

LBJ LIBRARY DOCUMENT WITHDRAWAL SHEET

Page 1 of 1

<u>Doc #</u>	<u>DocType</u>	<u>Doc Info</u>	<u>Classification</u>	<u>Pages</u>	<u>Date</u>	<u>Restriction</u>
4a	memo	From Charles Johnson to Bromley Smith document 4c same folder, and doc.#2 in "Outer Space Policy Statement, U.S., same box are duplicates	S	2	12/5/62	A
4c	memo	duplicate of 4a <i>of NLJ 030-0151-1; WH Guidelines</i>	S	2	12/5/62	A

Collection Title National Security File, Files of Charles E. Johnson**Folder Title** Military Use of Space**Box Number** 15**Restriction Codes**

- (A) Closed by Executive Order 12958 governing access to national security information.
(B) Closed by statute or by the agency which originated the document.
(C) Closed in accordance with restrictions contained in the donor's deed of gift.

An article a day of enduring significance, in condensed permanent booklet form



BY FRANCIS VIVIAN DRAKE
Military Editor of The Reader's Digest

Are we suffering from moon madness? The over-publicized "race" to get a man on our faraway neighbor has obscured an imminent threat to our security—Soviet strides toward military conquest of the space just over our heads

We're Running the Wrong Race With Russia!

SOME WEEKS ago in Washington, D.C., a number of prominent politicians were asked this question: "What, in your view, is the most urgent project facing the United States today?" Without hesitation each named the moon shot, costliest—perhaps 40 billion dollars

can pay for it—most dramatic and most complicated program ever to be waved along with so much support from Congress and the White House. Added one Congressman: "The prestige of pioneering that maiden voyage across outer space will be incalculable. Whatever the

cost, we've got to beat the Russians to the moon!"

The sincerity of these replies is military advisers is the assumption (shared, due to the flamboyant publicity, by millions of U.S. citizens) that the nation which achieves the first moon-landing will automatically become top dog.

This is wildly dangerous thinking. It is dangerous because it is tried to drive home to civilian planners from the very first conception of a moon shoot: *i.e., in lavishing our money and scientific brainpower on the effort to beat the Russians to the moon, we run the grave risk of losing the free world's battle for survival.*

Understand the difference between inner space and outer space. These two zones relate quite differently to our security.

Outer space engulfs the limitless reaches of the universe, an infinite void in which billions of planets and celestial bodies spin rhythmically. Project Apollo is beamed at reaching the nearest of these bodies, the moon, 238,800 miles away—much more by the curved path spacecraft must take. A landing on its bleak and inhospitable surface will indeed bring fame to the nation which first accomplishes this feat, glory greater even than scaling Mt. Everest. It will be a triumph for man's indomitable spirit of adventure; but,

from the very remoteness of the moon, *it can have little or no military consequence.*

above us recently invaded by the astronauts and man-made satellites. Since the appearance six years ago of Sputnik I, at least 134 satellites have occupied inner space, and 57 of them are still in orbit, some Russian, more American. *Whoever is first to dominate this inner space will dominate world affairs.*

The reason is this: before long, before any moon-landing can be achieved by either Russia or the United States, it will be possible to introduce into inner space armed satellites capable of extinguishing any country below in a matter of minutes. Commanding Russia's strategic rocket forces, promises categorically that Soviet rockets could be launched from satellites "at any desirable time and at any point in the satellite trajectory."

The danger to the free world lies in the profound difference in national objectives. The stated policy of the U.S. space program, as put forth by the President, is that it is "for peaceful purposes." To that end we have developed weather and communications satellites, and have kept our sights steadfastly on a moon adventure. The Russian effort, on the other hand, is first, last and unblushingly *military*. The Soviet Union is therefore racing to

win inner space, the only element in which it is still unopposed; where, unlike land, air, on and beneath the sea, it is not confronted by formidable deterrence.

For six years Russian satellites have been designed with this goal in view. Four or five times larger than ours (astronauts can move around inside them), Vostoks are built specifically for weight-carrying. Already they can lift off, and orbit, with loads much heavier than any we can carry. Already they have contrived a rendezvous between two Vostoks, have shot an astronaut through 81 consecutive orbits and placed one directly above both our national capital and our heartland.

If this is not sufficient to ring alarm bells, we have Khrushchev's warning that Vostoks can "carry other freight than man. We will hold a sword of Damocles above the earth." If we remain high-mindedly wedded to our policy of peaceful purposes, our vast reservoir of native horse sense drugged with moonshine, he may well live to see his prophecy fulfilled.

What makes a reappraisal of our inner-space objectives of imperative concern is the fact that right now an atomic development of immense military significance is taking place. It is this:

The Russians have recently achieved an increase in the effectiveness of nuclear explosions so devastating that it dwarfs all previous records. Confirming this, our own atomic experts have warned that

such stupendous forces, let loose above us from a satellite, could, in a few seconds, literally cremate a large part of the United States. There would be nothing left below, no man, beast, vegetation, buildings, nothing at all but the glare of white-hot cinders.

In face of such a dire threat, it must come as a stunning shock to all thoughtful Americans to learn that *the United States has no top-priority programs beamed at preventing, anticipating or deterring such a terrifying prospect.* Our top priorities are all tied up with steamrolling through the moon shot. Many billions of public money, together with the rich cream of scientific talent, are lavished on an effort that could well be aborted in midstride by Soviet enterprise and realism.

There is a crying need for a reappraisal of our space aims, for more specific public information, especially since statements from those highly placed in Washington are so contradictory that they blur rather than clarify our understanding. Less than a year ago, for instance, Secretary of Defense Robert S. McNamara declared that "attack from enemy satellites is not a very likely threat for the immediate future. At the present time we see no advantage to space-based systems."

On the other hand, Gen. Curtis E. LeMay, tough-minded chief of the U.S. Air Force, expressed a different view before the House Armed Services Committee: "... the Russian space program is entirely military. I

am sure that space systems will come."

Evidently small heed was paid to Air Force Secretary Eugene Zuckert's expressed dissatisfaction with "the tone and pace of our military space program," since eight months later we find C. D. Perkins, former Deputy Air Force Secretary for Research and Development, complaining that "our military space programs are floundering badly."

Unlike Americans, the people of Russia have no such reasons for confusion. One of their leading strategists, Marshal V. D. Sokolovsky, has summed up the situation for them simply and concisely: "*An important problem now is warfare with artificial earth satellites, which can be launched for diverse reasons, even as carriers of nuclear weapons.*"

How serious is this Russian threat?

First, their achievement of a vast increase in nuclear power, which could be directed against us via inner space, is technically feasible. Scientists tell us that given enough raw material there is no reason why bombs of unlimited power cannot be made. We have only to look at the record. The Hiroshima uranium bomb, which destroyed a city and caused 200,000 casualties, had a force of 20 kilotons—each kiloton equals 1000 tons of T.N.T. Next came the hydrogen bomb, increasing the explosive factor of the Hiroshima weapon by 1000 times—its power is reckoned in *megatons*, each equal to one million tons of T.N.T.

Now something even more sinister has occurred. In 1961 the Russians, violating the test moratorium, exploded a 55-to-60-megaton bomb. "You do not have 50- or 100-megaton bombs," exulted Khrushchev. "We have stronger than 100 megatons!" (That is more than 5000 times the strength of the Hiroshima bomb.)

Why, speculated the West, was this fantastically powerful bomb detonated? The answer came in a terrifying revelation by famed mathematician Dr. Donald G. Brennan, head of the Hudson Institute in Harmon-on-Hudson, N.Y., and associate of key atomic-physicist Dr. Herman Kahn.

Brennan said in part: The possibility of orbital weapons covers a great range. They could be aimed chiefly at the cities, in which case they would have relatively modest yields in the region of one megaton. "Another possibility that appears much more disturbing would involve placing in orbit a limited number of devices of very large yield, a few of 100 megatons or more, *which could be detonated at orbital altitude rather than being brought down to earth. The thermal effect from such a high-yield device could set fire to a large fraction of the continent.*"

Air Force-Space Digest magazine, the highly informed voice of the Air Force, rammed home the same point: "It is possible to place very large-yield devices in orbit, which have virtually instantaneous delivery time. Detonated at orbital altitude,

such a weapon could set fire to a large part of the United States."

Atomic speedup has thus reached this frightening climax: an aggressor nation can orbit satellites carrying unimaginable power, which can be triggered simply by a remote radio key. Set off above our heartland, the explosion would generate heat as incandescent as the sun's—but with this difference: the heat would strike not from a source 93 million miles distant, but from merely 150 miles away, incinerating hundreds of thousands of square miles in a single flash without any possibility of warning. Precision of target aim is no longer a factor.

What are we going to do about it? Efforts to bring about an end to nuclear testing have been sabotaged consistently by the Soviet Union; so have Western efforts, initiated in 1960, to achieve the prohibition of all orbital weapons for mass destruction. Have we any alternative but to take the most immediate and realistic steps to protect the safety of the free world?

Here are the measures urged by military planners:

- Perfect a method of *detecting* foreign satellites wherever they may appear. At present our Ballistic Missile Early Warning System (BMEWS) is tied to weapons that might show up in northern latitudes. We need a globe-girdling system, scanning all directions and sufficiently accurate to pinpoint a satellite so that we could send up a defensive vehicle to intercept it.

- Pioneer *inspector* satellites, poised on launching pads and ready to lift off within minutes. Our moon-shot experimental firings have been dependent on one big launching pad, Canaveral, and curtain-raising preliminaries there have required as many as 68 days. We must acquire the same hair-trigger, round-the-clock alertness that we have achieved with our nuclear bombers, missiles and submarines.

- Place *human* observers in inner space. Despite radar systems, computers and other electronic miracles, science has still not come up with anything equal to the intelligence and judgment of a man. The Russians have already pointed the way to interception by bringing their Vostoks so close together that the two astronauts could actually see each other. The next stage must include lock-on, perhaps by magnetic means, and physical inspection of the enemy satellite.

- Achieve means of *destroying, disarming or diverting* a satellite if it is armed. In World War II, British pilots pioneered a means of diverting London-heading V-1's, nudging the buzz-bombs with their wing tips to angle them away from the target into open country. To destroy a satellite would be infinitely more subtle and complicated, but scientists believe that they could be destroyed by electronics or radiation or even be directed back to their point of origin.

- Coupled to all these precautions we must establish *deterrence* inside

THE RUSSIANS will not be bound by any treaty agreement. When they are ready they will bring war into space and from space back to earth. We must be aware that they have a head start. They have reliable high-thrust boosters, accurate navigation and guidance systems. Today they place payloads in space five times heavier than ours. In a few years they will be able to increase this payload to 100 tons, and be able to rendezvous in space—a crucial point in military operation. Having resolved this decisive problem, there should be no major difficulty anymore in establishing a man-operated military system. They won't rest until they have obtained complete control of the space effort. They may achieve superiority in a couple of years while we are still arguing about the usefulness of military space systems.

—Excerpts from an address made before the Air Force War College at Air University, Maxwell AFB, in Montgomery, Ala., February 6, 1962, by Dr. Walter R. Dornberger, former German rocket scientist and now vice president and chief scientist of the Bell Aerosystems Co.

inner space, fortifying it with armed satellites of our own capable of confronting an aggressor with matching destructive force. Deterrent strength is the overwhelming reason our bombers and missiles have been able to preserve the peace despite incessant Soviet threat and belligerence.

- Form a top-level space commission to redefine priorities and activate these measures so that defense comes before exploration.

It is futile to assume that the imagination-capturing moon program will aid us herein. Knowledge of tremendous value is being gained, but national defense against a hostile, racing Soviet Union has more urgent and exacting requirements than the peaceful exploration of space.

The urgent importance of an effective inner-space military program has aroused a storm of controversy in Washington. Rep. Robert Wilson, chairman of the Republican advisory committee for space and

aeronautics, has declared, "The administration's negligence in military space development is a disastrous course for the future of America," and his alarm is echoed by such noted Senators as Barry Goldwater and Margaret Chase Smith, both members of the Senate Armed Services Committee. Nor can their criticisms be dismissed as partisan politics; as much alarm or more is being voiced by Democratic leaders such as Sen. Richard B. Russell (chairman of the same committee), Sen. Howard W. Cannon, of the Aeronautical and Space Sciences Committee, and Rep. Chet Holifield, head of the Joint Congressional Committee on Atomic Energy.

The warning of top military planners could hardly be more emphatic. Here is what two of the front-rankers have to say: *Lt. Gen. James Ferguson*, deputy chief of Air Force Research-and-Development, which has the prime responsibility for keep-

ing ahead of Russia: "The most lethal threat posed against the United States today is missiles through space. Space is no longer remote. We wish to operate both manned and unmanned systems in the near-earth environment. Our objectives include detection, tracking, inspecting and means of disabling hostile satellites."

Gen. Curtis E. LeMay: "We must not risk the danger of waiting for the enemy to demonstrate capability before we undertake development of our own. The visible threat requires a vigorous military program."

Luckily, we do not have to start from scratch. A military space program does exist. We also have a magnificent instrument in NASA, and we have the hard-won experience of our astronauts.

The greatest practical difficulty is cost. The price of accelerating the

military occupation of inner space would be about a billion dollars this year, with more to follow. This is far less than NASA is spending on outer-space experimentation. A re-allocation of funds in view of present dangers will undoubtedly be necessary.

The safety of our country and of the free world commands top-priority, and no other project, however sensational, should be allowed to compromise security.

It is the duty of all Americans to ponder the words of Dr. James R. Killian, Jr., chairman of M.I.T. and adviser to the White House, when he surveyed the advance of missile systems: "*This is one race we dare not lose.*"

For information on reprints, see page 107.



Man Hunt

AN ATTRACTIVE miss at the counter thoughtfully sniffed an expensive bottle of perfume. Finally she sighed and handed the salesgirl her money with the comment: "He's so happy as a bachelor that I almost hate to do it to him."

—Contributed by Hal Chadwick

IN A STATIONERY store a pretty girl fluttered over a large collection of greeting cards labeled *To My Sweetheart—Male*. Earnest in her quest, she read each card carefully before rejecting it. Finally she settled on one that said simply and directly: *Because I Love You*. Shyly, she held the card up to the clerk and said softly, "I'll take half a dozen of these, please."

—Marguerite Cullman, *Occupation: Angel* (Norton)



Bugged! The lady in the house on the corner struggles with powerful guilt feelings. "Every time I spray a bug," she says, "I wonder if Rachel Carson would approve."

—Bill Vaughan, *Bell-McClure Syndicate*

1a
July 30, 1963

CONFIDENTIAL

MEMORANDUM FOR MR. BUNDY

Mac --

I don't know if you saw this memorandum the President sent to McNamara and Webb. It is causing considerable pain in the intelligence community. McCone got a copy of it and immediately started cranking his OSI to look into it. Is there anything we can do to get it back on the track?

If you haven't seen the Readers Digest article, it is a re-hash of the Le May-Schriever-Ferguson argument for a large-scale military space program, ~~and~~ raising questions as to the desirability of beating the Russians to the moon at the expense of military space.

cy
Charles E. Johnson

7/31 Talked to Callahan NASA. Told him we wanted the popularized answer (into redone NIE) to the Digest attack.

cy
CONFIDENTIAL

DECLASSIFIED
E.O. 12958 Sec. 3.5
NLJ-S-98001
By JPW, NARA, Date 2-28-02

C O P Y

July 22, 1963

~~CONFIDENTIAL~~

MEMORANDUM FOR

SECRETARY McNAMARA
JIM WEBB

The lead article in the Reader's Digest this month states that the Soviet Union is making a major effort to dominate space while we are indifferent to this threat. I wonder if you could have some people analyze this and give me a response to it.

/s/ John F. Kennedy

~~CONFIDENTIAL~~

10

THE SECRETARY OF DEFENSE
WASHINGTON

July 31, 1963

MEMORANDUM FOR THE PRESIDENT

SUBJECT: Reader's Digest Article on Space

From...
Action copy to...
Info, copy to...

AAO-3
A-2
A-3
R/R

You asked for an analysis of and a response to the article "We're Running the Wrong Race with Russia," by Francis Drake, which appears in the August Reader's Digest.

The main thrust of the article is that we are pursuing our lunar program at the expense of the military space program, while the Russian space effort is entirely military. As a result, the Russians threaten to take over "inner space", the area 100 to 500 miles above the earth, and thus "occupy the driver's seat in world affairs." The Soviet's principal vehicle for doing this will be the orbital bomb.

The article is based for the most part on Soviet propaganda statements, faulty and greatly exaggerated interpretation of technical data, quotes by U. S. authorities taken out of context or distorted, excerpts from Air Force Magazine articles, and the author's personal opinions and unsupported statements. At the same time, he deliberately ignores or is strangely uninformed about our on-going military space program--now totaling some \$1.5 billion per year. The former is probably true inasmuch as he did not speak, as far as we can determine, to anyone of our top people in the Department before making his rather sweeping charges.

There is no foundation for Mr. Drake's flat assertion that our military leaders are deeply concerned that we are risking national security by "lavishing our money and scientific brainpower" on the lunar program, which can have "little or no military significance." He advocates forming a "top level space commission," ignoring that such a body--the Space Council--already exists. He is concerned about our ability to detect satellites, apparently unaware of our present space surveillance systems. His out-of-context quoting of Lt. General Ferguson omits that part of the General's statement where he said that "we strongly support in both thought and action the necessity and values of NASA's scientific explorations."

402

Mr. Drake's description of the orbital bomb threat is based largely on Soviet propaganda and a highly exaggerated and inaccurate interpretation of scientific data. The facts are that this is not a militarily sound way to deliver nuclear warheads and that a defense against such a delivery system could be developed with less difficulty than that against missiles equipped with sophisticated penetration aids. Such a system would add little or nothing to the present Soviet capability to deliver strategic weapons. We do not, of course, ignore the propaganda aspects of such an approach. His contention that we are not doing anything about this possible threat is not correct. We have, as you know, an active program to develop the technology and the techniques required to deal with hostile satellites--including the capability to destroy them--should such a threat eventually present itself.

We can demonstrate that our military space program is not being neglected because of the nation's alleged preoccupation with the lunar program. Moreover, we are working with NASA to develop new ways in which our organizations may combine planning, study, and development efforts where such are of mutual interest. The manned space flight activities which NASA is undertaking to accomplish the lunar mission will contribute to military manned space capabilities if and when it appears important to DoD requirements. The CELESTINE program Planning Board which Mr. Webb and Mr. McNamara established is precisely for this purpose.

Mr. Drake's article will no doubt elicit critical reactions from people who do not understand the interdependence and inter-relationship of the civil and military efforts comprising our National Space Program. While we have done a fair job in conveying the true picture to the public, more needs to be done. I believe that increasingly in future months Administration spokesmen should address the subject of space in order that 'scare' articles such as this may be more widely viewed in their proper perspective. As a first step, I am asking Secretary Zuckert to point out to the Reader's Digest the errors in the Drake piece and ask that the corrections be published. At the very least the Digest should give "equal time" to our position.

Mr. McNamara and I are confident that our present and projected technological base will carry forward our national space objectives while providing the flexibility we need to meet future military contingencies as they may develop.

cc: Mr. Webb, NASA 

Signed
ROSWELL L. GILPATRIC
Deputy Secretary of Defense

August 2, 1963

To: Chuck Johnson
with understanding as
to the place where the
origins of this letter
came from
Dew

I have read the article "We're Running the Wrong Race With Russia," which appears in the August issue of Reader's Digest. 1d

It is a distorted, unbalanced, misinformed article, by a writer who usually does a more accurate job.

The weakness of the article does not come from the writer's interest in an adequate military defense in space. I share the view that we should have such defense.

Rather, the weakness comes from the distortion of the facts. Where in the article is mention made of what the military is doing in space? Why does the author fail to point out that in excess of a billion and a half dollars a year is budgeted on developing space competence by the Department of Defense? Incidentally, that amount is more than was spent on the total space program by NASA, Defense, and the AEC, just two years ago.

You can be assured that the Defense space budget would be substantially larger if so much of what NASA is doing were not also helpful to the Defense Department. In the fields of rendezvous technique, life-protective measures, control and guidance systems, large rocket developments, etc., NASA activities contribute importantly to defense. Moreover, the Department of Defense contributes significantly to what NASA is doing. Anyone who leaves the impression that NASA's projects are deterring the buildup of our defense strength is distorting the facts. The author of the article perpetrates such a distortion.

Let's examine briefly a few specifics in the article to get the flavor of its lack of balance.

1. The article talks about inner space and outer space -- an arbitrary distinction. Yet, the majority of NASA's projects, up to the actual moon flight itself, are in the so-called inner space area, which the author says is being neglected. Where was the Mercury program? Where is the Gemini program scheduled to be undertaken? Where are the meteorological and communications projects? The facts are, and I challenge anyone to refute them: a larger percentage of U. S. launches have been in the so-called inner space area than have those of the USSR.

904

2. I never doubt that the Soviet Union has definite national objectives for each of its moves. Their major objective is to dominate the world and they will use their space competence toward that end. The writer of the article says that we, on the other hand, have peaceful objectives, as we do, and cites weather and communications satellites, and then adds: "(We) have kept our sights steadfastly on the moon." No mention is made of the fact that well over half of all the successful earth orbiting shots by the U. S. have been made by the Department of Defense and that none of them had anything to do with a moon mission. The author also conveniently fails to mention the very vigorous, although not entirely successful, program of the USSR to explore the planets.

3. I would like to take this occasion to meet head-on the accusation that our military efforts, in space and elsewhere, are not peaceful. The fact is that these efforts are devoted to maintaining the peace, deterring war, and as such are as peaceful as any activities by NASA or by any other agency of the government.

4. Great attention is given in the article to the larger weights which the Soviets can and are putting into orbit. For some reason, however, the author fails to make any mention of the fact that we are developing -- in both NASA and DoD -- larger and more powerful rockets than any the Soviets now have.

5. The author of the article emphasizes that Soviet satellites can "carry other freight than man." Any balanced presentation would have also pointed out that the same is true of the U. S. satellites.

6. When the writer decries the absence of any strong U. S. effort to deter attack from hostile spacecraft, he is dead wrong, although classification makes it difficult to give specifics regarding his error. He is also wrong about the allocation of top priorities when he says that they are devoted only to "steamrolling through the moon shot."

7. It is noted, and I refer to it only so as to give the flavor of the article, that the writer quotes Lt. General James Fergusen, Deputy Chief of Air Force R&D, as follows: "The most lethal threat posed against the United States today is missiles through space. Space is no longer remote....." The author failed to quote, presumably as it did not fit the thesis, that the General also said: "We strongly support in both thought and action, the necessity and values of NASA's scientific explorations."

8. The author of this article presents the thesis that, in lavishing our money and scientific brainpower on the effort to beat the Russians to the moon, we are running the grave risk of losing the Free World's battle for survival. This is a curious evaluation of the approximately \$50 billion a year going into our defense efforts. The entire NASA program, of which the moon project is only a part, is only approximately 10% as large as the military budget. Moreover, when we consider that much of the NASA program will be of direct or indirect military benefit, it is indeed a distortion to say that NASA's efforts are detracting from our national security.

9. The article presents the thesis that whatever country will first dominate the critical area of inner space will from then on occupy the driver's seat in world affairs. It should be clear that this country has no intention of letting any other country take over exclusive domination of space, whether near space, intermediate space, or outer space. That is one of the reasons why I am appearing before you today in defense of a large but carefully evaluated budget for the National Aeronautics and Space Administration. Control of space, just as control of any part of our environment, derives from competence and systems which will put that competence into effect. Not so incidentally, the United States has placed approximately four times as many spacecraft into near earth orbit, as have the Soviets. This is hardly evidence of neglecting this area or failing to develop a command and control capability in that area.

10. The military flavor of the Soviet space program cannot be minimized, but it is curious that the author of the article would state that it is exclusively military. The Soviet lunar

and planetary efforts together are at least on a magnitude with those of the United States. Since that is so, either outer space is important militarily, or the Soviet program contains objectives which are broader than those of aggression.

11. The author of the article suggests a number of steps which should be taken in order to save this world from Soviet space domination. He lists six steps. Actually, if the writer had made the effort to find out, he would have learned that most of these essential steps are under way. The United States is not ignoring the development competence to detect, to inspect, to place human observers in space, to disarm or destroy hostile spacecraft, or to form a top-level Space Council to examine priorities and to encourage forward-looking programs.

E.C. Wick

1e

July 30, 1963

~~CONFIDENTIAL~~

MEMORANDUM FOR MR. BUNDY

Mac --

I don't know if you saw this memorandum the President sent to McNamara and Webb. It is causing considerable pain in the intelligence community. McCone got a copy of it and immediately started cranking his OSI to look into it. Is there anything we can do to get it back on the track?

If you haven't seen the Readers Digest article, it is a re-hash of the Le MayhSchrleiver-Ferguson argument for a large-scale military space program, ~~and~~ raising questions as to the desirability of beating the Russians to the moon at the expense of military space.

Charles E. Johnson

~~CONFIDENTIAL~~

DECLASSIFIED
E.O. 12958 Sec. 3.5
NLJ-S-93001
By JDW, NARA, Date 2-28-02

Confidential

1f

July 22, 1963

MEMORANDUM FOR

SECRETARY McNAMARA
JIM WEBB

The lead article in the Reader's Digest this month states that the Soviet Union is making a major effort to dominate space while we are indifferent to this threat. I wonder if you could have some people analyze this and give me a response to it.

/s/ John F. Kennedy

Confidential

DECLASSIFIED
E.O. 12958 Sec. 3.5
NLJ-S-63001
By JOV, NAF, Date 2-28-02

PRESERVATION COPY

THE WHITE HOUSE
WASHINGTON

2

file - existing folder
"Military Use
of Space

PRESERVATION COPY

Miss Nichols

Return from leave
on July 29.

REN

→
Hold for her

Actions 1120
2186
2384

2c/

THE WHITE HOUSE


WASHINGTON

June 25, 1963

MEMORANDUM FOR

Mr. Charles E. Johnson
National Security Council

You may be interested in the attached letter from Ned Trapnell of the Department of the Air Force regarding Secretary Zuckert's space speech.



Arthur Schlesinger, jr.
Special Assistant
to the President

Attachment

772

2d

DEPARTMENT OF THE AIR FORCE
WASHINGTON

OFFICE OF THE SECRETARY

June 20, 1963

Dear Arthur:

I'm happy to make one of my first items of business on return from a long sick leave a note of thanks for your thoughtful letter of June 7th on the "Space and the Cold War" article.

Let me start at the back of your letter and work forward. We've been trying to speak in full accord with the two points you made on page 3, that the U. S. would not be the first to place weapons of mass destruction in orbit and that our military activities in space are not aggressive and are therefore peaceful within the meaning of the U. N. Charter and consistent with U. N. resolutions on the subject.

Your precise statement of the points will be very useful to me, even though I've had them generally in mind.

Air Force people are staying away from any reference to weapons in orbit, and are putting their own interest in space on the same basis as all other defense preparations, which necessarily meet your second criteria.

We will, from now on, emphasize the point of your first paragraph, that it is the "aggressive" exploitation of space against which the free world must be on guard.

We will also take into account the concern mentioned in your second numbered paragraph, which we can do without in any way diluting the integrity of the Air Force position that the free world must be prepared to defend itself against hostile action either through or from space.

Your third numbered paragraph is a useful reminder that even though we must present constructively the current government organization for space, we should keep in mind the external twists which can be put on internal explanations of policy. Since the defense requirement in space is fully

PRESERVATION COPY

772

acknowledged in other national policy declarations, it will always be difficult to avoid the type of trap you foresee.

I should have been more sensitive to the points you raised. I am truly grateful for the guidance, and, if you don't mind, will feel free to ask for it in advance next time.

Sincerely,



EDWARD R. TRAPNELL
Special Assistant for
Public Affairs

Mr. Arthur Schlesinger, Jr.
Special Assistant to the President
The White House

P.S. The article was adapted by the
magazine from the "Dining-In" speech
Gene gave 2 weeks at Petriels, cleared by OSD
P.P.S. Will call you soon for
lead to take another problem
nt.

June 6, 1963

MEMORANDUM FOR

MR. McGEORGE BUNDY

Ned Trapnell, who is Gene Zuckert's special assistant for public affairs, sent me some time back an article by Zuckert in the April Air Force and requested my comments as to its conformity to government policy. I sent it over to Harlan Cleveland, and subsequently Dick Gardner wrote me a long letter setting forth State's objections to the Zuckert piece. Since then, General Ferguson has made a speech along similar lines.

The problem is how to secure a single government voice on space questions. There are two alternatives: (1) have Defense check statements with State and, in case of disagreement, make sure that the matter comes to you; or (b) call for White House clearance of all speeches or articles dealing with the military uses of space.

I attach a draft of a letter to Trapnell in which I mention the problems raised by Zuckert's article and suggest alternative (a) as the way to handle such matters in the future.

Before sending the letter, I would like your own reaction both to the substance and procedure.

Arthur Schlesinger, jr.

cc: Mr. Charles Johnson ✓

2f

June 7, 1963

Dear Ned:

Forgive my delay in responding to your note of April 10 regarding Secretary Zuckert's article "Space and the Cold War" in Air Force of April 1963. Your action in sending the article over indicates the desire of the Secretary to make sure that the Government is speaking with a single voice on this matter; and we very much appreciate your thoughtfulness in checking the matter here.

The Secretary's article -- and the subsequent speech on May 24 by General Ferguson in Dallas -- do, indeed, raise some problems. For example, in the discussion of the role of the Air Force in outer space, some of the comments might be interpreted to imply that the United States is developing weapons systems for actual use in outer space. This casts doubt on the statements we have made in the United Nations and elsewhere that our policy is to avoid the extension of the arms race to that environment. Prudence, of course, dictates that, in the interests of our national security, we do the necessary research and planning regarding military applications of outer space; and I recognize the difficulty of avoiding public statements on the military's legitimate concern with this area. We would hope, however, that, when such statements are made, the formulation would be more rigorously consistent with our declared policy.

Let me mention a few specific points.

1. The Secretary says, for example, that "there is no such thing as peaceful space or military space." He then observes that, when NASA was established, there was "for reasons which seemed not unreasonable at that time -- a great hullabaloo about peaceful objectives." He adds that, while the nation holds to these peaceful

706

objectives, "we know also that the military services will have to do the same thing in space that they have always done in the media of the land, sea, and air." In these comments, the Secretary seems to imply that the opposite of "peaceful" is "military," and his language seems almost to deprecate the commitment to peaceful objectives in the development of outer space. But we have consistently emphasized in the UN and elsewhere that the opposite of "peaceful" is not "military" but "aggressive," and we have made some progress in securing the acceptance of this interpretation.

2. The Secretary writes, "Our second general objective is to acquire the necessary defense capability for aerospace regions themselves. . . . We believe that space can be free to all for peaceful activity only if somebody keeps it free. We are that somebody. The job involves mastering the space environment in order to deny to a hostile power the uninhibited military exploitation of space. We can do this only if we have the ability to detect and counter any military threat." The trouble with this is that, while we clearly want to be in a position to defend against hostile actions from outer space, we wish to avoid the implication that we will use armed vehicles to do so and that we may put these vehicles in space preemptively. We have said publicly that we do not intend to place weapons in orbit unless forced to do so by actions of others. Some might read the Secretary's statement as contradicting our policy of peaceful intentions in space. The language seems almost to set up the United States as a self-appointed policeman to decide what is best for the world. The Soviets could use this line of reasoning as justification for their assuming the right to prevent our military uses of space.

3. The suggestion that NASA has the same relationship with the Defense Department as the AEC might also play into Soviet hands. The NASA-DOD agreement on Project Gemini may already have raised doubts in some minds as to the character of NASA's programs. Our Embassy in Lagos, for example, has warned us as to the possible effect of this agreement on the continued use of facilities in Nigeria contracted for by NASA. It is to our international interest to play down rather than up any connections between NASA and Defense.

The problem here is the familiar one of making sure that the Government speaks with a single voice on matters of international sensitivity. No one questions for a moment the duty of the military to do everything possible to ensure that we are in a position to defend ourselves against any hostile actions in or from outer space. Our concern is rather that nothing be said publicly which can be construed abroad as in conflict with our declared national policy (a) that we will not be the first to place weapons of mass destruction in orbit and (b) that our military activities in space are not aggressive and are, therefore, peaceful within the meaning of the United Nations Charter and entirely consistent with UN resolutions dealing with this subject.

The remaining question is the best means of making sure that public statements by government officials are not in contradiction with each other or with government policy. I would suggest that, in the future, such speeches or articles be checked with the Department of State. If Defense and State cannot iron out differences in language, then I would suggest that the matter be submitted to Mr. Bundy at the White House.

Sincerely yours,

Arthur Schlesinger, jr.
Special Assistant
to the President

Mr. Edward R. Trapnell
Special Assistant
for Public Affairs
Department of the Air Force
Washington 25, D.C.

cc: Mr. Bundy
Mr. Charles Johnson✓

~~CONFIDENTIAL~~
DEPARTMENT OF STATE
DEPUTY UNDERSECRETARY
G/PM

29

June 3, 1963

To: Mr. Charles E. Johnson
White House Staff

Herewith, for your information, is a
copy of the letter re Air Force Secretary
Zuckert's article, "Space and the Cold War."


Dana Orwick

DECLASSIFIED
E.O. 12958 Sec. 3.5
NLJ-S-98001
By JDW, NARA, Date 1-28-01

~~CONFIDENTIAL~~

653

G/PM - *Seelye* 2h
File
Ret RB
MAY 21 1963

CONFIDENTIAL

Dear Arthur:

A week or so ago you were good enough to send me a copy of an article entitled "Space and the Cold War" appearing in the publication Air Force for April 1963. The article was an abridgement of a speech given by Air Force Secretary Zuckert at Patrick Air Force Base on March 3. I found Secretary Zuckert's remarks interesting but, in some respects, disturbing. In his discussion of the role of the Air Force in outer space, some of his comments might be interpreted to imply that the United States is developing weapons systems for actual use in outer space, thus casting doubt on statements we have made in the United Nations and elsewhere that we seek to avoid the extension of the arms race to that environment. Prudence, of course, dictates that, in our security interests, we do the necessary research and development of all military applications of outer space, and I recognize the difficulty of avoiding public statements on the military's legitimate concern with outer space. In making such statements, however, it should be possible to discuss the role of the military with somewhat greater circumspection than has at times been the case.

I am setting forth below examples from Secretary Zuckert's remarks which cause us difficulty.

1. Secretary Zuckert likens the relationship with NASA to that of the Defense Department with the AEC. The latter relationship, he says, is a reassuring precedent, and he points to "our own nuclear weapon flexibility" and to the Polaris submarines as testimony to this.

Comment: You will understand the implications which can be read into this analogy. The NASA-DDD agreement on Project Gemini may have already raised doubts in some minds as to the character of NASA's programs. Our Embassy in Lagos has called attention to the possible reaction of Nigeria to this agreement and to its possible effect on the continued or expanded use of facilities in that country contracted for by NASA.

2. Mr. Zuckert

The Honorable
Arthur M. Schlesinger, Jr.,
Special Assistant to the President,
The White House.

GROUP 3
Downgraded at 12 year
intervals; not
automatically declassified

CONFIDENTIAL

PRESERVATION COPY

DECLASSIFIED
E.O. 12958 Sec. 3.5
NLJ-S10001
By JDW, NAR, Date 2-28-02

~~CONFIDENTIAL~~

-2-

2. Mr. Zuckert says, somewhat obscurely, that "there is no such thing as peaceful space or military space." He then observes that, when NASA was established, there was "for reasons which seemed not unreasonable at the time--a great hullabaloo about peaceful objectives." He adds that, while the nation holds to these peaceful objectives "we know also that the military services will have to do the same thing in space that they have always done in the media of the land, sea, and air."

Comment: We have consistently emphasized in the UN that the antonym of "peaceful" is not "military" but "aggressive" and have gone some little way in developing acceptance of this interpretation. In the comments referred to immediately above, Secretary Zuckert appears to imply that the opposite of peaceful is military and his language seems to deprecate the commitment to peaceful objectives in the development of outer space.

3. Secretary Zuckert says: "Our second general objective is to acquire the necessary defense capability for aerospace regions themselves. . . . We believe that space can be free to all for peaceful activity only if somebody keeps it free. We are that somebody. The job involves mastering the space environment in order to deny to a hostile power the unimpeded military exploitation of space. We can only do this if we have the ability to detect and counter any military threat."

Comment: Clearly we will want to be in a position to defend against hostile actions from outer space. These comments, however, convey the inference that we will use armed vehicles to do so and may put those vehicles in space pre-emptively. They set up the United States as a self-appointed policeman to decide what is best for the world. The Soviets could use this line of reasoning as justification for their asserting the right to prevent our military uses of space.

At the end of the summary of Mr. Zuckert's speech appearing in Air Force are excerpts from his testimony before the House Committee on the Armed Services given on February 21, 1963. These include the following points:

1. Mr. Zuckert testified that the Air Force has continued to explore technical problems associated with a space plane capability, and that it envisions such a vehicle as manned, operating from SAC-type bases, and capable of delivering and retrieving orbital payloads.

Comment:

~~CONFIDENTIAL~~

PRESERVATION COPY

~~CONFIDENTIAL~~

-3-

Comment: Does the reference to payloads mean nuclear devices? While the United States is, of course, free to develop any type of military system for possible future use, we have said publicly that we do not intend to place weapons in orbit unless forced to do so by the actions of others. Others might read Mr. Zuckert's statement as contradicting our peaceful intentions in space.

2. Elsewhere in this testimony Secretary Zuckert says: "The Air Force has developed a solid foundation of space on which military capabilities can be built. These efforts have brought us to a point where significant military space possibilities are clearly apparent. Utilizing the technological base so far established, the Air Force must translate these technical capabilities into actual defense systems. The time required to move from a development stage to operational systems is measured in years. Yet, it is the ready military capability, not the technological base, that accomplishes deterrence. Accordingly, the Air Force proposes to begin some of these conversions at once."

Comment: Here again, although there is no specific reference to weapons systems, Mr. Zuckert's remarks might be interpreted abroad as implying that the United States plans to use space in every way which would strengthen our military posture, including weapons in orbit.

I hope all of the foregoing does not suggest to you that we are overly sensitive to comments by officials of the defense establishment or that we do not recognize completely the necessity that the military do everything possible to ensure that we are in a position to defend ourselves against any hostile actions in, or from, outer space. Our concern is rather that, as little as possible be said publicly which can be construed abroad as in conflict with our policy statements that we will not be the first to place weapons of mass destruction in orbit and that our military activities in space are not aggressive and are, therefore, peaceful within the meaning of the United Nations Charter and entirely consistent with UN resolutions dealing with this subject.

Best regards,

Sincerely,

IO:UMP:CHoffittJr/PWJonesJr:rr
5/15/53

13/

L/UNA - Mr. Reis (in draft) Richard N. Gardner
G/PM - Mr. Garthoff (in draft) Deputy Assistant Secretary of State
SCI - Mr. Dillery - (in draft) for International Organization Affairs

UMP: ~~W. B. Jones~~
W. B. Jones

~~CONFIDENTIAL~~

PRESERVATION COPY

Those portions of the Rostow report which stated that our goal was a victory not of the United States over the Soviet Union, a victory not of capitalism over socialism, but rather a victory of men and nations under the banner of the United Nations have now been officially confirmed. The President used the term "Pax Americana" to disavow the hitherto traditional policy of the United States to extend liberty and freedom as civilization has known these thrilling concepts. This is a milestone.

Of disarmament President Kennedy said, "Our primary long-range interest in Geneva, however, is general and complete disarmament—designed to take place by stages, permitting parallel political developments to build the new institutions of peace which would take the place of arms."

This is the official 1963 reaffirmation of that September 1961 policy paper, State Department Document No. 7277. This has been slyly denied by our officials or rejected as fantastic by responsible persons in our society.

Our expressed policy has been to work toward the dismantling, in three stages, of national defense establishments and the creation of an all powerful international "peace force" controlled by the U.N. Under it we would be allowed only those weapons needed for internal policing.

On the world order, the President too reaffirmed what our policy papers have all recommended, the strengthening of the United Nations into a world government. His exact words were: "Meanwhile, we seek to strengthen the United Nations, to help solve its financial problems, to make it a more effective instrument for peace, to develop it into a genuine world security system—a system capable of resolving disputes on the basis of law, of insuring the security of the large and the small, and of creating conditions under which arms can finally be abolished."

The treaty we have put on the table at Geneva even provides that all nations would have to submit to the compulsory jurisdiction of the International Court of Justice. An all-powerful international army, with an all-powerful court under the same control as the army is world government. What else would an international rule of law imply? Law would not be what we have always known it to be but the consensus of the contributions of the Khrushchevs, the Maos, the Sukarnos, the Nassers, the Nkrumahs, and the Adlai Stevensons.

In this synthesis, as U Thant calls this merger, we would be 1 voice out of 126. Necessarily our heritage of religious and spiritual values, our common law tradition, our bill of rights, our free enterprise system will be diluted beyond recognition.

The question is, Do our people want this? They should have the opportunity of choosing. The threat of nuclear war is the justification for this surrender. Advocates of the plan, now in the saddle of Government, have been pressing for this very thing long before the advent of nuclear weapons. They have used nuclear power, exaggerated it in Soviet hands, as a pretext for their purpose.

The United Nations was never intended to serve this purpose. The whole U.N. charter belies it. In fact, when the Senate was induced to sign the underlying treaty, Secretary of State Edward R. Stettinius specifically guaranteed it was not an instrument of world government. Thus what U Thant and the President are proposing is even illegal.

What compounds the issue even more is the posture the President adopts for us. We are courting Khrushchev. Apparently we cession to draw him into the consensus, will continue to make concession after concession his strength will be enormous when he deigns to move in.

No issue on the surface today is more fundamental than this. It should be openly discussed. It involves our very heritage.

Farley, Once Reviled, Now Is Respected

EXTENSION OF REMARKS

HON. WILLIAM J. GREEN, JR.

OF PENNSYLVANIA

IN THE HOUSE OF REPRESENTATIVES

Wednesday, June 19, 1963

Mr. GREEN of Pennsylvania. Mr. Speaker, it gives me great pleasure to call to the attention of the Members of the House two splendid editorials which appeared in the Pittsburgh Post Gazette on May 27, 1963, and in the Philadelphia Daily News on June 7, 1963, respectively, concerning the life and business career of that great statesman, my good friend, Jim Farley:

[From the Pittsburgh Gazette, May 27, 1963]

FARLEY, ONCE REVILED, NOW IS RESPECTED

(By Andrew Bernhard)

Anyone whose memory goes back to the early days of the New Deal remembers Big Jim Farley, who, as one of the men surrounding Franklin D. Roosevelt, was most often the target aimed at by enemies of the administration.

Big Jim was a politician to his fingertips. His abiding object was to get his man and his party into office and keep them there. He came from New York. He was a Democrat. So he was tabbed as a creature of Tammany.

When it wasn't judged convenient or prudent to attack Roosevelt, the administration's opponents took out after Farley and portrayed him as the incarnation of Tammany and all of the evils attributed to Tammany. But being schooled in the rough politics of New York Farley never let it appear that the attacks bothered him.

Most infuriating to the administration's enemies was Farley's success and his habit of being right, as when, in 1936, he predicted that Alf Landon would carry only two States. It's hard for us to swallow the correctness of an enemy's forecast.

Then, in 1940, Farley broke with Roosevelt over the third term issue. Almost overnight, the man whom the anti-Roosevelt faction had execrated as the embodiment of all political evil, became a hero to the same people. As the Arab proverb has it, "the enemy of my enemy is my friend."

Today, by virtue of that break with Roosevelt and the fact that he is now to reach his 75th birthday on Thursday, Farley has become a respected elder statesman. Not of the stature of Herbert Hoover, Harry Truman, and Dwight Eisenhower, for there is a particular halo around the head of our ex-Presidents, but still well up in the national pantheon.

The Associated Press reports that on the eve of turning 75, Big Jim is much as he was when he was a cartoonist's delight, big—6 feet 2½ inches and 205 pounds—only a little white fringe around his shining pink head.

The former Democratic National Chairman and Postmaster General is as active as ever and is able, despite his duties as board chairman of Coca-Cola Export Corp., to devote much of his energy and time to politics.

He traveled more than 53,000 miles last year, 46,000 of them by air. "I spent nearly 106 hours in the air, attended 98 dinners and 78 business luncheons," he told the Associated Press. He keeps a record of everything.

How does he view the political situation today? Nothing he can see, he says, leads him to think that President Kennedy won't be reelected. "I think he has handled the situation well. I can visualize him going down as one of our greatest Presidents."

Farley believes that at this writing the

Republican nomination of Rockefeller is a sure thing.

Of the man whom he helped put in office, Franklin Roosevelt, he says, "If he hadn't run for the third term he would have gone down in history as America's greatest President. The accomplishments of his first two terms were the greatest ever made by an American President."

Farley blames Roosevelt's third and fourth terms for many of the ills besetting the world today. "Those terms brought a great mind, but one worn by the weight of years and cares of state, to the all important conferences of Tehran and Yalta. We had a worn leader dividing the world in a series of concessions embodied in secret agreements which . . . are plaguing the world's children with blood, death, and fears."

Farley clearly has not forgiven his old boss.

[From the Philadelphia Daily News, June 7, 1963]

THE BEST MEMORY TEACHER

Philosophers, teachers, and members of the clergy have been telling us, time and again—a million times, maybe—that truth is a great tool to keep polished.

For one thing, if you pile one lie atop another, it's pretty hard to keep them in proper order in your memory file.

James A. Farley, the man who was campaign manager for President Franklin D. Roosevelt's first 2-term victories, was known for his remarkable memory.

Now, as he begins his 76th year, Farley gives a hint about how his memory got so good. Said Farley:

"I never lied to anyone who came to me seeking a favor or assistance. I would tell him the reason why something couldn't be done. Truth saves a lot of embarrassing questions, if you don't remember what you said."

Farley never told a truer truth.

Inadequacies in Military Space

EXTENSION OF REMARKS

OF

HON. BARRY GOLDWATER

OF ARIZONA

IN THE SENATE OF THE UNITED STATES

Wednesday, June 19, 1963

Mr. GOLDWATER. Mr. President, the first Member of this body to call the attention of the American people to our woeful inadequacies in military space was the Senator from Nevada [Mr. CANNON]. The axiom that "he who controls the air controls the world" can be moved up a few hundred miles and changed to "he who controls aerospace controls the world."

Ours is a peaceful mission in space according to the administration but our enemy's mission is military. The Senator from Nevada in a recent issue of the Saturday Evening Post has written a very forceful and penetrating article "Are We Being Too Peaceful in Space?" I ask unanimous consent that it be printed in the Appendix of the Record.

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

ARE WE BEING TOO PEACEFUL IN SPACE?

(By Senator HOWARD W. CANNON)

A perilous notion grips Washington—that through some sort of gentleman's agreement with Russia we can quarantine space, can keep it from becoming a theater of war.

Wishfully the Nation gears its space program to peaceful purposes, blind to the fact that the Russians have no such inhibitions. While we dream, the Russians bend every effort to develop military space systems. Quite openly they are striving for a decisive advantage in that newly penetrated region.

"Peaceful purposes," the administration admits, means "keeping the peace" as well as engaging in scientific exploration and in commercial activities in space. President Kennedy has said we must insure that no other nation gains a position in space that would threaten our security. And we are orbiting numerous unmanned space vehicles which could have significant military purposes. But the disturbing fact is that we continue to put overwhelming emphasis on nonmilitary space programs and limit military efforts to a small list of defensive possibilities.

Elaborate reasons have been advanced for pursuing this policy. One used frequently is that we might somehow be able to keep space out of bounds for active warfare. The theory is that, by unilaterally avoiding development programs that could make space a combat theater in any war, we might induce the Russians to follow suit. This kind of thinking flies in the face of history. We have generally been able to discourage the Russians from a course of action only by confronting them with impressive deterrent power.

I see a disconcerting parallel between our "space is for peace" attitude and our attempt from 1958 to 1961, to end competition in nuclear weapons by voluntary halting our nuclear test program.

While cobwebs gathered on our test installations in the Nevada desert and the Pacific, the Russians blithely went ahead with preparations for what was to be the most concentrated series of nuclear tests that has been held to date. Suddenly, after 3 years of naive inactivity on our part, the Russians broke the gentleman's agreement and wiped out much of this Nation's vital lead in nuclear technology.

What makes our wishful thinking in space all the more dangerous is that we do not enjoy the lead in space that we held in the nuclear field. Rather, we are still far behind the Soviet in some technical areas with enormous military potential. We are still handicapped by the inferior thrust of our largest rockets. The Russians can hurl much larger payloads into orbit, including their 50-megaton and 100-megaton bombs. We are still nowhere near matching the Soviet accomplishment of last summer in orbiting two manned Vostok spacecraft within a very short distance of one another. The date for our first rendezvous of two Gemini capsules, it would appear, has just been put back to 1965. It will greatly surprise me if the Russians have not actually joined two spacecraft in flight before this year is out and perhaps even transferred the cosmonauts flying them.

The logic of history should be enough to convince this Nation that, without an enforceable treaty limiting space activities—an unlikely eventuality—the Russians will do everything possible to exploit the military uses of space. But we need not content ourselves with the logic of history. Soviet leaders, starting with Nikita Khrushchev, have given repeated indications that the Soviet space program is aimed squarely at attaining military dominance in space.

In a speech delivered in December 1961, the Soviet Premier said: "When the imperialists decide the question of whether or not they should unleash war, the 50- and 100-megaton Soviet bombs will hang over their heads like the sword of Damocles." Later, in the same speech, he said: "If I could send up Gagarin and Titov, we could, of course, replace Gagarin and Titov with other freight, and land it where we would like to land it."

A second argument for limiting U.S. military space efforts has to do with the type of space threat we tend to think of first: bombs in orbit. The nub of this argument is that there is no point in anyone putting bombs in orbit, or on the moon, because such space-based nuclear systems would inevitably be costlier, less reliable, and less accurate than earth-based systems.

A big flaw in this reasoning is that it tends to view the Russians as mirror images of ourselves. I admit I see no immediate need for this country to push development of orbital bombers, although I do not rule out such a need at a later date. But just because space-based bombers might not fit our strategic needs for the moment, it does not follow that they would not fit Soviet ambitions. Soviet strategists may well have decided to capitalize on their advantages in rocket thrust and 100-megaton bombs.

A limited force of supersatellites carrying 100-megaton bombs might not be able to deliver nuclear blows as discriminately or efficiently as a bomber-Minuteman-Polaris force. Still, for a nation that has shown little hesitancy to employ blackmail, a satellite force might represent a decisive psychological weapon. You do not, after all, have to shoot something at someone to weaken him. Think what a psychological advantage the Russians would have gained had they got away with stationing offensive missiles in Cuba. What if they now turned around and placed comparable nuclear power in orbits not much farther vertically from U.S. targets than Cuba is from Miami horizontally?

To counter such a move, we might not see any gain in orbiting bomb-carrying satellites of our own. What we might urgently want would be satellites able to rendezvous with suspicious Soviet craft, detect whether they had weapons on board and, if need be, destroy them.

There are officials who, while granting such a possibility, put forward still another argument for deemphasizing military space programs. They are exponents of the so-called fallout theory, which runs this way: The National Aeronautics and Space Administration (NASA) plans to spend \$20 billion putting a two-man expedition on the moon by 1970. In doing so, the civilian space agency will investigate almost every technical aspect of space operations. The Defense Department needs only to adapt the technical "fallout" of this and other NASA programs to its own requirements if a Soviet military threat in space materializes.

This pat theory will not withstand close examination. While many requirements for space flight apply equally to civilian and military operations, there are some unique military requirements no amount of civilian oriented effort will satisfy.

Military vehicles must react instantaneously to enemy thrusts. The launching of a scientific vehicle, by contrast, can ordinarily be delayed to await improvement in the weather or to permit a last-minute item-by-item checkout of the rocket. Military vehicles must operate from places dictated by military needs, not from a limited number of well-established launch pads at Cape Canaveral and other research centers. They must be able to return to base and fly another day, since military operations are likely to be repetitive, and the cost of launching one-shot vehicles would be unbearable.

There is another decisive difference. A military operation—in tanks, subs, planes or space vehicles—is not just a matter of having the right hardware. The best hardware is useless in war without crews trained for their mission, a well-oiled maintenance and supply system and an operational doctrine worked out not simply in a "think factory" but through field trials, the field in this case being space.

It takes time to build a ready-to-go mili-

tary capability. Right now it may look as though earth-based systems constitute a force adequate to deter any strategic attack. But technology is advancing so swiftly it is possible that scientists might at any moment accomplish another "breakthrough" as significant as the perfection of the H-bomb. If they do, the capability to conduct military operations in space may suddenly become decisive.

The same objections hold, only more firmly, for the contention that the United States can take out adequate space insurance by developing a storehouse of "building blocks." The Titan III workhorse rocket booster, various infrared, optical and other apparatus for detecting what is aboard other nations' satellites; and an exotic line of winged space vehicles are examples of "building blocks" now being worked on. The theory is that if a Soviet space threat did become evident, the blocks could be pulled off the shelves and a military space force put together in short order. But what about mission training, supply and operational doctrine? There are months, more likely years, between the production of military equipment and the ability to use that equipment in an efficient way, particularly in a forbidding new environment.

There have been recent signs that highly placed officials are beginning to recognize the reality of the Soviet space threat. But in the past there have been similar ripples of interest that soon dissipated. Whatever new interest there is has not yet been translated into specific new space programs. Nor is there anything like adequate funding in the proposed space budget for the fiscal year starting July 1. I would like to see the Defense Department come to the Congress with a program calling for:

First. Speedy development of orbiting vehicles able to rendezvous with, inspect and, if necessary, disable potentially hostile spacecraft.

Second. An early opportunity for the Air Force to conduct complete space missions on its own so as to acquire vital across-the-board experience in space operations. The best course is for the Air Force to be authorized, as agent of the Defense Department, to orbit its own versions of the wingless, ballistic, two-man Gemini capsules NASA is building as a step in its man-on-the-moon program.

Third. NASA-Defense Department joint planning for development of an orbiting space station large enough for 20 to 30 crewmen. Provision would be made for crews to rotate every 2 to 4 weeks through use of space taxis. The permanent space station could serve as a command post for controlling space interceptors, orbital antimissile systems and other components of a military space force. Eventually we might want to orbit strategic space stations able to carry heavy payloads. When it becomes possible to deploy as many as 100 weapons, or several hundred, on a single space platform, the space bomber might for the first time become economically competitive with earth-based strategic systems.

(4) Stepped-up work on rocket boosters that could be recovered after launch and used again. An alternative is the ambitious concept of an "aerospace" plane that could takeoff conventionally from a runway, propel itself into orbit and eventually return to the takeoff runway.

TOO MUCH BUCK ROGERS?

The above proposals, prior to Sputnik I, would have sounded like the notions of someone who had read too much Buck Rogers. So much has happened since Sputnik I, however, that they should sound now like simple prudence for any nation intent on preserving its security.

They should. But will they? There are well-meaning scientists, some in high places,

who doubt that space-based weapons could accomplish anything not better accomplished from nearer the earth. History indicates they are wrong, that they underestimate the speed of advancing technology. In any case, we cannot afford to gamble. If we dismiss the military potential in space, we may be startled one day—like the day Sputnik I was orbited—to discover, from the accomplishments of potential enemies, how wrong we have been. And by then, because technology is advancing in ever longer quantum jumps, it may be too late to do anything about it.

Secret of New Hampshire's Industrial Growth

EXTENSION OF REMARKS

HON. THOMAS J. M-INTYRE

OF NEW HAMPSHIRE

IN THE SENATE OF THE UNITED STATES

Wednesday, June 19, 1963

Mr. MCINTYRE. Mr. President, the industrial director of the Division of Economic Development in the State of New Hampshire, Mr. Winfred L. Foss, recently wrote a splendid article setting forth the basis for New Hampshire's industrial progress. As he points out, the approach of our industries and the cooperating agencies of the State government has been remarkably free from the gimmickry that so often besets industrial expansion schemes. His message is a distillation of Yankee wisdom on this subject and describes New Hampshire's experience in a manner well suited to be useful to other States. I ask unanimous consent that his article, "New Hampshire Needs No Gimmicks," in the American Banker for June 10, 1963, be printed in the Appendix of the RECORD.

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

NEW HAMPSHIRE NEEDS NO GIMMICKS

The secret of New Hampshire's industrial growth is that "there is no secret."

New Hampshire has no "get industry quick" schemes. It cannot, under its constitution, give tax concessions to industry.

Its tax structure rates only average in its impact on industry. It has no enabling law permitting its towns and cities to bond themselves for industrial construction.

In spite of these limitations, for two decades New Hampshire has been building an industrial economy which one out-of-State observer recently characterized as "a bright spot in the Nation's economy."

Statistics tell the story:

New Hampshire ranks second among the States in the percentage of population employed in manufacturing.

Manufacturing employment continues to grow, reversing a national trend. The gain over the past decade approximated 5,000.

Nonmanufacturing employment is growing even faster, topping the rate of all other New England States.

New Hampshire's unemployment rate is usually the lowest in New England and consistently below the national average. In August 1962, it dropped to a phenomenal 2.6 percent.

Population growth (12.7 percent in the last decade) is the second most rapid in New England.

How come this record of growth and progress, in a State which confesses to having some handicaps and lays no claim to a pet formula?

Continuity of effort, plus a good industrial climate, are the major factors.

New Hampshire was one of the first States to get into the industrial development field, and some of its recently acquired industries are the results of efforts which had their beginning 30 years ago.

EARLY START

This early beginning was important. The record shows that the annual increase in New only partly from the influx of new industry—much of it results from the expansion of companies establishing here 5, 10 or 20 years ago. The increase has strong similarities to the increase of many at compound interest.

An example of how an industrial investment made a dozen years ago has paid steadily increasing dividends in industrial jobs is found in Nashua. Here, Sanders Associates established itself in the early 1950's with some 100 employees.

Steady and rapid growth has now made Sanders one of the State's largest employers, with more than 2,000 on its payroll at plants in Nashua and Manchester, and three additional plants in Massachusetts and New York.

An early start and a consistent follow-up have not, however, all by themselves, been responsible for New Hampshire's dynamic economy. Of greater importance is New Hampshire's "good industrial climate," in which labor attitudes are the major ingredient.

New Hampshire is not a State inhabited wholly by Yankees anymore. It hasn't been since the last century, when thousands of French Canadians moved in to become weavers and spinners in the State's then-dominant textile industry.

But these newcomers already had many Yankee characteristics—and more rubbed off on them. By and large, New Hampshire workers are still characterized by the Yankee traits of self-sufficiency, independence, and pride.

All three of these traits are reflected in the New Hampshire worker's attitude toward unions. He isn't antiunion. As a matter of fact, some 50 percent of the State's industrial workers are union members. But he isn't union dominated, doesn't regard a union as an absolute essential, and prefers making his own decisions to having them made for him by a union.

The disposition of the New Hampshire worker to do his own bargaining and settle his own grievances is shown by the comment of one manufacturer:

"I don't have a union in my plant and don't expect to have one, so long as I leave my office door open to anybody who wants to come in and talk with me."

This type of camaraderie between employer and worker is typical. An out-of-State newspaperman, taken on a tour of the Keene plant of Miniature Precision Bearings, Inc., by Horace Gilbert, president, made this observation:

"I can't get over the number of workers who addressed the president of the company by his first name."

The first-name relationship works both ways. The typical industrial worker likes to be known as a person—not as a number—to his employer. Perhaps this wish to be an individual is the reason for his relative reluctance to merge himself into a union and let a bargaining agent do his talking for him.

These worker attitudes add up to one of New Hampshire's key attractions for industry—its low incidence of strikes and work stoppages. Consistently, New Hampshire has one of the best records in the Nation in number of man-days lost through work stoppages. Labor turnover is similarly low.

Along with cooperative and productive labor, New Hampshire offers the industrialist a tax structure which bears less heavily on the manufacturer than that of many other States.

New Hampshire is one of the few States with neither a corporate income tax nor a sales tax. For revenue, it leans heavily on taxes on parimutuel betting, alcoholic beverages, and tobacco. During the present session of the legislature, it took an additional step in this direction by creating a State-operated sweepstakes, forecast to bring in an additional \$4 million or more per year.

These so-called voluntary taxes—voluntary because its citizens and guests don't have to pay them unless they choose to drink, smoke or gamble—are supplemented at the local level by a property tax levied on land, buildings and inventory.

New Hampshiremen freely confess that this tax structure has faults. There was strong opposition to the sweepstakes bill by people who thought that the State was depending too heavily on voluntary taxes. The property tax is generally regarded as too high and there has been a continuing demand that the tax on inventory be repealed as inequitable.

But there is no immediate prospect of any important change in tax structure, mostly because the present one works. Particularly, in this industry-conscious State, there have been few complaints from industry that the burden of taxation is excessive.

Industrialists generally find that they can live with this tax structure. One, a recent transplant to New Hampshire from another State, even went so far as to state that he expected that New Hampshire's tax structure and economic climate would result in a saving of \$50,000 over cost in his previous location.

Although New Hampshire has no industrial development gimmicks, it has its share of what might be called aids to industry, some of which are unique.

The New Hampshire Industrial Park Authority is an agency of State government with broad powers. Originally, it was an agency to finance the development of raw land into industrial sites in cooperation with local agencies. It was also authorized to finance the construction of industrial plants. Two years ago, its powers were increased to enable it to guarantee loans to the extent necessary to make possible 100 percent financing of new industrial plants.

The New Hampshire Business Development Corp., a private agency, makes both construction and working capital loans to industry, usually in second position. It, also, had its powers broadened two years ago when the legislature revised its charter to permit it to guarantee loans to industry.

In addition to these State-wide agencies, there are 30-odd local industrial development corporations, some of which have been highly effective. One of these, Concord Regional Development Corp., was singled out by Donald R. Gilmore, regional economist, Federal Reserve Bank of Boston, as outstanding among all such organizations in the Nation.

UPRISING, CARNEGIE HALL, NEW YORK CITY

All of these agencies have been exceedingly effective. It is significant to note, however, that their effectiveness has not been achieved at the expense of departures from sound business practice. There have been no special interest rates offered, and loans have had to stand up under rigid scrutiny.

Further, all industrial financing has been in cooperation with established banks and lending institutions. All of which is not surprising, since bankers have consistently been leaders in New Hampshire's industrial development effort, and fill many of the offices in these financing organizations.

Equally significantly, New Hampshire would still acquire industry even if it didn't have these aids. For example, the two largest industries locating in New Hampshire during the past 12 months drew on neither State nor local communities for financing assistance.

These were Sylvania Electric Products, which picked Exeter as the site for a new 600-employee plant (Sylvania's third in the State), and Tampax, Inc., which is building a 500-employee plant in Claremont.

What are New Hampshire's prospects for the future?

We will continue to attract new industry. However, we will probably find that the State stands to gain as much from assisting established industry as from attracting new industry.

In two areas of activity we can do much to promote the growth of that which we already have:

We can seek broader powers for the Industrial Park Authority in financing new plant facilities for New Hampshire manufacturers. And we can adopt a vigorous program of seeking to attract to New Hampshire the skilled labor and technicians necessary for future industrial growth.

Effectiveness of Research Sponsored by National Institutes of Health

EXTENSION OF REMARKS

OF

HON. MAURINE B. NEUBERGER

OF OREGON

IN THE SENATE OF THE UNITED STATES

Wednesday, June 19, 1963

Mrs. NEUBERGER. Mr. President, the ultimate value of funds invested in medical research cannot be measured because no one can foretell at what point work in the laboratory may unlock the mysteries of illnesses like cancer and heart disease. Yet, criticism is directed occasionally at the National Institutes of Health for sponsorship of extensive research in various fields of medicine.

Dr. Howard A. Rusk, an assistant editor of the New York Times and internationally known chairman of the Department of Rehabilitation and Physical Medicine at New York University College of Medicine, has analyzed charges made against NIH. In an article in the Times of June 16, 1963, Dr. Rusk comments on the claim that Congress allocates to the Institutes more funds than can be used effectively. Study of testimony presented to House and Senate Appropriations Committees, he asserts, actually shows that our Nation's capacity for conducting medical research is still not being fully used, despite the annual increases in NIH funds for research.

Dr. Rusk, who has received numerous honors from public and private organizations for his achievements in medicine, concludes from his study of the record that the research program of the National Institutes of Health has demonstrated its soundness. I ask unanimous consent to have the text of his article printed in the RECORD.

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

THE INSTITUTES OF HEALTH: RISING U.S. AID FOR MEDICAL RESEARCH IS CAUSE FOR PRIDE, NOT CRITICISM

(By Howard A. Rusk, M.D.)

Within the last year there has been mounting criticism of the National Institutes of

Health from a relatively small number of people.

This criticism has been centered largely on the charge that the Institutes are granted more funds by the Congress than they can use effectively. The criticisms are usually sweeping generalizations lacking in documentation and evidence.

After a careful analysis of the exhaustive material gathered through extensive hearings each year by both the House and Senate Appropriations Committees, one cannot help but conclude that these charges are not true.

It is correct that Federal support of medical research has grown rapidly since World War II. This, however, should be a cause for pride rather than for concern. The growths of research in defense, space, and industrial technology have been even more rapid.

QUESTIONS OF IMPORTANCE

Which is most important—to get a man on the moon before the Russians or to eradicate many of the diseases that kill and disable millions of Americans each year?

As Mike Gorman, executive director of the National Committee Against Mental Illness, pointed out recently, "the true yardstick by which these programs should be judged is how well they are succeeding in controlling or eradicating those major diseases which cost the American economy billions of dollars each year in medical outlays, lost wages and lost income taxes."

The truth of the matter is that despite increases in the budgets of the National Institutes of Health each year, our Nation's medical research capacity is still underutilized.

Each year all of the Institutes have far more applications approved by their advisory councils than they can finance within current budgets.

PROJECTS REVIEWED

The advisory councils, consisting of eminent scientists and leading citizens, review each individual project from the standpoint of scientific validity and scientific importance.

The National Institutes of Health have been authorized during the past 7 years to initiate a series of programs for the construction and equipping of health research facilities. This program provides matching funds up to 50 percent of the cost of an entire research building or a section of it.

So great has been the demand for health research facility funds that the \$50 million authorized by Congress for the current fiscal year, ending this month, has already been awarded.

Outstanding against the \$50 million expected to be available for the fiscal year beginning July 1 are awards approved by the advisory council totaling \$61,963,291.

CENTERS ARE LINK

Another extensive program is the support of general clinical research centers in hospitals and other research institutions. These centers provide the link between basic medical research and its application to patients under rigidly controlled conditions.

There are 42 general clinical research centers in operation, and 22 others in various stages of development.

Based on experience, it is estimated that in the fiscal year beginning July 1 there will be a backlog of \$7,100,000 in approved applications for which funds will not be available.

Another important program supports special research resources by providing unusual and highly specialized research tools and services for many departments and disciplines in one or more institutions.

This program supports 19 large computer centers, six LINC computer evaluation studies and one biomedical engineering center.

GRANTS WITHOUT FUNDS

It is estimated that the backlog of approved special research resources grants for

the year beginning July 1 for which funds will not be available will be around \$21 million.

The current and estimated backlog of approved grants for which funds are not available are for but one division of the National Institutes of Health. The same situation exists in most of the other divisions.

Critics of the National Institutes of Health have charged that unnecessary and unimportant research is supported in order to use up funds. Again an analysis of the facts shows this is not the case.

TREASURY GETS \$40 MILLION

At the end of this month, which concludes the current fiscal year, the National Institutes of Health will return to the Treasury about \$40 million out of a total of about \$700 million appropriated by Congress for extramural research grants.

This results from the fact that the appropriations are made categorically and funds cannot be transferred from one program to another.

It is difficult to understand why a program as important as that of the National Institutes of Health, which has had the full support of the American people and which has demonstrated its soundness, should be singled out for such unjustified criticism.

Importance of American Principles and Ideals

EXTENSION OF REMARKS

OF

HON. STROM THURMOND

OF SOUTH CAROLINA

IN THE SENATE OF THE UNITED STATES

Wednesday, June 19, 1963

Mr. THURMOND. Mr. President, one of the victims of the drive to establish a world government has been the great American ideal of patriotism, a strong spirit of dedication to our national heritage and the principles which have made our country the greatest the world has ever known. Mr. John Brock, vice president and general manager of Lowrance Newspapers in North Carolina, has written an important and interesting article on the subject of patriotism and its decline in America.

This article was published on March 13, 1963, in the Belmont Banner of Belmont, N.C., and has just come to my attention. I commend Mr. Brock for this and a number of other columns that he has written in an effort to increase American principles and ideals that must be promoted rather than forgotten.

I ask unanimous consent that his article be printed in the Appendix of the RECORD.

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

[From the Belmont (N.C.) Banner, Mar. 13, 1963]

LISTEN: WHAT HAPPENED TO PATRIOTISM?

(By John Brock)

Is patriotism fading from the American scene?

Remember the days of—and prior to—World War II when the sight of "Old Glory" lifted the hearts of Americans to emphatic shouting or clapping? Times have changed.

Recently, an elderly gentleman stood on the downtown streets of a nearby city awaiting the passing of a parade. When the color guard came into sight, the old man raised

THE WHITE HOUSE
WASHINGTON

C. Johnson

BKS

Why not let Chuck Sample the temperature of Charyk-Scoville et al -- my own impression is that the surfacing of such a scheme as this is a year or so away -- but planning might being promptly

Hall Omburg
after talking with
Tom P. 2 depend
until after 1st of yr.
eg

42
Brundy
December 5, 1962

SECRET

MEMORANDUM FOR MR. BROMLEY SMITH S

Brom--

Senator Gore's speech on U. S. space policy and the subsequent rejoinder by the Soviets prompted me to look at our old OCB paper on Reconnaissance Satellites, dated May 4, 1960. The U. S. Policy on Outer Space provided for two equal and major courses of action, as follows:

"39. As soon as reasonably practicable, subject to limitations imposed by the President, use reconnaissance satellites to enhance the U. S. intelligence effort.

"40. Consider the extent to which information obtained through the military use of space, as in the case of reconnaissance satellites, can be applied to civil purposes."

You will remember that the working group, after extensive discussions that agitated the intelligence community, finally compromised on the conclusion that no decision could be reached on the application of information obtained from reconnaissance satellites for civil purposes until decisions had been reached concerning the uses to be made of the photographic data resulting from the SAMOS Project. The working group noted, for example, a question of whether the photographs were going to be limited to or exploited for political and psychological purposes.

You will also recall that the working group recommended, and the Board concurred, that State and Defense, in consultation with other agencies as appropriate, should consider on an urgent basis the extent to which information obtained through the use of reconnaissance satellites should be applied to civil purposes. This was done and the view of the intelligence community prevailed at that time, and the whole subject has been under deepest security ever since.

I think that we are now again in a situation where the question should be reviewed. I cannot see how there could be any compromise

SECRET

DECLASSIFIED
Authority: PLJ 030-015-1-1, W 4
By JOW, NARA, Date 3.5.02

SECRET

of intelligence sources in the appropriate use of satellite photography for political and psychological purposes. Our potential enemies must assume for planning and policy making purposes that we have this capability even if they are not too sure of the details of the technology. I believe that our scientific community would grant the Soviets a similar if not equal capability.

I realize the delicacy of the relationships that exist in this particular field and hesitate to make a firm personal recommendation on the basis of incomplete knowledge. I should like to suggest, however, that you give this matter some thought and perhaps bring this to Mac's attention as a subject meriting some additional staff study.



Charles E. Johnson

-2-

SECRET

Hold in case
Mr. C & J wants to
send to Barrett

4C

December 5, 1962

~~SECRET~~

MEMORANDUM FOR MR. BROMLEY SMITH

Brom--

Senator Gore's speech on U. S. space policy and the subsequent rejoinder by the Soviets prompted me to look at our old OCB paper on Reconnaissance Satellites, dated May 4, 1960. The U. S. Policy on Outer Space provided for two equal and major courses of action, as follows:

"39. As soon as reasonably practicable, subject to limitations imposed by the President, use reconnaissance satellites to enhance the U. S. intelligence effort.

"40. Consider the extent to which information obtained through the military use of space, as in the case of reconnaissance satellites, can be applied to civil purposes. "

You will remember that the working group, after extensive discussions that agitated the intelligence community, finally compromised on the conclusion that no decision could be reached on the application of information obtained from reconnaissance satellites for civil purposes until decisions had been reached concerning the uses to be made of the photographic data resulting from the SAMOS Project. The working group noted, for example, a question of whether the photographs were going to be limited to or exploited for political and psychological purposes.

You will also recall that the working group recommended, and the Board concurred, that State and Defense, in consultation with other agencies as appropriate, should consider on an urgent basis the extent to which information obtained through the use of reconnaissance satellites should be applied to civil purposes. This was done and the view of the intelligence community prevailed at that time, and the whole subject has been under deepest security ever since.

I think that we are now again in a situation where the question should be reviewed. I cannot see how there could be any compromise

~~SECRET~~

DECLASSIFIED
Authority NLT 030-05-1-1; GAO 020
JON, NARA, Date 3-6-02

~~SECRET~~

of intelligence sources in the appropriate use of satellite photography for political and psychological purposes. Our potential enemies must assume for planning and policy making purposes that we have this capability even if they are not too sure of the details of the technology. I believe that our scientific community would grant the Soviets a similar if not equal capability.

I realize the delicacy of the relationships that exist in this particular field and hesitate to make a firm personal recommendation on the basis of incomplete knowledge. I should like to suggest, however, that you give this matter some thought and perhaps bring this to Mac's attention as a subject meriting some additional staff study.

Charles E. Johnson

-2-

~~SECRET~~

file Mil. Use 7
Space

An Appeal to the President

WE ARE IN a strategic space race with the Russians and we have been losing. The first man-made satellite to orbit the Earth was named *Sputnik*. The first living creature in space was Laika. The first rocket to the Moon carried a Red flag. The first photograph of the far side of the Moon was made with a Soviet camera. . . .

Control of space will be decided in the next decade. If the Soviets control space they can control Earth, as in past centuries the nation that controlled the seas dominated the continents. This does not mean that the United States desires more rights in space than any other nation. But we cannot run second in this vital race. To insure peace and freedom, we must be first.

The target dates for a manned space platform, U.S. citizen on the Moon, nuclear power for space exploration, and a true manned spaceship should be elastic. All these things and more we should accomplish as swiftly as possible. This is the new age of exploration; space is our great New Frontier.

THE WORDS ABOVE were not written by the editor of *MISSILES AND ROCKETS*. They were written by President of the United States John F. Kennedy. They appeared in an article he wrote for the Oct. 10, 1960 issue of *M/R*—less than a month before his election.

We appeal to the President to carefully consider once again what he said at that time:

"If the Soviets control space, they can control Earth. . . ."

Mr. Kennedy's article was written in response to a nine-point proposal by this magazine for an effective national defense and space policy. These points included recognition that "space for peaceful purposes" is possible only if "freedom of space" is ensured by giving the U.S. military a predominant role in developing and carrying out the projects necessary to guarantee freedom of space.

This is what Mr. Kennedy said in his response:

"The space and defense proposals of *MISSILES AND ROCKETS* parallel, although in somewhat more detail, those of the Democratic Party platform. They are in line with my own thinking: our goals are identical."

WE MUST ASK, Mr. President, what has happened to your thinking? Why are our goals, in a little more than two years, now so far apart?

In agreeing to our proposal for an effective U.S. military space program, you called it "an umbrella under which we can explore and develop space for the benefit of all mankind."

There is no such umbrella, Mr. President, and the events of the past two months have made it exceedingly clear that there is no prospect of one.

The course upon which you are embarked is endangering the future security of the United States as no other President has done. We do not make this charge lightly. There are serious reasons for making it at this time.

Foremost is the fact that the Russians themselves have taken your words of October, 1960, at their face value. Marshal Vasilii Danilovich Sokolovskiy, First Deputy Minister of the Soviet Armed Forces, recently has published what an Air Force official calls the first comprehensive treatment of Soviet doctrine and strategy since 1926, a book entitled *Military Strategy*.

In that book, Marshal Sokolovskiy cites your statement of October, 1960, in *MISSILES AND ROCKETS* that the country which controls space can control the Earth. He says the Soviet Union "cannot disregard" what he calls U.S. plans to use space exploration for military purposes.

Sokolovskiy states that the Soviet Union cannot allow the U.S. to become superior in this field "in any way." He says the Soviet Union must oppose the U.S. with "more effective means and methods by the use of space for defensive purposes."

The implication is plain that the Soviet Union is embarked on a military space program.

What, meanwhile, is the status of the U.S. military space program which the Russians are using as an excuse for embarking on military space projects of their own?

- The exclusive reports in this magazine that the *Dyna-Soar (X-20)* project was to be given the axe now have been confirmed. No less an authority than your Secretary of Defense made that clear in his statement to Congress on *Dyna-Soar*: "It will cost to complete, in total, including funds spent to date, something in the order of \$800 million to \$1 billion. The question is, do we meet a rather ill-defined military requirement by proceeding down that track, or do we meet it better by modifying *Gemini* in some joint project with NASA? . . . I think we can cut back very substantially while better meeting both of our requirements, and that is our objective."

- The *Rover* program for development of a nuclear rocket for space, which you said in October, 1960, should be accomplished as swiftly as possible, has slipped 14 to 16 months behind schedule.

- The *MIDAS* program, for development of an early-warning satellite system, has been cut back to a study effort.

- *SAINT*, the program to develop a capability for inspecting possibly hostile satellites, has been cut back in favor of a more distant goal.

- *Blue Gemini*, the Air Force program for developing its own space flight capabilities, has been abandoned in favor of the joint project with NASA.

Where, Mr. President, is the effective and predominant military space program which you agreed is so vital to our national security? It does not exist—and current developments are pushing any prospect of its implementation into the far distant future.

We charge you with neglect of our national security in your own words, Mr. President: "If the Soviet control space, they can control Earth."

William J. Coughlin

missiles and rockets, March 18, 1963

"Military Use of
Space"

2

THE WHITE HOUSE
WASHINGTON

Mr. Rom/2 ✓

G. Johnson

PRESERVATION COPY

NEWS RELEASE

PLEASE NOTE DATE



DEPARTMENT OF DEFENSE
OFFICE OF PUBLIC AFFAIRS
Washington 25, D. C.

HOLD FOR RELEASE
UNTIL DELIVERY OF ADDRESS
EXPECTED AT 12 NOON (EDT)
TUESDAY, OCTOBER 9, 1962

NO. 1642-62
OXford 53201-
53176

6a

REMARKS BY
ASSISTANT SECRETARY OF DEFENSE JOHN H. RUBEL
AT THE AEROSPACE LUNCHEON CLUB
BURLINGTON HOTEL, WASHINGTON, D. C.
TUESDAY, OCTOBER 9, 1962 -- 12 NOON (EDT)

INTRODUCTION

My talk today is concerned with the space program supported by the Defense Department. This program is often spoken and thought of as the "military space program", particularly by its critics, who may use the adjective either to argue that it is too big or too small. I propose to demonstrate that the program is as close to the optimum size as we can make it in the light of all the uncertainties that must accompany such a program, and, in fact, that we probably err on the side of allowing too generous a margin of safety for the effects of these uncertainties.

Actually, of course, extensive programs and projects under NASA supervision will prove equally applicable to systems and devices in space whether these are used for military or non-military purposes. In this sense, then, the totality of our "military" space efforts, assessed from a national rather than a Departmental viewpoint greatly exceeds the efforts supported by the Defense Department alone.

I will make four principal points in this talk as follows:

First, in discussing the mission and objectives of the Defense Department I point out that this is not the Department of Space, but the Department responsible for national defense and that any undertakings that are supported by the Defense Department, whether or not they are space projects, must further that basic mission and those objectives.

Second, I discuss the requirements for space programs and projects. The principal point here is that our expenditures on space developments have been remarkably high in relation to viable concepts for military applications in space. In fact, despite extraordinary efforts we have not evolved any very new ideas for military applications in space during the past several years. This is especially true of manned military applications. Nevertheless, we have tripled our hardware efforts just in the last three years. I note that about half of our efforts are directed at clear, identifiable military needs but that half of them are not, and comprise a very extensive program of technological insurance against an uncertain future.

MORE

My third principal point, which concerns the scope of the DoD space program, is simply that it is a very large, not a very small, program.

Fourth, I point out that decisions are not made about the scope of a space program as such. They are based principally on the value of particular ideas and program proposals.

Lastly, I note that space is a new frontier, although certainly not the only new frontier in the world today, and that we in the Defense Department are determined to be out on that frontier.

I should like to begin this discussion, then, by outlining the principal objectives of the Defense Department.

MISSION AND OBJECTIVES OF THE DEFENSE DEPARTMENT

Basically the Department of Defense is charged with military preparations essential for the protection of our vital interests. To do that effectively and well is a foremost objective. Our efforts with respect to space undertakings supported by the Defense Department are, therefore, aimed at enhancing as necessary our military power and effectiveness. There are, of course, a multitude of fascinating and potentially useful projects that one might undertake in this new field, but unless we can satisfy ourselves that these efforts contribute to our military mission, or are likely to, we are not justified in supporting them. This is not the only criterion, but it is a minimum criterion.

In a world where thermonuclear war is always a possibility, we have a special obligation to be able to meet any level of aggression with the appropriate level of force. That is why the Defense Department particularly during this Administration, has placed great emphasis upon the preparation of a flexible military capability. Naturally, space efforts, which are often very costly and which may not contribute heavily or directly to such objectives must compete for support with others that do.

MILITARY REQUIREMENTS IN SPACE

The first step in determining what our program ought to be is to identify military needs and requirements so that plans may be set to meet them. Space developments, of course, are close to the forefront of modern technological advances. We must plan not only on the basis of our present knowledge, but knowing that discoveries that suggest new applications might occur in a wholly unplanned and unplannable way. Naturally, therefore, we are always engaged in reviewing our plans and assessing and re-assessing proposals and concepts.

This process is not a new one. We have devoted great efforts over a long period of time to studies of space in general and to military applications of space systems in particular. The Air Force assigned a series of space studies to the RAND Corporation as early as 1946. These were followed by a dozen more completed and assessed in 1947, and those were the basis for many more. The "study requirement" program, started in 1956, sponsored numerous industry studies. Some of these were paid for by the Government, but many were performed "gratis" by interested contractors who were granted a "need-to-know." This study program concentrated heavily on space missions and applications. The Air Force established additional permanent study groups and activities including the Anser Corporation in 1958 and more recently, the Aerospace Corporation which performs

such studies as well as other tasks. Numerous ad hoc efforts have been undertaken in recent years by in-house and consulting bodies, including some sponsored by the Air Force Scientific Advisory Board and others by the Navy Department. No listing here could be more than a partial one. Many tens of millions of dollars have been spent--representing many thousands of man-years of effort--either directly or indirectly in studying military applications for space in the past five years, exclusive of normal preliminary design efforts needed in pursuit of authorized projects.

One of the most interesting aspects of this effort is that no really new ideas for the military utilization of space have been evolved as a result of these efforts. New techniques have been evolved or postulated, of course, but the list of system proposals under active consideration shortly after Sputnik I is remarkably similar to today's list. Many of these are being heavily supported, but others are not. This does not prove, of course, that new ideas will not be forthcoming. It does not prove that all the decisions to proceed or not to proceed have been correct. Nor does it prove that we have studied the problem sufficiently; we are still studying. But it does suggest that our development efforts are not lagging behind the good ideas. In fact, during the past three years we have increased the scope of our hardware development efforts by a factor of more than three. These efforts may be classed under two principal headings.

PROJECTS AIMED AT MILITARY REQUIREMENTS

First are those projects which are directed at clear, identifiable military needs and requirements. About half of our total effort falls under this heading. We have been working on many of these for sometime and most still appear promising today. Examples include the development of communications satellite systems. We have already expended nearly \$200 million on such developments and we are planning to spend \$100 million in this fiscal year. We are continuing to support the development of navigational satellites. We have already spent nearly \$100 million on this and we will spend nearly \$50 million in this fiscal year. Despite great technical difficulties and disappointments, we continue to support the development of a satellite system for ballistic missile warning. We have already spent nearly \$300 million on that development and we will spend up to \$100 million more in this fiscal year.

These and a few others are examples of promising applications of space technology for military purposes. The decision to pursue such projects, to expand them, to cut them back or otherwise to modify them as problems arise are made precisely as decisions must be made with respect to any other complex system under development to meet military needs. Here the chief problem is how best to meet needs and requirements. The factors to be weighed include feasibility, cost and the applicability of new technologies and devices. The decisions concern technical choices among competing approaches. These decisions are chiefly concerned not with why one ought to proceed but with whether and how to do so.

EVOLUTION OF ESSENTIAL "BUILDING BLOCKS"

Though about half our efforts in space are undertaken to meet well-defined military needs and requirements, the other half are not. This other half comprises the second major class of efforts we are supporting in this field, and it is a very important one. The first is aimed at developing systems to meet needs: the second is aimed at evolving new opportunities, at creating a vigorous and broad base of new technology and even of devices and systems for possible future application, even though the requirements for these are incomplete or altogether absent. These undertakings represent insurance against an uncertain future, a resolve to be prepared even though we often must be uncertain about how to prepare, or what to prepare for.

An important example is TITAN III, the development of which was recently approved. We plan to expend more than \$250 million in this fiscal year and a total of nearly \$1 billion in developing TITAN III as a part of the National Launch Vehicle Program. It will be a standardized workhorse launch vehicle useful for the better part of a decade. TITAN III, however, is not being developed to fill a specific military mission requirement that adequately justified its development. No such requirement presently exists. We are supporting its development nevertheless because we are confident that it will be an important "building block" upon which future military space missions and operations, should they materialize, will be heavily dependent.

TITAN III is not the only major "building block" currently being supported by the DoD, although it is by far the largest system development in this category. We are also supporting exploratory and advanced developments aimed specifically at the evolution of "technological building blocks" for space to the extent of more than \$300 million in fiscal year 1963. These developments include a great variety of efforts in bioastronautics, the development of advanced sensors, the evolution of advanced propulsion systems and power supplies, developments in materials, and a multitude of exploration and research efforts aimed at learning more about space flight and the space environment.

These "building block" programs and projects are conceived and supported on a broad base complementing NASA efforts to insure the availability of space technology for application to new military systems as their characteristics and the need for them are clearly established.

Many of the applications that have been contemplated seem to us today to be unlikely, if not infeasible. Most manned military missions in space still, after years of study, seem little or no more viable than they ever did. The same may be said of many unmanned systems, especially systems employing offensive weapons in space. Nevertheless, we are anxious to build a base on which future systems could, if needed, be constructed. We are not yet ready to design the building, but we want the building blocks at hand.

SCOPE OF DoD SPACE PROGRAM

Now let's put together the two parts of our space program--the "application" and the "insurance" parts--and examine the scope of the total effort.

Until recently research and development played a comparatively minor role in the evolution of our military posture and in the operations of the Department of Defense. In fact, the budgetary category known as Research, Development, Test and Evaluation was not established until Fiscal Year 1960. Today our total RDT&E program amounts to \$7.1 billion (FY 1963). It equals nearly half of the expenditures for the procurement of all weapons systems and supporting systems for use in combat and in support of combat operations. Stated somewhat differently, for every dollar that we spend to furnish a weapon for the fighting man to use we spend nearly fifty cents to develop a new one or to improve an existing one. The impact of this historically unprecedented effort on the character of our military weapons and the development of new military capabilities, is, of course, one of the dramatic facts of life in the modern world.

Between 20% and 25% of this effort is currently devoted to our military space program. We know that because we have made extensive and special studies of our total research and engineering effort and have identified space program and projects separately. It is the aggregate of these that comprise what I have been referring to as the Department of Defense "space program".

This program exceeds \$1.5 billion this year and is likely to be even larger next year.

It is greater than the entire Army budget for RDT&E.

It is greater than the entire Navy budget for RDT&E.

It is not a small effort, but a very large effort. As I have already mentioned, at least half of this effort is devoted to the evolution of new technologies and devices not aimed at implementing clear military requirements. It is very large in relation to the funds and the efforts we are expending in research and development aimed at the creation or improvement of new systems and new capabilities of demonstrable military value and effectiveness. It competes with these, and as it grows, becomes a correspondingly larger and more important factor in decisions affecting the total Defense research and development program.

POLICIES AND DECISION-MAKING

I would like to turn now to the policies that govern decisions affecting the size and scope of our Defense space program. Basically, decisions on any segment of our research and engineering program are governed by four principal considerations.

First, systems for operational use, or developed as candidates for deployment, must meet clear cut military requirements.

Second, although the establishment of requirements is bound to be affected by technical opportunities and change, requirements for military equipment must be fully consistent with the basic objectives of the Defense Department as I outlined them earlier. In other words, decisions must be governed by what we ought to do, not just what we can do, although new development often affect both.

Third, developments must be feasible and worth the expenditure of funds and effort in relation to urgency and effectiveness. Those of us with responsibilities in the field of research and engineering are particularly concerned with the effective utilization of our precious scientific and engineering manpower resources, for the bulk of the funds for research and development measure and determine the areas toward which their efforts and talents will be directed.

And, finally, we are governed in our R&D decisions by the need to insure continued technological growth in all fields of military interest and concern, especially in advanced fields requiring heavy support by the DoD.

Needless to say, technical and policy decisions concerning the development of systems for military use are not made on general or philosophical grounds. We do not simply decide to spend more or to spend less on a system or a group of systems. Each major decision is and must be made on its merits in the context of the objectives we are trying to attain.

Needless to say, too, system decisions are not made in response to or in furtherance of abstract doctrinal concepts. POLARIS does not augment America's "sea power" in the Mahan sense, nor was it started and supported because anyone thought it would. MINUTEMAN does not augment America's "air power" in the conventional sense any more or any less than POLARIS does, nor is it either

supported or opposed because it is essentially a "land" system, owing its survival to dispersal and hardening under ground. Doctrinal abstractions such as "sea power" or "air power" or "aerospace power" are often useful for analysis and discussion of the patterns of power as history reveals them. But these doctrinal abstractions do not translate well into new programs and projects. Here technology takes over, and technology, as we have noted, tends to obsolete such concepts and abstractions rather than the reverse.

SPACE - A NEW FRONTIER

Our national interest in and our pre-occupation with space is without historical precedent. We in the Defense Department share, of course, in this excitement, so much of which stems from projects for which we are responsible.

Few other social issues and undertakings, short of war, have so fired the imagination and captured the interest and harnessed the talents and energies of men and women on a national scale. At least a third of all American scientists engaged in research and development, among whom must be counted many of our most brilliant minds, are devoting their efforts to the evolution of new knowledge and new technologies in space. The last decade has seen the growth of many new professional societies and groups, new journals, new books, new companies, new schools--all concerned with space. Naturally, a host of new concepts and perceptions serve as foci for and as expressions of the loyalties, the energies and the talents that are increasingly applied to this new field. Many of these notions have by now become familiar to nearly everyone. I will mention only a few.

Sometimes it is asserted that space will represent the next great stride in man's control over the external world, corresponding somewhat to his emergence from the state of a land-bound creature to one who today masters much of the sea and most of the air.

Sometimes it is said that space will be the battle ground of the future where decisive battles will be fought to decide the fate of the earth-bound people below.

Sometimes it is asserted, although none of these assertions can be proved, that not only the space around the earth but the moon and other celestial bodies will be of great importance to our welfare and our safety. Whichever nation can get to the moon first with the capability of returning to any spot on the earth will, it is said, possess an overwhelming military and psychological advantage over have-not nations who cannot.

And it is asserted that space, after all, is merely an extension of the air with which it blends imperceptibly. It is said that "The aerospace is an operationally indivisible medium consisting of the total expanse beyond the earth's surface". Often it is asserted that the weapons that will operate and the missions that will be performed in space will, therefore, be extensions of those with which we are familiar. The statement that this is so is a doctrinal abstraction, but the belief that it is so comprises an important element in that larger set of notions that might be called the "mystique" of space.

Sometimes, in fact, it is asserted further that these weapons and these missions will be involved in the "control of space", and that space will be "controlled" in somewhat the sense that air space is. This concept of "control"

is sometimes expanded to include the extension of national sovereignty into space, although international law, of course, does not recognize this extension of national sovereignty beyond national air space to outer space or celestial bodies.

Regardless of the merits of such ideas or whether any one of them or none, comes true, all are founded upon the common feeling and assumption that space will prove to be, as other great technological developments of our age, a new and revolutionary force.

We would not be behaving as Americans if we did not respond to the challenge of the space frontier. The Department of Defense is responding actively and vigorously to that challenge, both by exploiting the use of space for military purposes wherever that is technically and economically indicated, and by supporting the rapid development of a technological base and major system building blocks for the creation of military systems to operate in space. If such systems are needed, we shall have them.

There is an old saying that used to symbolize ambition and motivation in America. "Hitch your wagon to a star," they used to say -- and that is what we are doing these days more literally than ever before. But let's not forget another dictum that is certainly valid in the Space Age: if you are going around with your head in the clouds, you'd better keep your feet on the ground.

E N D

NEWS RELEASE

PLEASE NOTE DATE



DEPARTMENT OF DEFENSE
OFFICE OF PUBLIC AFFAIRS
Washington 25, D. C.

HOLD FOR RELEASE
UNTIL DELIVERY OF ADDRESS
EXPECTED AT 12 NOON (EDT)
TUESDAY, OCTOBER 9, 1962

NO. 1642-62

OXford 53201-
53176

REMARKS BY
ASSISTANT SECRETARY OF DEFENSE JOHN H. RUBEL
AT THE AEROSPACE LUNCHEON CLUB
BURLINGTON HOTEL, WASHINGTON, D. C.
TUESDAY, OCTOBER 9, 1962 -- 12 NOON (EDT)

file "Military Use of Space"

INTRODUCTION

My talk today is concerned with the space program supported by the Defense Department. This program is often spoken and thought of as the "military space program", particularly by its critics, who may use the adjective either to argue that it is too big or too small. I propose to demonstrate that the program is as close to the optimum size as we can make it in the light of all the uncertainties that must accompany such a program, and, in fact, that we probably err on the side of allowing too generous a margin of safety for the effects of these uncertainties.

Actually, of course, extensive programs and projects under NASA supervision will prove equally applicable to systems and devices in space whether these are used for military or non-military purposes. In this sense, then, the totality of our "military" space efforts, assessed from a national rather than a Departmental viewpoint greatly exceeds the efforts supported by the Defense Department alone.

I will make four principal points in this talk as follows:

First, in discussing the mission and objectives of the Defense Department I point out that this is not the Department of Space, but the Department responsible for national defense and that any undertakings that are supported by the Defense Department, whether or not they are space projects, must further that basic mission and those objectives.

Second, I discuss the requirements for space programs and projects. The principal point here is that our expenditures on space developments have been remarkably high in relation to viable concepts for military applications in space. In fact, despite extraordinary efforts we have not evolved any very new ideas for military applications in space during the past several years. This is especially true of manned military applications. Nevertheless, we have tripled our hardware efforts just in the last three years. I note that about half of our efforts are directed at clear, identifiable military needs but that half of them are not, and comprise a very extensive program of technological insurance against an uncertain future.

MORE

My third principal point, which concerns the scope of the DoD space program, is simply that it is a very large, not a very small, program.

Fourth, I point out that decisions are not made about the scope of a space program as such. They are based principally on the value of particular ideas and program proposals.

Lastly, I note that space is a new frontier, although certainly not the only new frontier in the world today, and that we in the Defense Department are determined to be out on that frontier.

I should like to begin this discussion, then, by outlining the principal objectives of the Defense Department.

MISSION AND OBJECTIVES OF THE DEFENSE DEPARTMENT

Basically the Department of Defense is charged with military preparations essential for the protection of our vital interests. To do that effectively and well is a foremost objective. Our efforts with respect to space undertakings supported by the Defense Department are, therefore, aimed at enhancing as necessary our military power and effectiveness. There are, of course, a multitude of fascinating and potentially useful projects that one might undertake in this new field, but unless we can satisfy ourselves that these efforts contribute to our military mission, or are likely to, we are not justified in supporting them. This is not the only criterion, but it is a minimum criterion.

In a world where thermonuclear war is always a possibility, we have a special obligation to be able to meet any level of aggression with the appropriate level of force. That is why the Defense Department particularly during this Administration, has placed great emphasis upon the preparation of a flexible military capability. Naturally, space efforts, which are often very costly and which may not contribute heavily or directly to such objectives must compete for support with others that do.

MILITARY REQUIREMENTS IN SPACE

The first step in determining what our program ought to be is to identify military needs and requirements so that plans may be set to meet them. Space developments, of course, are close to the forefront of modern technological advances. We must plan not only on the basis of our present knowledge, but knowing that discoveries that suggest new applications might occur in a wholly unplanned and unplannable way. Naturally, therefore, we are always engaged in reviewing our plans and assessing and re-assessing proposals and concepts.

This process is not a new one. We have devoted great efforts over a long period of time to studies of space in general and to military applications of space systems in particular. The Air Force assigned a series of space studies to the RAND Corporation as early as 1946. These were followed by a dozen more completed and assessed in 1947, and those were the basis for many more. The "study requirement" program, started in 1956, sponsored numerous industry studies. Some of these were paid for by the Government, but many were performed "gratis" by interested contractors who were granted a "need-to-know." This study program concentrated heavily on space missions and applications. The Air Force established additional permanent study groups and activities including the Anser Corporation in 1958 and more recently, the Aerospace Corporation which performs

such studies as well as other tasks. Numerous ad hoc efforts have been undertaken in recent years by in-house and consulting bodies, including some sponsored by the Air Force Scientific Advisory Board and others by the Navy Department. No listing here could be more than a partial one. Many tens of millions of dollars have been spent--representing many thousands of man-years of effort--either directly or indirectly in studying military applications for space in the past five years, exclusive of normal preliminary design efforts needed in pursuit of authorized projects.

One of the most interesting aspects of this effort is that no really new ideas for the military utilization of space have been evolved as a result of these efforts. New techniques have been evolved or postulated, of course, but the list of system proposals under active consideration shortly after Sputnik I is remarkably similar to today's list. Many of these are being heavily supported, but others are not. This does not prove, of course, that new ideas will not be forthcoming. It does not prove that all the decisions to proceed or not to proceed have been correct. Nor does it prove that we have studied the problem sufficiently; we are still studying. But it does suggest that our development efforts are not lagging behind the good ideas. In fact, during the past three years we have increased the scope of our hardware development efforts by a factor of more than three. These efforts may be classed under two principal headings.

PROJECTS AIMED AT MILITARY REQUIREMENTS

First are those projects which are directed at clear, identifiable military needs and requirements. About half of our total effort falls under this heading. We have been working on many of these for sometime and most still appear promising today. Examples include the development of communications satellite systems. We have already expended nearly \$200 million on such developments and we are planning to spend \$100 million in this fiscal year. We are continuing to support the development of navigational satellites. We have already spent nearly \$100 million on this and we will spend nearly \$50 million in this fiscal year. Despite great technical difficulties and disappointments, we continue to support the development of a satellite system for ballistic missile warning. We have already spent nearly \$300 million on that development and we will spend up to \$100 million more in this fiscal year.

These and a few others are examples of promising applications of space technology for military purposes. The decision to pursue such projects, to expand them, to cut them back or otherwise to modify them as problems arise are made precisely as decisions must be made with respect to any other complex system under development to meet military needs. Here the chief problem is how best to meet needs and requirements. The factors to be weighed include feasibility, cost and the applicability of new technologies and devices. The decisions concern technical choices among competing approaches. These decisions are chiefly concerned not with why one ought to proceed but with whether and how to do so.

EVOLUTION OF ESSENTIAL "BUILDING BLOCKS"

Though about half our efforts in space are undertaken to meet well-defined military needs and requirements, the other half are not. This other half comprises the second major class of efforts we are supporting in this field, and it is a very important one. The first is aimed at developing systems to meet needs: the second is aimed at evolving new opportunities, at creating a vigorous and broad base of new technology and even of devices and systems for possible future application, even though the requirements for these are incomplete or altogether absent. These undertakings represent insurance against an uncertain future, a resolve to be prepared even though we often must be uncertain about how to prepare, or what to prepare for.

An important example is TITAN III, the development of which was recently approved. We plan to expend more than \$250 million in this fiscal year and a total of nearly \$1 billion in developing TITAN III as a part of the National Launch Vehicle Program. It will be a standardized workhorse launch vehicle useful for the better part of a decade. TITAN III, however, is not being developed to fill a specific military mission requirement that adequately justified its development. No such requirement presently exists. We are supporting its development nevertheless because we are confident that it will be an important "building block" upon which future military space missions and operations, should they materialize, will be heavily dependent.

TITAN III is not the only major "building block" currently being supported by the DoD, although it is by far the largest system development in this category. We are also supporting exploratory and advanced developments aimed specifically at the evolution of "technological building blocks" for space to the extent of more than \$300 million in fiscal year 1963. These developments include a great variety of efforts in bioastronautics, the development of advanced sensors, the evolution of advanced propulsion systems and power supplies, developments in materials, and a multitude of exploration and research efforts aimed at learning more about space flight and the space environment.

These "building block" programs and projects are conceived and supported on a broad base complementing NASA efforts to insure the availability of space technology for application to new military systems as their characteristics and the need for them are clearly established.

Many of the applications that have been contemplated seem to us today to be unlikely, if not infeasible. Most manned military missions in space still, after years of study, seem little or no more viable than they ever did. The same may be said of many unmanned systems, especially systems employing offensive weapons in space. Nevertheless, we are anxious to build a base on which future systems could, if needed, be constructed. We are not yet ready to design the building, but we want the building blocks at hand.

SCOPE OF DoD SPACE PROGRAM

Now let's put together the two parts of our space program--the "application" and the "insurance" parts--and examine the scope of the total effort.

Until recently research and development played a comparatively minor role in the evolution of our military posture and in the operations of the Department of Defense. In fact, the budgetary category known as Research, Development, Test and Evaluation was not established until Fiscal Year 1960. Today our total RDT&E program amounts to \$7.1 billion (FY 1963). It equals nearly half of the expenditures for the procurement of all weapons systems and supporting systems for use in combat and in support of combat operations. Stated somewhat differently, for every dollar that we spend to furnish a weapon for the fighting man to use we spend nearly fifty cents to develop a new one or to improve an existing one. The impact of this historically unprecedented effort on the character of our military weapons and the development of new military capabilities, is, of course, one of the dramatic facts of life in the modern world.

Between 20% and 25% of this effort is currently devoted to our military space program. We know that because we have made extensive and special studies of our total research and engineering effort and have identified space program and projects separately. It is the aggregate of these that comprise what I have been referring to as the Department of Defense "space program".

This program exceeds \$1.5 billion this year and is likely to be even larger next year.

It is greater than the entire Army budget for RDT&E.

It is greater than the entire Navy budget for RDT&E.

It is not a small effort, but a very large effort. As I have already mentioned, at least half of this effort is devoted to the evolution of new technologies and devices not aimed at implementing clear military requirements. It is very large in relation to the funds and the efforts we are expending in research and development aimed at the creation or improvement of new systems and new capabilities of demonstrable military value and effectiveness. It competes with these, and as it grows, becomes a correspondingly larger and more important factor in decisions affecting the total Defense research and development program.

POLICIES AND DECISION-MAKING

I would like to turn now to the policies that govern decisions affecting the size and scope of our Defense space program. Basically, decisions on any segment of our research and engineering program are governed by four principal considerations.

First, systems for operational use, or developed as candidates for deployment, must meet clear cut military requirements.

Second, although the establishment of requirements is bound to be affected by technical opportunities and change, requirements for military equipment must be fully consistent with the basic objectives of the Defense Department as I outlined them earlier. In other words, decisions must be governed by what we ought to do, not just what we can do, although new development often affect both.

Third, developments must be feasible and worth the expenditure of funds and effort in relation to urgency and effectiveness. Those of us with responsibilities in the field of research and engineering are particularly concerned with the effective utilization of our precious scientific and engineering manpower resources, for the bulk of the funds for research and development measure and determine the areas toward which their efforts and talents will be directed.

And, finally, we are governed in our R&D decisions by the need to insure continued technological growth in all fields of military interest and concern, especially in advanced fields requiring heavy support by the DoD.

Needless to say, technical and policy decisions concerning the development of systems for military use are not made on general or philosophical grounds. We do not simply decide to spend more or to spend less on a system or a group of systems. Each major decision is and must be made on its merits in the context of the objectives we are trying to attain.

Needless to say, too, system decisions are not made in response to or in furtherance of abstract doctrinal concepts. POLARIS does not augment America's "sea power" in the Mahan sense, nor was it started and supported because anyone thought it would. MINUTEMAN does not augment America's "air power" in the conventional sense any more or any less than POLARIS does, nor is it either

supported or opposed because it is essentially a "land" system, owing its survival to dispersal and hardening under ground. Doctrinal abstractions such as "sea power" or "air power" or "aerospace power" are often useful for analysis and discussion of the patterns of power as history reveals them. But these doctrinal abstractions do not translate well into new programs and projects. Here technology takes over, and technology, as we have noted, tends to obsolete such concepts and abstractions rather than the reverse.

SPACE - A NEW FRONTIER

Our national interest in and our pre-occupation with space is without historical precedent. We in the Defense Department share, of course, in this excitement, so much of which stems from projects for which we are responsible.

Few other social issues and undertakings, short of war, have so fired the imagination and captured the interest and harnessed the talents and energies of men and women on a national scale. At least a third of all American scientists engaged in research and development, among whom must be counted many of our most brilliant minds, are devoting their efforts to the evolution of new knowledge and new technologies in space. The last decade has seen the growth of many new professional societies and groups, new journals, new books, new companies, new schools--all concerned with space. Naturally, a host of new concepts and perceptions serve as foci for and as expressions of the loyalties, the energies and the talents that are increasingly applied to this new field. Many of these notions have by now become familiar to nearly everyone. I will mention only a few.

Sometimes it is asserted that space will represent the next great stride in man's control over the external world, corresponding somewhat to his emergence from the state of a land-bound creature to one who today masters much of the sea and most of the air.

Sometimes it is said that space will be the battle ground of the future where decisive battles will be fought to decide the fate of the earth-bound people below.

Sometimes it is asserted, although none of these assertions can be proved, that not only the space around the earth but the moon and other celestial bodies will be of great importance to our welfare and our safety. Whichever nation can get to the moon first with the capability of returning to any spot on the earth will, it is said, possess an overwhelming military and psychological advantage over have-not nations who cannot.

And it is asserted that space, after all, is merely an extension of the air with which it blends imperceptibly. It is said that "The aerospace is an operationally indivisible medium consisting of the total expanse beyond the earth's surface". Often it is asserted that the weapons that will operate and the missions that will be performed in space will, therefore, be extensions of those with which we are familiar. The statement that this is so is a doctrinal abstraction, but the belief that it is so comprises an important element in that larger set of notions that might be called the "mystique" of space.

Sometimes, in fact, it is asserted further that these weapons and these missions will be involved in the "control of space", and that space will be "controlled" in somewhat the sense that air space is. This concept of "control"

is sometimes expanded to include the extension of national sovereignty into space, although international law, of course, does not recognize this extension of national sovereignty beyond national air space to outer space or celestial bodies.

Regardless of the merits of such ideas or whether any one of them or none, comes true, all are founded upon the common feeling and assumption that space will prove to be, as other great technological developments of our age, a new and revolutionary force.

We would not be behaving as Americans if we did not respond to the challenge of the space frontier. The Department of Defense is responding actively and vigorously to that challenge, both by exploiting the use of space for military purposes wherever that is technically and economically indicated, and by supporting the rapid development of a technological base and major system building blocks for the creation of military systems to operate in space. If such systems are needed, we shall have them.

There is an old saying that used to symbolize ambition and motivation in America. "Hitch your wagon to a star," they used to say -- and that is what we are doing these days more literally than ever before. But let's not forget another dictum that is certainly valid in the Space Age: if you are going around with your head in the clouds, you'd better keep your feet on the ground.

E N D

Speak Up Mr. Secretary

file "M. McNamara - space" 8

WE THINK an explanation of what is going on inside the Pentagon in regard to the military space program should be given by Secretary of Defense Robert McNamara just as soon as possible. From all outward indications, the situation is a shambles.

Let's take a look at what is known.

Early this year, the Air Force began a strengthened and renewed drive for an expanded military space role based on a document called the Air Force Space Plan—distributed with an endorsing letter from Chief of Staff Gen. Curtis LeMay.

This met immediate opposition in the Department of Defense.

"We cannot visualize or define now a military mission for a man-in-space," Assistant Secretary John Rubel told *MISSILES AND ROCKETS*.

This has not been a unanimous DOD view. In fact, quite a schism has developed in this regard. The Air Force demand for a bigger role in space, including man-in-space, had met opposition from politicians of both the Eisenhower and Kennedy Administrations who insisted on emphasizing what they like to call the "peaceful use of space."

But in recent weeks, a change has been evident within the Office of the Secretary of Defense.

Deputy Secretary Roswell Gilpatric, speaking from personal notes with no advance text, in a May 2 speech admitted that the military space posture had been neglected and added: "Within the next six months, we will get about our business in this area." (*M/R*, May 14, p. 38).

On May 16, Gilpatric followed this with a public statement that "the Defense Department has decided to develop the technology of manned orbital systems able to rendezvous with satellites and then land at preset locations on Earth." These systems would be capable of "neutralizing" hostile satellites, he said.

Late in May, the Space Systems Division of the Air Force opened negotiations with a number of industry firms on three-month study contracts for the manned satellite inspector system, known officially as 621B and unofficially as *Saint II* (*M/R*, March 26, p. 43).

The group included such firms as Lockheed, Boeing, McDonnell, North American, Hughes and Raytheon.

Last Monday, June 11, due note of all this activity was taken in the lead story of the *New York Times*, which reported that the Defense Department was embarking upon a man-in-space program.

The day it appeared, the report was vehemently denied by Arthur Sylvester, Assistant Secretary of

Defense, who stopped just short of calling *Times* correspondent John Finney a liar for writing it.

The firms which were to receive the study contracts on the manned satellite inspector system have been notified abruptly that all plans for these have been cancelled—on orders from the highest levels.

IT SEEMS a fair question to ask: WHAT IS GOING ON?

From surface indications, a fight appears to be brewing within the Administration which is strongly reminiscent of the struggle which led to Trevor Gardner's resignation over the ICBM program—or more properly, over the lack of an ICBM program.

There are people on the White House staff and in DOD who are either such idealistic dreamers or such ignorant clods that they will not awaken to the need for a manned defensive space system until hostile Soviet satellites are overhead.

To these babes in the woods, any talk of military space programs would prejudice negotiations with the Russians at the disarmament table. Shades of Munich! Can anyone honestly believe that the best position from which to talk disarmament with the Russians is a position of weakness? Obviously, someone can.

The manned satellite system proposed is one which would make it possible to rendezvous with and to destroy hostile satellites. It is a follow-on to the well-advanced 621A program. First step in 621A is the scheduled launch from Cape Canaveral of a *Satellite Inspector* satellite aboard an *Atlas D-Agena B*. Target satellites are to be launched by *Blue Scout*. Purpose is to demonstrate feasibility of satellite inspection by means of television relay.

But of what purpose is it to inspect a hostile satellite if it cannot be destroyed? The follow-on *Satellite Interceptor* program is intended to provide that capability.

This is a must. But the churlish actions which have resulted in cancellation of plans for the study contracts are endangering the nation's security.

We think Secretary McNamara should make a prompt effort to clear up the situation, which has been hopelessly confused by Mr. Sylvester's contradictory position and by the contract cancellations.

Unless, of course, the White House staff is running the Pentagon these days? This possibility suggests an even greater danger than that spectre of a Pentagon run by its own civilians, which is haunting a number of military men these days.

William J. Coughlin

NEWS RELEASE
PLEASE NOTE DATE



DEPARTMENT OF DEFENSE
OFFICE OF PUBLIC AFFAIRS
Washington 25, D. C.

Military Affairs
J. Space

9

HOLD FOR RELEASE
UNTIL 6:30 A.M. (EDT)
WEDNESDAY, MAY 16, 1962

NO. 774-62

Oxford 53201
53176

REMARKS BY
DEPUTY SECRETARY OF DEFENSE ROSWELL L. GILPATRICK
AT THE ARMED FORCES DAY LUNCHEON
OF THE SAN FRANCISCO CHAMBER OF COMMERCE
SAN FRANCISCO, CALIFORNIA
WEDNESDAY, MAY 16, 1962 -- 1:00 P.M. (PDT), 4:00 P.M. (EDT)

Today we, like all Americans, pause in our daily concerns to pay tribute to our Armed Forces. The men and women who comprise these Forces are stationed all around the world, defending our freedom and way of life by their dedicated service. Many are stationed in isolated outposts, remote from home and the conveniences to which other Americans have become accustomed. Others patrol the high seas, separated from their families and friends. Still others endure the strain of a day-in-day-out alert with aircraft and missiles whose destructive power is almost unimaginable. To all of these men and women we give our thanks and our support. It is such as they who have made our country free and great.

No state contributes more than does California to our national defense effort. Here in your state there are 370,000 men and women, in uniform and civilian, of the Department of Defense, or about 10% of the total personnel in the U.S. military establishment. Last year (FY 61) more prime defense contracts including R&D were awarded to California plants than in any other state. These contracts represented in dollar value some \$5.3 billion, or almost 24% of total U.S. domestic procurement. Of particular significance is the fact that, of this total, research, development, testing and evaluation contracts going to California firms amounted to some \$2.5 billions, or over 41% of the national total.

This major share of defense work would not have gone to California had it not been for your superb resources, in professional and technically trained manpower, and in dynamic management -- not to mention your climate. It is hardly surprising in view of this important defense contribution that almost every Californian thinks of himself as a lay expert in military and aerospace technology -- and with good reason, as evidenced by some of the more important programs conducted in whole or in part right here in this state, such as the Atlas, Titan, Minuteman, Polaris and Skybolt projects that I will mention later.

It is to the space field that I should like to address myself here today, particularly the contribution which the Defense Department is making to the National Space Program. I put the matter in this way rather than as "The Military Space Program" because there is only one unified national program, not two or three or four, and the Defense Department contributes to it in a significant way. I would like to tell you how this is done and how it happened to be this way.

MORE

PRESERVATION COPY

The first point to be made concerns the feature of space activity which distinguishes it from other military or civilian operations. I refer to the extent of our ignorance of space environment. The abundance of fundamental unknowns sets the limits on any activity in space today. We must, in consequence, do a significant amount of basic research and exploration before we can hope to be reasonably confident that man and machines can operate safely and successfully in space environment. Scientific reconnaissance is a must. The National Space Program, therefore, puts heavy emphasis on collecting data of all kinds in order better to define space environment. The better knowledge we have of that environment, the better we can prepare our astronauts and design our vehicles to withstand its rigors.

Our ignorance of space environment is compounded by our inability to ask the right questions of nature. We have, of course, sent measuring instruments into space, instruments which reveal the presence of phenomena not previously suspected, such as the Van Allen radiation belts. But it would not be surprising if equally significant phenomena have not been overlooked because the appropriate measuring instruments were not sent up. The reason would be that no one thought of why they should be. Even our most imaginative scientists do not come up with all of the right questions today.

Before getting down to the particulars of Defense space activities, I should like to give you a thumbnail historical sketch of space exploration. What we do and how we do it is not entirely the result of a rational calculated policy; to a significant extent it is a product of history.

Although the first really serious writings about space exploration date from the beginning of this century, most of the requisite technology for initial space flight was not developed until the Germans began work in 1934 on what was to become the V-2 rocket. This was the first big rocket work in the world. Neither the Russians nor ourselves had anything comparable. Indeed, all of the large liquid chemical rocket technology in existence today has its roots in the work of the German Army at Peenemünde. The Soviet Union and the United States were therefore in a roughly comparable position with respect to liquid rocket technology at the close of World War II. Both sides had access to German rockets, facilities and personnel. For several reasons, however, it was the Soviet Union that first pressed forward with the development of large liquid rockets.

For one thing, the Soviets accepted the reality of the Cold War before we did. This is hardly surprising; after all, they started it. The Soviet Union never demobilized as fully as we did, nor did they slow the pace of their military research and development. We never fully accepted the reality of the Cold War and the basic hostility of Communism until after the fall of Czechoslovakia, when we reacted by rearming and by joining in the establishment of NATO.

Secondly, the Soviets realized that they could not, in any reasonable time period, match the technical proficiency of our strategic airpower, either in equipment or in crews. Indeed, the great technical proficiency of the United States in strategic bombing still exceeds that of the Soviet, and they know it. The Soviets, therefore, looked with the greatest interest on early German ICBM designs as an alternative to the aircraft delivery systems in which they were outclassed.

Thirdly, as I need not remind you, the Soviet Union lagged behind the United States in nuclear technology. This lag meant that the Soviets needed a heavier device to achieve the same explosive power than was available to us with a much lighter device. This consideration imposed on their rocket engineers a very significant design parameter: their ICBMs had to be able to carry very heavy payloads.

Thus, ironically enough, it was the Soviet Union's technological inferiority in strategic airpower and nuclear weapons that inspired them to begin laying the foundations of what was later to become a space capability. At the time, neither United States nor the Soviet Union was seriously planning for space exploration as such. Rocket development was for military purposes on the earth's surface. Each side had its problems which it went about solving in what seemed to it the best way.

The United States began work in earnest on its own ICBM program after the 1954 report of the Von Neumann Committee, which first pointed up to us the feasibility of delivering nuclear explosives in reasonably compact payloads. Until then, the delivery of nuclear explosives by long-range rocket had not looked attractive. A factor in this judgment was the unquestionable American superiority in strategic airpower. We were, in a sense, inhibited by our own successes.

Once we did press ahead with ICBM development, we did remarkably well. We first built two large liquid-fueled ICBMs, the Atlas and the Titan, and two liquid IREMs, the Jupiter and the Thor, and then developed the military possibilities of solid-fuel technology with a submarine-based missile, the Polaris, and a land-based system, the Minuteman. Now we are readying for production an air-launched missile, the Skybolt, and proceeding with the development of very large solid rocket propulsion units. The Soviets, on the other hand, concentrating largely on their successful liquid-fueled rockets, are behind us in solid rocket technology.

All of this is still in the regime of strictly military objectives. Space exploration as such had not yet entered into the picture.

The heightening of our interest in space exploration followed the October, 1957, launching of the Russian Sputnik I by a large Soviet ICBM. We followed suit in 1958 with smaller satellites launched also by military booster rockets. At that time, neither our boosters nor the Soviets' were specially designed for space exploration missions. They were meant for bombardment missions. But when the problem of orbiting satellites arose, the Soviets found themselves at an advantage because their rockets had been designed, as I have said, to carry heavier payloads than ours. It is ironic that current Soviet boasts of "technological superiority" in space are based on the results of an assessment, made many years ago, of Soviet technological inferiority in two critical military areas.

The United States was stung into further action by the Soviet space successes. In 1959 there was established a new agency, the National Aeronautics and Space Administration, with the avowed intent of regaining for the United States the lead in all forms of space technology and exploration. Many new space projects have since been initiated by NASA which has also carried on the old ones transferred to it by the Defense Department.

NASA has a difficult and demanding mission of the greatest importance to our country in which the Department of Defense has given, and will continue to give, the fullest support and assistance. Both agencies are active participants in the National Space Program which, I repeat, is one unified program for very good reasons.

The human and material resources required to carry out research and development in space technology are by no means unlimited. These resources include the dollars appropriated by Congress, trained technical manpower, and the laboratory, production, and test facilities needed to do the job. The space program is the largest of its kind ever undertaken in this country, larger than the World War II Manhattan Project and larger than the more recent ICBM programs. Wealthy as this nation is, it cannot afford two completely independent space programs. The decision -- in my view, the only reasonable one -- was therefore made to pool all available national resources into one program so that together NASA and the Defense Department could do more than each could individually.

How do we in practice divide up the many jobs to be done between Defense and NASA? I would say that the division of labor is based partly in logic, partly in pragmatic assessment. Missions that are fundamentally exploratory and scientific -- such as the investigation of the moon and the solar system -- are done by NASA. Those which support a clear military requirement -- such as satellite inspection or early warning of a hostile ballistic missile attack -- are being done by the Defense Department. Beyond such logical parceling out of missions there are activities which could be assigned to either agency.

Last year, for example, it was agreed that NASA should develop large liquid rocket engines and that Defense should develop large solid boosters. The assignments might have been reversed, but the point is that such engines are technological developments and by themselves are neither "military" nor "civilian." A rocket engine will lift anything; it is the type of payload that makes it a military or civilian vehicle. In another case, since the Defense Department already had in existence two large oceanic test ranges, it was decided to make common use of them. The same is true of Defense bioastronautics and space medicine facilities.

In describing how we in Defense support NASA, I must remind you that Colonel John Glenn is a Marine test pilot and that the other six astronauts are also military test pilots. They are only some of the Defense Department's people working for NASA; 18,000 other Defense personnel took part in the Mercury program to ensure its success. The Defense Department is proud of all of them.

More needs to be said about specific military activities in space because we must be ready to take on potential threats from hostile space vehicles. We cannot afford a Soviet technological surprise in the military space area, regardless of what its military significance might actually be. As a result, we are developing the components, subsystems and technologies of a number of possible space systems.

Let me give you an example. The Defense Department has decided to develop the technology of manned orbital systems able to rendezvous with satellites and then land at preset locations on the earth. As these requirements are met

more stringent than the NASA requirements for Mercury, we cannot reasonably expect NASA programs to solve our rendezvous and landing problems for us. Therefore, while making full use of NASA's experience, we shall develop a satellite rendezvous vehicle ourselves. A firm military requirement for such a system may not now exist, but we believe that we should anticipate the possibility of hostile use of the space environment by taking steps to protect our country from such dangers.

Let me be clear, however, on one cardinal point about the Defense Department's participation in the National Space Program. We are mindful of the stated U.S. national objective of using space for peaceful purposes only, and we support this policy completely and wholeheartedly. Nothing would suit us better than for the Soviet Union to agree that warfare should be prohibited from space and that this literally infinite medium be left to the peaceful exploitation of all mankind. As the President said last year in his address to the United Nations General Assembly,

"As we extend the rule of law on earth, so must we also extend it to man's new domain - outer space . . . The new horizons of outer space must not be driven by the old bitter concepts of imperialism and sovereign claims. The cold reaches of the universe must not become the new arena of an even colder war."

We must recognize, however, the possibility that the Communists will not cooperate with us in the attainment of this goal. In view of the Soviet record in nuclear test ban negotiations, we are well advised in buying technological insurance even while earnestly hoping that space will be used only for peaceful purposes. With this insurance, we shall be able to inspect and verify that unidentified space vehicles are in fact peaceful. If they are proven hostile, they will be neutralized before they can do harm to mankind.

The Department of Defense will never relax its vigilance in any area affecting national security, including space environment. In closing, I ask you to join with me in saluting the devoted men and women in our Armed Forces who provide that vigilance. They deserve and will receive our continuing gratitude and respect.

E N D

PRESERVATION COPY