definition"; and earlier in the debate there is the colloquy about hardening of the design. That is what we were referring to, and it is this design and definition purpose for which the \$110 million is requested.

Mr. HOLLAND. The Senator from Minnesota, in his statement just before

the Senator from Mississippi spoke, had this to say:

My argument is that until we have been satisfied in the research field, until we have seen whether it is feasible as a system which assumes man's capacity to survive long duration flights, we should withhold this kind of starter costs which we may not have to make if we find it to be infeasible.

In other words, the Senator from Minnesota took the position that until we found out how long man can live in space and whether long enough to justify the station and the shuttle service in which the vehicles would be used over and over again, we should not go into the question of the design of the platform. The Senator from Mississippi answered that, I thought, not only capably but also conclusively in what he had to say.

Mr. President, there just is not any question about it—the Soviets as well as ourselves have been trying to find out how long men can exist in space with the best protection we are able to devise for them, without suffering too great results. The Russian experiment is the last one in that field and has shown that they can exist up to 4 days longer than was proven by us to be the case.

Mr. President, I hold in my hand a letter dated July 6, 1970, from the Director of Space Medicine in NASA, admitting that they have not been able to get all the facts, because, as we know, our friends, the Russians, are not so frank with giving out facts to the world as we are.

But he does say that many things have been determined if only from the news media. I read a part of his letter:

At the present time, the only medical information on the results of Soyuz 9 which are available to us are those obtained from the Russian and American news media. Information derived from the news media seem to indicate:

(1) The primary purpose of the mission was to evaluate the medical effects of manned space flight and test the life support system.

which is exactly what I have been saying awhile ago, that we have been trying to see how much longer we could go and which would be practical.

Continuing reading:

(2) A reduced coordination of eye movements and disturbances of color perception were reported, but apparently were not of sufficient magnitude to disturb visual performance. (We are unable to interpret the precise meaning of this statement at this time.)

(3) No significant impairment of health or performance occurred during the flight.

(4) Reports of post flight findings are meager, but seem to indicate a subjective feeling of heaviness immediately post flight and an alteration of cardiovascular responses for the first few days following the flight. (Both of these findings have been noted in our own astronauts. It is very likely that when we are able to compare the actual data, the Russian findings will approximate our own.)

Mr. President, I ask unanimous consent to have the whole letter from Maj. J. W. Humphreys, Jr., printed in the RECORD.

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

NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION,
Washington, D.C., July 6, 1970.

To: C/Assistant Administrator, Office of Legislative Affairs. Attn: Mr. Gerald J. Mossinghoff.

From: MM/Director of Space Medicine.
Subject: Medical Information on Soyuz 9.

At the present time, the only medical information on the results of Soyuz 9 which are available to us are those obtained from the Russian and American news media. Information derived from the news media seems to indicate:

(1) The primary purpose of the mission was to evaluate the medical effects of manned space flight and to test the life support system.

(2) A reduced coordination of eye movements and disturbances of color perception were reported, but apparently were not of sufficient magnitude to disturb visual performance. (We are unable to interpret the precise meaning of this statement at this time.)

(3) No significant impairment of health or performance occurred during the flight.

(4) Reports of post flight findings are meager, but seem to indicate a subjective feeling of heaviness immediately post flight and an alteration of cardiovascular responses for the first few days following the flight. (Both of these findings have been noted in our own astronauts. It is very likely that when we are able to compare the actual data, the Russian findings will approximate our own.)

At this point we are unaware of any exceptional or unanticipated findings derived from the Soyuz 9 medical findings. The only possible exception is the indication of the occurrence of visual changes which are presently not amenable to precise interpretation. We have, however, been proceeding for the past three years with plans to provide an inflight capability to examine visual function, together with a great many other measurements aboard our future manned space flight missions. Opinions of various Russian experts, as reported in Tass and Izvestia, based on Soyuz 9, have varied considerably in their prognosis of man's ability to fly in a weightless environment for prolonged periods of time (one to 12 months and longer), but currently available medical information on Soyuz 9 provides no indication for altering our present approach to planning of future manned space flight.

J. W. HUMPHREYS, JR.,
Major General, USAF, MC.

Mr. HOLLAND. Mr. President, apparently they are trying to find out as a preliminary to greater use of men, not in the distant outer space but in the space around the earth, how long men can survive without great disturbance of their bodily functions.

This last result was obtained by the Russians since our debate when we approved this amount by a vote of better than 2 to 1, as I remember it, which shows that we are finding out with each passing test that man can survive a little longer than any other machine known, not like the little monkey my friend from Minnesota refers to who could not survive very long because he lacked the intelligence to adapt himself to the conditions which arose while the flight was in progress.

Mr. President, as to the defense application, there is no question about the connection existing, because that was brought out clearly in testimony by Dr. Foster, Director, Defense Research and Engineering, the chief man for the Department of Defense research.

Let me read for the record portions of the Senate Space Committee hearing, on pages 880 and 881.

I am going to read some portions which were deleted because of secrecy—I cannot read what was deleted—but it will show how many matters there were which the Department of Defense thought were critically affected because of security so that they should be omitted from the hearing record.

It starts with the question by the distinguished Senator from Maine (Mrs. SMITH), following the statement by Dr. Foster that the Manned Orbital Laboratory program of the Department of Defense was canceled at a total estimated saving of \$1.5 billion, as I recall the amount:

Senator SMITH of Maine. Perhaps for the record, Dr. Foster, you might give us in a little more detail, keeping the security aspects of the subject in mind, as to just how the Defense Department can see a possible future military use, for the space shuttle.

Dr. FOSTER. I would be very pleased to put that in the record.

This he did. These things do not appear in the RECORD except as a sanitized version, but it speaks rather strongly for the value of the program.

Here is what Dr. Foster said further:

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.

Now, my friends, who are undoubtedly led into this in their desire for economy, do not seem to realize that this is an economy effort, that this is the significant intention of this particular special shuttle effort, to be able to use the vehicle over and over again and to use men in space for as long a period as is found to be safe to use them.

Now, continuing to read:

Not only will we economize from the point of view of reusable launch vehicles, but significant savings can accrue because repair and reuse of payloads will be possible and payload design criteria could become less stringent. In addition to all of this, we would expect to benefit from the STS technology resulting from NASA's development efforts.

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.

Mr. President, that concludes the sanitized statement that was placed in the RECORD, showing the importance to the Department of the Defense of the space shuttle effort.

Now, maybe our friends do not think there is any saving of money in combining an expensive program which the Department of Defense was operating, which was known as the MOL, with another expensive program which NASA is planning or doing the research for; but I cannot agree with that at all, and I do not believe, on sober reflection, that by friend from Minnesota would agree.

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

Mr. HOLLAND. I yield.

Mr. MONDALE. Is the Defense De-

partment at this time contributing any money to research on the space shuttle station program, either to NASA or in cooperation with NASA?

Mr. HOLLAND. Not to my knowledge. I believe that the understanding was on agreeing that the MOL should be abandoned after it had spent so many millions of dollars on it. I see that the distinguished Senator from Nevada is in the Chamber, and he is a member of the Armed Services Committee, as well as being a distinguished man in aviation. He will be able to correct me if I am wrong about it, but they decided that it was much sounder to have one agency do the research with both having the advantage of that research. The sanitized statement placed in the record by Dr. Foster says:

Once an economical and operationally effective STS is developed, we would expect to use it to launch essentially all DOD payloads into earth orbit.

If that does not sound like cooperation for the common use of a space system once it is determined to be feasible and then constructed for launch services, then I do not know how words can be found to state that.

Mr. MONDALE. Mr. President, did DOD testify in favor of the \$110 million for design and definition of the space shuttle?

Mr. HOLLAND. I believe they did. The whole question is further discussed in the record. I have not had a chance to review it entirely this morning. But I believe that was Dr. Foster's purpose. His main purpose in coming was to make it clear that the Department of Defense wanted this particular program to go ahead and wanted the research work on it done.

I will continue to read, and perhaps we will find the specific wording.

Mr. MONDALE. Mr. President, I am not objecting to the research. But I am objecting to the \$110 million in here for design and definition.

Mr. HOLLAND. The Senator is not objecting to the research insofar as individuals are concerned and the effort to find out what conditions they can survive under and the like. But he is objecting to research which has to do with research on the kind of design which should be used, how it shall be launched, and how long its life is apt to be once launched into orbit and all of those questions that have to do with the space system, which are connected with the \$110 million.

Mr. MONDALE. Mr. President, this is a fundamental question. It seems to be a point of disagreement, not confusion, because the question of definition and design assumes a certain understanding about man's capacity for long duration flight.

Permit me to read a portion of the letter from Dr. Adey, director of the Space Biology Laboratory of the University of California at Los Angeles.

Mr. HOLLAND. Did the Senator not have that letter printed in the RECORD a while ago?

Mr. MONDALE. I did. But I want to make the distinction between definition and design. This is design money. There is research money provided in the bill.

Dr. Adey states:

Biomedical information currently available is not adequate in critically important areas for the design or construction of space stations or interplanetary space craft. Specifically, we do not know whether it will be necessary to provide artificial gravity by some form of rotation of part or all of the spacecraft. Biomedical evidence from the U.S. manned program, and particularly from the recent U.S. monkey biosatellite flight, and from the Soviet Soyuz-9 manned flight, all indicate that there are significant problems of cardiovascular instability, body weight loss, and associated disturbances in daily body rhythms and certain nervous functions.

Yet to build spacecraft with a full artificial gravity as on earth, provided by rotation, predicates systems of very large dimensions for acceptable human comfort. Moreover, levels of gravity much less than 1 G may be adequate to prevent medical deterioration, and it is possible that drug and hormone therapy, properly developed, may greatly assist on long missions.

Mr. HOLLAND. Mr. President, I think the Senator has overlooked the fact that the letter relates in part to research for interplanetary missions. The word was used in the letter.

Mr. MONDALE. Mr. President, permit me to state his conclusion. I think that will clarify the matter.

He states:

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.

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

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

UNIVERSITY OF CALIFORNIA,
LOS ANGELES.

Los Angeles, Calif., June 29, 1970.

SENATOR WALTER F. MONDALE,
Old Senate Office Building,
Washington, D.C.

DEAR SENATOR MONDALE: With Senate action now pending on the Space Shuttle, I submit for your consideration the following viewpoints as important in the determination of priorities in the space program in the coming decade. I write as a concerned biomedical scientist who has participated in the space program for the past ten years, both as an investigator in manned and unmanned flights, and as a member of committees and review bodies with an advisory role to both government and NASA.

Priorities in the space program since its inception have placed major emphasis on manned programs, with particular emphasis on the engineering aspects of needed hardware for reliable mission accomplishment. Although there can be no quarrel with the development of spacecraft engineering with reliability assured for manned flight, the price paid has been very high, so high that it appears to have been markedly detrimental to a balance between manned and unmanned space developments. Moreover, emphasis within the manned program has been on man as a test pilot in evaluation of engineering goals, rather than as a biological system himself, requiring the same careful long-term and detailed evaluation if the goal of long-term space flight is to be accomplished.

Biomedical information currently available is not adequate in critically important areas for the design or construction of space stations or interplanetary spacecraft. Specifically, we do not know whether it will be necessary to provide artificial gravity by some form of rotation of part or all of the spacecraft. Biomedical evidence from the U.S.

manned program, and particularly from the recent U.S. monkey biosatellite flight, and from the Soviet Soyuz-9 manned flight, all indicate that there are significant problems of cardiovascular instability, body weight loss, and associated disturbances in daily body rhythms and certain nervous functions.

Yet to build spacecraft with a full artificial gravity as on earth, provided by rotation, predicates systems of very large dimensions for acceptable human comfort. Moreover, levels of gravity much less than 1 G may be adequate to prevent medical deterioration, and it is possible that drug and hormone therapy, properly developed, may greatly assist on long missions.

No adequate biomedical basis for these engineering systems is now available, either in the NASA or in the biomedical community. Therefore, it is imperative that NASA collect comprehensive biomedical data as an engineering baseline for design of future spacecraft for prolonged human occupancy.

It is here that there are grounds for concern. NASA has a long history of making commitments to biomedical investigations, which have been repeatedly reduced or even shelved in favor of mission goals of a primarily engineering character. The proposed medical studies in the Skylab missions were initially designed to overcome many deficiencies in the current status of space medicine and physiology. Every effort should be made to safeguard the prime importance of the biomedical aspects of these missions.

In this context, development of a Space Shuttle should be reviewed in terms of its potential contribution to acquisition of needed biomedical information. Its use as an adjunct to physical and life science investigations should be evaluated against likely progress of biomedical research in the Skylab program in the absence of such a vehicle. Medical and psychological studies planned for Skylab will provide much needed information relevant to design of spacecraft for prolonged human occupancy. They are expected to settle many basic issues concerning needs for artificial gravity.

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. At the same time, avoiding commitment to heavy expenditure in this area would afford an excellent opportunity to redress the traditional imbalance between manned spaceflight programs and other more modest but highly important developments. These include fundamental space biology related to medical problems of man in space, and studies in the physical sciences in planetary programs, as well as in areas of the NASA Space Applications program.

Thank you for your consideration.

Sincerely,

W. ROSS ADEY, M.D.,

Director, Space Biology Laboratory
University of California at Los Angeles.

Mr. HOLLAND. Mr. President, I think the letter expresses very clearly that it is directed in the main at interplanetary exploration and interplanetary flight and artificial gravity to be created by certain mechanical means in the event men are sent out into interplanetary spaces.

We are not talking about anything of that kind. We are talking plainly and simply about the research for and the design for the reusability of the craft after it is launched and the method of launch which would be different than anything we have ever had before. We are also talking about finding out whether it is feasible to have such a platform launched out in an area relatively close to earth, but nevertheless making constant orbits around earth.



MINNESOTA HISTORICAL SOCIETY

Copyright in the Walter F. Mondale Papers belongs to the Minnesota Historical Society and its content may not be copied without the copyright holder's express written permission. Users may print, download, link to, or email content, however, for individual use.

To request permission for commercial or educational use, please contact the Minnesota Historical Society.



www.mnhs.org