

Originally Processed With FOIA(s):  
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# FOIA MARKER

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**Record Group/Collection:** George H.W. Bush Presidential Records  
**Collection/Office of Origin:** Scowcroft, Brent, Collection  
**Series:** Administrative Files  
**Subseries:**

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**OA/ID Number:** 85035  
**Folder ID Number:** 85035-001

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**Folder Title:**  
Appointments Completed, January to December 1991 [1]

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| Stack: | Row: | Section: | Shelf: | Position: |
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# Withdrawal/Redaction Sheet

## (George Bush Library)

| Doc. No. / Type | Subject/Title                                                                                                                                                       | Date     | Restriction                    | Classification |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------|----------------|
| 01. Memo        | Torkel Patterson to Distribution List<br>Re: Meeting with Ambassador Murata (1 pp.)                                                                                 | 12/16/91 | (b)(1)                         | <del>C</del>   |
| 02. Memo        | Tony Wayne to Brent Scowcroft<br>Re: Visit of Pierre Morel (1 pp.)                                                                                                  | 12/17/91 | (b)(1)                         | <del>C</del>   |
| 03. Memo        | Richard N. Haass to Florence E. Gantt<br>Re: levi meeting at 1100 today (2 pp.)                                                                                     | 12/17/91 | (b)(1)                         | <del>C</del>   |
| 04. List        | Re: Deputies Committee Meeting (1 pp.)                                                                                                                              | 11/25/91 | (b)(3) [50 U.S.C. 403g, Sec.6] |                |
| 05a. Memo       | Mark Johnson to Brent Scowcroft<br>Re: Appointment Request for Neil van Heerden, Director General, South African Department of Foreign Affairs: November 25 (1 pp.) | 11/19/91 | (b)(1)                         | S              |
| 05b. Memo       | W. Robert Pearson to Brent Scowcroft<br>Re: Meeting with Neil van Heerden, Director General, South African Department of Foreign Affairs (1 pp.)                    | 11/16/91 | (b)(1)                         | C              |
| 05c. Report     | Re: Biography (1 pp.)                                                                                                                                               | 9/14/90  | (b)(1)                         | S              |
| 06. Memo        | Al Haig to Dick Soloman<br>Re: Beijing (2 pp.)                                                                                                                      | 11/13/91 | (b)(1)                         |                |

Page 1 of 2

|                               |                                                      |
|-------------------------------|------------------------------------------------------|
| <b>Collection:</b>            |                                                      |
| <b>Record Group:</b>          | Bush Presidential Records                            |
| <b>Office:</b>                | Scowcroft, Brent, Collection                         |
| <b>Series:</b>                | Administrative Files                                 |
| <b>Subseries:</b>             |                                                      |
| <b>WHORM Cat.:</b>            |                                                      |
| <b>File Location:</b>         | Appointments Completed, January to December 1991 [1] |
| <hr/>                         |                                                      |
| <b>Pinksheet Number:</b>      | cap2254                                              |
| <b>OA/ID Number:</b>          | 85035-001                                            |
| <b>Date Closed:</b>           | 9/20/2010                                            |
| <b>FOIA/Sys Case #:</b>       | 2009-0275-S[2]                                       |
| <b>Re-review Case #:</b>      |                                                      |
| <b>P-2/P-5 Review Case #:</b> |                                                      |



# Withdrawal/Redaction Sheet

## (George Bush Library)

| Doc. No. / Type | Subject/Title                                                                                                             | Date     | Restriction | Classification |
|-----------------|---------------------------------------------------------------------------------------------------------------------------|----------|-------------|----------------|
| 07. Memo        | R. Nicholas Burns to Florence E. Gantt, Wilma G. Hall, and Dona F. Proctor<br>Re: Meeting with Alexander Yakovlev (1 pp.) | 11/12/91 | (b)(1)      | <del>C</del>   |
| 08. Memo        | R. Nicholas Burns to Florence E. Gantt, Wilma G. Hall, and Dona F. Proctor<br>Re: Meeting with Jim Collins (1 pp.)        | 11/12/91 | (b)(1)      | <del>C</del>   |
| 09. Memo        | R. Nicholas Burns to Florence E. Gantt, Wilma G. Hall, and Dona F. Proctor<br>Re: Appointments (1 pp.)                    | 11/8/91  | (b)(1)      | <del>C</del>   |
| 10. Memo        | Timothy E. Deal to Distribution List<br>Re: Soviet Debt (1 pp.)                                                           | 11/5/91  | (b)(1)      | <del>C</del>   |
| 11a. Memo       | James R. Keith to Distribution List<br>Re: Report on Kissinger's Trip to China (1 pp.)                                    | 9/10/91  | (b)(1)      | <del>C</del>   |
| 11b. Memo       | Re: Kissinger's Briefing to Ambassador on Visit Highlights (4 pp.)                                                        | 9/10/91  | (b)(1)      | <del>C</del>   |
| 12. Memo        | Re: Meeting with Czech Officials with General Scowcroft (1 pp.)                                                           | 10/21/91 | (b)(1)      | TS             |

Page 2 of 2

**Collection:**

**Record Group:** Bush Presidential Records  
**Office:** Scowcroft, Brent, Collection  
**Series:** Administrative Files  
**Subseries:**

**WHORM Cat.:**

**File Location:** Appointments Completed, January to December 1991 [1]

**Pinksheet Number:** cap2254  
**OA/ID Number:** 85035-001  
**Date Closed:** 9/20/2010  
**FOIA/Sys Case #:** 2009-0275-S[2]  
**Re-review Case #:**  
**P-2/P-5 Review Case #:**

# REQUEST FOR APPOINTMENTS

To: Officer-in-charge  
Workers and Visitor Entrance System  
Room 065, OEOB

Please admit the following appointments on FRIDAY, DECEMBER 27, 19 91  
for GEN BRENT SCOWCROFT of NSC :  
(name of person to be visited) (agency)

| <u>NAME</u>                   | <u>DATE OF BIRTH</u> | <u>SOCIAL SECURITY NUMBER</u> |
|-------------------------------|----------------------|-------------------------------|
| ZHU, Qizhen<br>PRC Ambassador | DOB: 12/19/27        |                               |
| LIU, Xiaoming<br>PRC Embassy  | DOB: 1/16/56         |                               |

-----  
Driver of vehicle who will enter via SW Gate and who will stay  
with vehicle on West Executive Avenue:

YANG, Chang Qing                      DOB: 2/15/47  
PRC Embassy

License of Vehicle: DCY 001

## MEETING LOCATION

|                             |                                           |
|-----------------------------|-------------------------------------------|
| Building <u>WHITE HOUSE</u> | Requested by <u>Douglas Paal</u>          |
| Room No. <u>1FL WW</u>      | Room No. <u>493</u> Telephone <u>5746</u> |
| Time of Meeting <u>2:00</u> | Date of request <u>12/27/91</u>           |

Additions and/or changes made by telephone should be limited to five (5) names or less.

**WAVES Center:      SIG/OEOB — 395-6046 or WHITE HOUSE — 456-6742**

2:00  
Fri 12/27

NATIONAL SECURITY COUNCIL

26-Dec-1991 15:53 EDT

~~CONFIDENTIAL~~

MEMORANDUM FOR: SEE BELOW

FROM: Douglas H. Paal *57dc*  
(PAAL)

SUBJECT: Meeting with PRC Amb. Zhu

*OK* ✓  
*Friday*

For General Scowcroft:

Amb Zhu seeks a short meeting to convey an oral message from CCP General Secretary Jiang Zemin. He asked for the meeting before the President's travel to Asia. No further information available.

Distribution:

|                        |             |
|------------------------|-------------|
| FOR: Florence E. Gantt | ( GANTT )   |
| FOR: Wilma G. Hall     | ( HALL )    |
| FOR: Dona F. Proctor   | ( PROCTOR ) |
| FOR: Kristen K. Cicio  | ( CICIO )   |
| CC: Cynthia M. Hindle  | ( HINDLE )  |
| CC: James R. Keith     | ( KEITH )   |

**DECLASSIFIED**  
PER NSC WAIVER, August 6, 2010  
By CAP NARA, Date 9/20/10

weekend

Fri 12/13

1:30

Document Originally  
Attached to  
Following Page





December 11, 1991

To: Brent, JAB, John S., Sam S, Bob Mosbacher

Re: Asian Trip.

A reminder:

we need to be sure we 'get something' from Japan trip especially. All these business people going will heighten attention to opening markets etc...As I mentioned to our Pacific Ambassadors in Hawaii, perhaps we can 'get' something from countries we do not even visit. This is very important stuff.

GB

FROM THE PRESIDENT



**Bush To Host Soviet-Aid Conference Next Month**

...In Moscow, the Soviet foreign ministry spokesman, Vitaly Churkin, called Bush's plan "very positive." But he added: "We have seen in the past many rounds of discussion, and I would not want another conference to slow down any efforts which might be forthcoming in terms of humanitarian aid to our country."

(Barry Schweid, AP)

**DEMOCRATS ATTACK, ECHO BUSH'S PLAN**

Democrats welcomed the Bush Administration's new Soviet initiative, even as they complained that it was too little and maybe too late....

Sen. Kerrey blasted Bush, saying: "The cold warrior is getting cold feet," and adding: "As the old Soviet Union is breaking up, he's not prepared." But while criticizing Bush, Kerrey's proposed solutions mirrored those of Baker. "It is not an act of charity, it's an act of enlightened self-interest..."

Gov. Bill Clinton chastised the Administration for not being forceful enough, saying "the spread of deprivation and disorder in the former Soviet Union" is the greatest danger of the post-Cold War era.

(Leslie Phillips & Bill Nichols, USA Today, 4A)

**AID TO SOVIETS: SYMBOL, NOT SUBSTANCE**

The announcement Thursday that the U.S. Air Force will ferry surplus food left over from the Gulf War to the disintegrating Soviet Union constitutes a largely symbolic gesture of support for a beleaguered people at a time when the Bush Administration can ill afford a massive new aid program....

"At this point," a State Department expert said Thursday, "it doesn't look like we're going to mount a gigantic Hoover-type relief operation..."

Key Administration officials acknowledged that the U.S. does not have the resources right now to launch the sort of multibillion-dollar aid program that could provide food for millions.

(Michael Putzel, Boston Globe)

**U.S. CONTINUING GRAIN CREDITS FOR SOVIETS  
Critics Charge Loan Program Amounts To  
Foreign Aid For Strapped Moscow**

While calling for an international conference on humanitarian aid to the Soviet Union, the U.S. is moving ahead with the latest installment of a \$3.75 billion loan program enabling the Soviets to purchase U.S. agricultural products....

Some critics charge that the credits are simply foreign aid by another name. They accuse the Bush Administration, with an assist from farm state senators and representatives, of deliberately allowing the Soviets to run up billions of dollars of debt they can never repay. (Guy Gugliotta, Washington Post, A39)

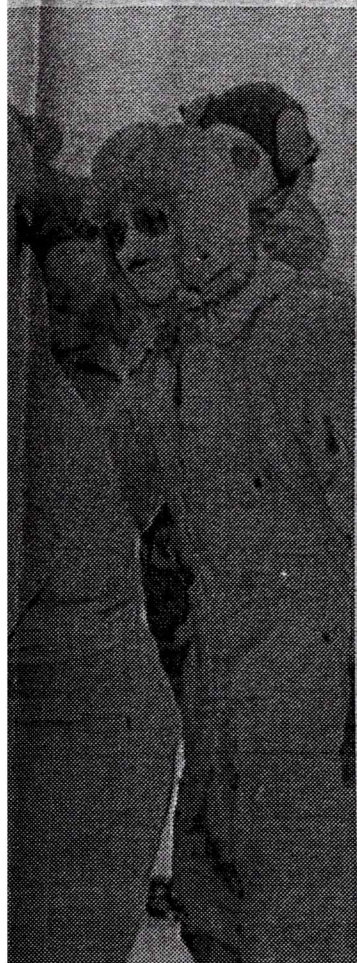
Sunday 12:00 - 13:00 Major

KSH 16:00 today

Witterend 12:00 Sunday



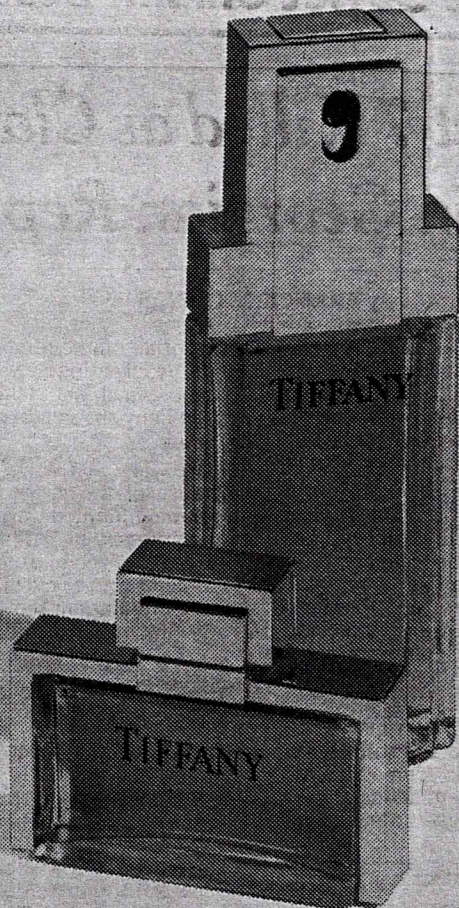
# w's Hungry



Associated Press

through the winter. Soviet and Moscow yesterday unloaded from the Persian Gulf war.

ella A. Pamfilova, the Russian Minister of Social Welfare, inspected the hospital and the delivery and agreed today, at least, none of the goods could be siphoned off to the black market. As difficult as it is to keep the hospital area supplied with food, she said, the problem is far worse in other parts of Russia. American officials noted that this far the United States had made available \$4 billion in Commodity Credit Corporation credit guarantees to the Soviet Union, including \$2.3 billion since the failed coup against Mr. Gorbachev in August. Since then, Washington has been blamed for the decline in Mr. Gorbachev's power by analysts who feel that the huge amounts of aid the Soviet President asked for, and as refused, might have saved him. The American officials added that the Bush Administration would also draw from \$100 million recently authorized by Congress for humanitarian aid, and would deliver as much as \$165 million worth of food under an Agriculture Department program.



Bush Library Photocopy  
Preservation

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HAVING ONE FOR THE ROAD? TRY TEA.



## End of the Soviet Union: Emergency Rations

# U.S. Army Flies Surplus Food to Moscow

By JAMES F. CLARITY  
Special to The New York Times

MOSCOW, Dec. 22 — The United States delivered 75 tons of food left over from the Persian Gulf war to the hungry Moscow region today, part of a relief effort that American and Russian officials said they expected to continue through the winter.

The food, flown in through the snow on two military cargo planes from a supply base in Pisa, Italy, was to go directly to hospitals, orphanages and old people's institutions.

The delivery from Sheremetyevo Airport in Russian trucks was observed by Americans, including embassy dependents, and by Russian and Red Cross officials, to make sure that its contents were not stolen and put on sale by Russian black marketeers.

The flights had a paradoxical quality: The American military, after decades of cold war training to fight a hot war against the Soviet Union, arrived here to help this country feed its hungry.

### An Echo of World War II

Today's shipment followed a similar one two days ago to St. Petersburg. Together, the supplies of prepared breakfasts, potatoes, noodle soup and bread were valued by American officials at \$400,000. The American chargé d'affaires, James F. Collins, reminded Russian officials at the airport that President Bush would hold an international conference in Washington next month to promote additional aid for this country.

The political confusion that has arisen in the reshaping and regrouping of the republics of the former Soviet Union has crippled food production and distribution and caused speculation that food riots could destroy order and lead to the establishment of authoritarian rule in Russia and elsewhere.

At the airport today, Russian officials said the American effort recalled the relief effort of World War II on Liberty and Victory ships that carried vital aid to the Arctic ports of northern Russia.

At the Moscow Region Hospital for Children with Central Nervous System

A delivery of 75 tons of food to hospitals, orphanages and old people's institutions in the Moscow region, part of a relief effort by the United States, is

expected to continue. American soldiers and their supplies left over

and Psychological Dysfunctions, the young patients knew that the food was on its way.

"Your country is good to give us help," said Aleksandr Sukhov, 14 years old, "but at the same time, we have nothing to give you."

Another boy interrupted, "We hope for an improvement in food in Russia." But Aleksandr expressed skepticism

The architect of the Pentagon's Soviet strategy is cautiously optimistic. Washington at Work, page A14. The West is being asked to help convert Soviet arms factories to consumer goods. Page D1.

whether this would happen. "Vladimir Mironov, who is 12, remarked: "Your country is very good. Does it have any difficulties?"

Yes, he was told, many. "But not food," a blond pigtailed girl interjected.

The children said they were aware that the food problem here was related to the political confusion, the competition between the President of Russia Boris N. Yeltsin, and President Mikhail S. Gorbachev.

Who would win the struggle — Mr. Gorbachev?

A chorus of "nyets" filled the recreation room of the hospital, as the young Russians shook their heads, unsmiling serious.

Outside in the falling snow, American and Russian officials watched the unloading from a Russian truck into a storehouse freshly painted bright blue.

## Academia Knocks for Gorbachev, But He Is Unlikely to Answer Call

By IRVIN MOLOTSKY  
Special to The New York Times

WASHINGTON, Dec. 22 — Mikhail S. Gorbachev is on the verge of losing his title of President, but some American universities have offered him another that has less prestige but more job security: professor.

Even though the acceptance of any of the offers would seem unlikely, one

chairs distinguished professorships in conflict resolution.

A spokesman for Stanford University near Palo Alto, Calif., did not immediately respond to Mr. Nitzze's report.

As to Boston University, The Boston Globe reported last week that John R. Silber, the university's president, had



November 12, 1991  
Harvard University  
John F. Kennedy School of  
Government  
Institute of Politics  
Cambridge, MA 02138

The President  
The White House  
Washington, DC 20500

Dear Mr. President:

We must keep our ties to China strong especially during these troubled times in our bilateral relationship. Granted the Chinese leadership has treated its own people badly, in part because of its deep insecurity, and the current leadership in China should therefore be dealt with firmly.

But what I realized during my recent trip in China was the enormous reservoir of respect and affection among the Chinese people for the United States. This was exemplified by the great spontaneous outpouring of support from the Chinese people for our side in the Gulf War.

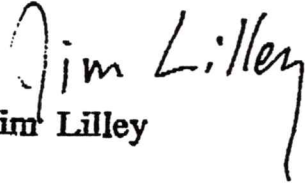
One of the most important links to the Chinese people and to the future Chinese leadership is the Hopkins Nanjing Center, a unique joint educational program in China that furthers U.S. policy aims. It needs federal government funding now if it is to survive.

No money of ours could be better spent in China. You saw the value early in 1986 when you were convinced that the Center had the potential to become one of the most important training facilities for future professionals whose careers involve Sino-American interaction. I wish it had been there when I started on my own tortuous path on China.

Stape Roy has written a persuasive message supporting continued government funding for the Center at a level which would keep it going. I think Stape is absolutely right.

Harvard, of course, is something else, but I'm still trying to advance our cause in the unique environment in Cambridge.

Respectfully,

  
Jim Lilley

bcc:  
Doug Paal, NSC  
Bob Perito, State



10 10 91

11:50

2202 817 8420

EAP CM &amp; EAP RA ... JHU SAIS

STAPLETON ROY

VMS, WC

1. THE NANJING HOPKINS CENTER FOR CHINESE AMERICAN STUDIES IS THE BEST KNOWN, MOST IMPORTANT, AND MOST VALUABLE SUCH INSTITUTION FOR BOTH AMERICANS AND CHINESE IN ALL OF CHINA. I STRONGLY URGE THAT AID AND THE DEPARTMENT MAKE EVERY EFFORT TO SUPPORT THIS EXTREMELY VALUABLE PROJECT. THIS COLLABORATION BETWEEN JOHNS HOPKINS AND ONE OF CHINA'S MOST PROMINENT EDUCATIONAL INSTITUTIONS HAS ALREADY DEMONSTRATED THE MUTUAL BENEFITS THAT CAN ACCRUE FROM SINO-AMERICAN

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PAGE 02 BEIJIN 31737 0415537  
EDUCATIONAL EXCHANGES. ITS UNIQUE CROSS CULTURAL STUDIES PROGRAM IS WELL KNOWN THROUGHOUT CHINA. ELITE CHINESE SCHOLARS NATIONWIDE COMPETE FOR THE OPPORTUNITY TO ATTAIN ACADEMIC EXCELLENCE IN AN UNPRECEDENTED OPEN ENVIRONMENT WHERE THEY HAVE THE OPPORTUNITY TO MINGLE FREELY WITH AMERICANS, EVEN TO SHARE DORMITORY ROOMS.  
2. GRADUATES OF THE CENTER ARE LIKELY TO PLAY A VISIBLE AND POSITIVE ROLE IN CHINESE GOVERNMENT AND BUSINESS INSTITUTIONS OF IMPORTANCE TO THE UNITED STATES FOR YEARS TO COME. AMONG AMERICAN STUDENTS THERE HAS BEEN ONE STATE DEPARTMENT EMPLOYEE IN EVERY CLASS. SOME GRADUATES ARE LIKELY TO FIND THEIR WAY INTO THE FOREIGN SERVICE IN THE FUTURE.

3. THE NANJING HOPKINS CENTER IS AN EXCEPTIONALLY WELL CONCEIVED PROGRAM THAT WOULD ALREADY HAVE BEEN SELF SUSTAINING FINANCIALLY HAD IT NOT BEEN FOR TIANANMEN, WHICH HAD A DEVASTATING EFFECT ON THE CENTER'S FUND RAISING EFFORTS IN THE U.S. AS A RESULT, THE CONTINUED EXISTENCE OF THE CENTER IS IMPERILLED, DESPITE ITS HIGH REPUTE. ASHA SUPPORT FOR THE CENTER IS THUS AS URGENT AS IT IS APPROPRIATE. I URGE THAT WE FIND A WAY TO CONTINUE TO BENEFIT FROM THE DISPROPORTIONATELY LARGE RETURNS THAT WE RECEIVE ON OUR INVESTMENT IN THE NANJING HOPKINS CENTER.

## HOPKINS-NANJING CENTER

Action Requested: To survive, the Hopkins-Nanjing Center must be assured of \$800,000 annually from the U.S. Government until private sector donor interest returns.

Background: The Hopkins-Nanjing Center, a unique joint educational program in China that furthers U.S. policy aims, needs emergency federal government funding if it is to survive.

The Hopkins-Nanjing Center has successfully operated in Nanjing, China since 1986. In a specially designed facility, this program trains 80 Chinese and American postgraduates in political, economic, foreign policy and social studies. All of the students are bilingual: the Chinese take courses from an American faculty in English; Americans study in graduate-level Chinese with Chinese professors.

Funding for this program is provided to Nanjing University by the PRC's State Education Commission. The American commitment to the program is \$1.8 million annually. To date, Johns Hopkins has provided \$7.2 million; private sector sources (American and Chinese) have donated \$3.5 million; U.S. government agencies (AID and USIA) have granted \$1.7 million. Following the June 1989 Tiananmen Square crackdown, promised private sector support that would have provided a full endowment for the Center is being held back. To survive until a climate conducive to private sector support returns, Johns Hopkins must have relatively modest U.S. government support.

Key Points: The Hopkins-Nanjing Center--

- o Enjoys the support of President Bush who, in 1986, was "convinced that this Center has the potential to become one of the most important training facilities for future professionals whose careers involve Sino-American interaction."

- o Produces China-savvy Americans for the American corporate community doing business in China.

- o Trains U.S. State Department, USIA and Defense Department personnel and their Chinese counterparts who, together, will manage the future U.S.-China relationship.

- o Propagates American political ideals and free market principles in China with the sanction of the PRC government.

- o Benefits directly a select group of Chinese academics and practitioners who must not be isolated from the West.

December 23, 1991



DANTE B. FASCELL, FLORIDA  
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CHIEF OF STAFF

One Hundred Second Congress  
**Congress of the United States**  
Committee on Foreign Affairs  
House of Representatives  
Washington, DC 20515

December 19, 1991

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JOHN R. SINCLAIR  
MINORITY CHIEF OF STAFF

The President  
The White House  
Washington, D.C. 20500

Dear Mr. President:

As Vice-President, you had the honor of welcoming the opening of the Johns Hopkins Nanjing University Center for Chinese and American Studies, which is now in its fifth year of operation. Unfortunately, the continued existence of this unique educational program is in jeopardy because of a lack of funding.

The Nanjing Center brings together U.S. and Chinese post-graduate students to study the politics, economics, foreign policy, and social conditions of China and the United States. Chinese students take courses from a U.S. faculty in English, and Americans study in graduate level Mandarin with Chinese professors. The Center is producing a cadre of leaders crucial to future U.S.-China relations in an open academic atmosphere unknown elsewhere in China.

The Johns Hopkins University has to date contributed \$7.2 million from its core funds toward the operation of the Center and has raised an additional \$3.5 million from private individuals, foundations, and corporations, while the U.S. government has contributed \$1.7 million, primarily through the American Schools and Hospitals Program of the Agency for International Development. Current fund-raising efforts, unfortunately, have been hampered by the political situation in China. The University believes, however, that private sources, particularly wealthy Hong Kong residents, will again move to support the Center when China returns to a more outward and open political posture.

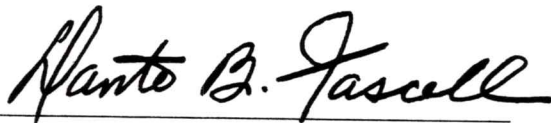
If additional funding is not identified in the very near future, Johns Hopkins will be forced to make plans to close the Center, since it cannot continue to fund the Center at the levels to which it has contributed in the past. Such an action would certainly be a setback to the already strained relations between the United States and China. If the Center were to close now, it would be difficult and costly to reestablish such a facility at a later date. Further, there is a continuing and growing need for the expertise in language and politics which the Center provides to both American and Chinese students, if relations between our two countries are to be strengthened as we move into the 21st century.

The President  
December 19, 1991  
Page Two

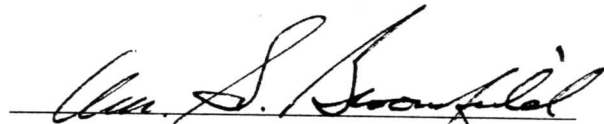
Although we recognize the severe pressure on funding for all international affairs programs at the present time, we strongly support the recent requests from Ambassadors Roy and Lilley for additional support for the Center and urge that \$800,000 be allocated promptly from the 150 account to assure that the Johns Hopkins Nanjing Center remain open for the 1992-93 academic year. It would be a tragedy to lose this unique educational institution which is laying the groundwork for the kind of U.S. - China relationship which we all desire.

With best wishes, we are

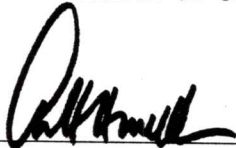
Sincerely yours,



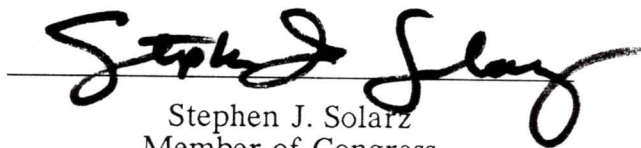
Dante B. Fascell  
Member of Congress



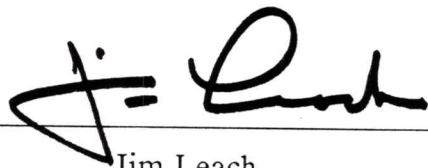
William S. Broomfield  
Member of Congress



Lee H. Hamilton  
Member of Congress



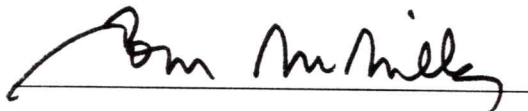
Stephen J. Solarz  
Member of Congress



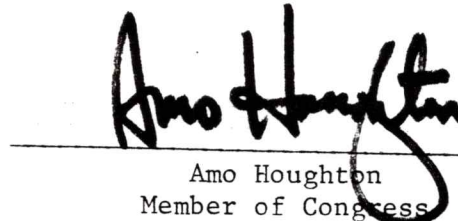
Jim Leach  
Member of Congress



Steny H. Hoyer  
Member of Congress



C. Thomas McMillen  
Member of Congress



Amo Houghton  
Member of Congress



## United States Senate

WASHINGTON, DC 20510-2002

December 19, 1991

The President  
The White House  
Washington, DC 20500

Dear Mr. President:

As Vice-President, you welcomed the opening of Johns Hopkins Nanjing University Center for Chinese and American Studies, which is currently in its fifth year of operation. Now, however, the continued existence of this unique educational program is in jeopardy due to the lack of adequate funding.

The Nanjing Center brings together U.S. and Chinese post-graduate students to study the politics, economics, foreign policy, and social conditions of China and the United States. Chinese students take courses taught in English by U.S. faculty, and Americans study in graduate-level Mandarin under Chinese professors. The Center is producing a cadre of leaders crucial to future U.S.-China relations in an open academic atmosphere unavailable elsewhere in China.

To date, the Johns Hopkins University has contributed \$7.2 million from its core funds toward the operation of the Center and has raised an additional \$3.5 million from private individuals, foundations, and corporations. The U.S. government has contributed \$1.7 million, primarily through the Agency for International Development's American Schools and Hospitals Abroad program. However, current fundraising efforts have been hampered by the political situation in China. Nevertheless, the University believes that private sources, particularly wealthy Hong Kong residents, will again contribute financial support for the Center when China returns to a more outward and open political posture.

If additional funding is not found in the near future, Johns Hopkins will be forced to make plans to close the Center since it cannot continue to support the Center at the financial levels it has maintained in the past. Such an action certainly would be a setback to the already-strained relations between the United States and China. If the Center were to close now, it would be difficult and costly to reestablish such a facility at a future date. Further, there is a continuing and growing need for the expertise in language and politics provided by the Center to both U.S. and Chinese students if relations between our two countries are to be strengthened as we move into the 21st century.

Although we recognize the severe pressure on funding for all international affairs programs at the present time, we support strongly the recent requests from Ambassadors Stapleton Roy and James Lilley for additional support for the Center and urge that \$800,000 be allocated promptly from the 150 account to enable the Nanjing Center to remain open for the 1992-1993 academic year. It would be a tragedy to lose this unique educational institution which has been laying the groundwork for the kind of U.S.-China relationship we all desire.

We invite your attention to this important matter and look forward to hearing from you.

Sincerely,

*Barbara A. Mikulski*

Barbara A. Mikulski  
United States Senator

*Paul Sarbanes*

Paul S. Sarbanes  
United States Senator

*Claiborne Pell*

Claiborne Pell  
United States Senator

*Frank H. Murkowski*

Frank H. Murkowski  
United States Senator

*Arlen Specter*

Arlen Specter  
United States Senator



*General —*

*See my note attached*

*OK. J.*

*Mon 12/23  
1:30*



NATIONAL SECURITY COUNCIL

09-Dec-1991 18:40 EDT

UNCLASSIFIED

MEMORANDUM FOR:

Florence E. Gantt  
Wilma G. Hall  
Dona F. Proctor

( GANTT )  
( HALL )  
( PROCTOR )

FROM: James R. Keith  
(KEITH)

SUBJECT: Prospective Meeting with General Scowcroft

Doug Paal discussed with the General a possible meeting with George Packard, Dean of SAIS, and Dr. Richardson of Johns Hopkins to discuss financial support for the Johns Hopkins-Nanjing Center in China. (The Center runs a joint area studies/language study program for Chinese and Americans.) Can you tell me whether the General has agreed to schedule the meeting? We will forward a package to you if/when the meeting is arranged. Thanks, Jim.

CC: Cynthia M. Hindle

( HINDLE )

December 9, 1991

General --

Dr. William C. Richardson, President of Johns Hopkins, Dean George Packard of SAIS and former Ambassador Art Hummel have asked to come see you to discuss the Hopkins school in Nanjing City, China. Apparently Dick Solomon has orchestrated a number of eminent people to donate \$800,000 from Fulbright (?). Doug Paal recommends you meet with them if you have time. He suggests 15 minutes. They wanted to see you as soon as you were available. Shall I try to work out a time on your calendar?

Okay, but just 15 minutes \_\_\_\_\_

Other \_\_\_\_\_

*Julia*

Mary Moyer  
202-663-5630

*Thomas*

Florence



Mon 12/23

3:00

NATIONAL SECURITY COUNCIL

05-Dec-1991 09:45 EDT

UNCLASSIFIED

MEMORANDUM FOR:

Florence E. Gantt  
Wilma G. Hall  
Dona F. Proctor

( GANTT )  
( HALL )  
( PROCTOR )

FROM:

Douglas H. Paal  
(PAAL)

SUBJECT:

Australian Amb. Cook requests appt

Amb. Michael Cook requests an appointment with Gen. Scowcroft to review issues for the President's visit to Australia prior to Cook's return to Canberra. I discussed this with the General and he agreed to a meeting. Cook would prefer a time on the following dates, in order of preference: 27, 24 or 23 December. Recommend one half hour. Please advise. Thanks.

CC: James R. Keith  
CC: Cynthia M. Hindle

( KEITH )  
( HINDLE )

**CHARLES A. GILLESPIE, JR.**

Position for which considered: Ambassador to the Republic of Chile

Present Position: Ambassador to the Republic of Colombia

Office Address: American Embassy (Bogota)  
APO Miami, FL 34038

Born: March 22, 1935, Long Beach, California

Legal Residence: Long Beach, California

Marital Status: Married

Family: Wife: former Vivian Havens  
Children: Charles A.  
Kristin H.

Home Address: American Embassy (Bogota)  
APO Miami, FL 34038

Education: B.A. 1958, University of California,  
attended 1963-64, California State University  
attended 1975-78, Syracuse University, Maxwell  
School of Citizenship and Public Administration

Language Ability: Spanish, French, and German

Experience:

**Military**  
1958-62

Commissioned Officer, U.S Army

**Government**

1965-66  
1966-68  
1968-70  
1970-72  
1972-75  
1975-76  
1976-78  
1978-80  
1980-81  
1981-83  
1983-85

Regional Security Officer, American Embassy, Manila, Philippines  
Regional Security Officer, American Embassy, Brussels, Belgium  
Administrative Officer, U.S. Mission NATO, Brussels  
Special Assistant, Bureau of Administration, Department  
General Services Officer, American Embassy, Mexico City, Mexico  
Student, Syracuse University, Syracuse, New York  
Administrative Officer, American Embassy, Managua, Nicaragua  
Associate Director, Management Operations, Department  
Student, National War College  
Executive Assistant, Bureau of Inter-American Affairs  
Deputy Assistant Secretary for the Caribbean, Bureau of  
Inter-American Affairs  
United States Ambassador to the Republic of Colombia

1985-present

Awards:

1983 and 1984: Superior Honor Award, Department of State  
1974 and 1975: Meritorious Honor Award, Department of State

May 1988



*Fri*  
*12/20*  
*5:00 P.m.*

NATIONAL SECURITY COUNCIL

16-Dec-1991 07:56 EDT

CONFIDENTIAL

MEMORANDUM FOR: SEE BELOW

FROM: Torkel Patterson  
(PATTERSON)

SUBJECT: Meeting with Ambassador Murata

Florence,

Ambassador Murata has asked to see the General prior to the President's trip to discuss matters of importance to the President concerning the stop in Japan. He will be going back to Tokyo for consultations on the first of January and would like to come in anytime after the 18th.

Doug and I think it is important that we use this request to push the Japanese hard for results (not just form) during the President's trip. We ask that this be scheduled as early as possible after the 18th, if the General and his schedule are amenable.

Thanks, Torkel.

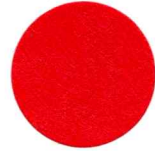
Distribution:

|                        |              |
|------------------------|--------------|
| FOR: Florence E. Gantt | ( GANTT )    |
| FOR: Wilma G. Hall     | ( HALL )     |
| FOR: Dona F. Proctor   | ( PROCTOR )  |
| FOR: Kristen K. Cicio  | ( CICIO )    |
| CC: Douglas H. Paal    | ( PAAL )     |
| CC: Patty A. Daniel    | ( DANIEL )   |
| CC: Cynthia M. Hindle  | ( HINDLE )   |
| CC: Wendy E. Gray      | ( GRAY )     |
| CC: Brenda I. Hilliard | ( HILLIARD ) |
| CC: Cathy Millison     | ( MILLISON ) |
| CC: Mary C. Emery      | ( EMERY )    |

DECLASSIFIED  
PER NSC WAIVER, 1500 2021-02  
By SS NARA, Date 3/6/24

11:30 12/20

December 19, 1991



General --

The Soviet Ambassador would like to come see you tomorrow anytime between 9:30 and 1:00 if that is possible. He has a message from Yeltsin that he would like to bring to you. Shall I schedule him?

Okay ✓

Other \_\_\_\_\_

Sergey  
628-1359  
628-7551

*no answer  
so couldn't schedule  
DP*



Thurs 12/19  
3:00 PM

NATIONAL SECURITY COUNCIL

17-Dec-1991 19:57 EDT

UNCLASSIFIED

MEMORANDUM FOR:

Dona F. Proctor

( PROCTOR )

FROM:

John A. Gordon  
(GORDON)

SUBJECT:

RE: Meeting Request/Gen Scowcroft

Dona --

I suppose Woolsey and Allison could see the General -- everyone in the world has an idea and a plan on how to get the nucs out of the former Soviet Union.

If I have any thing to say about when they come in, I would very much like it to be on Thursday -- for my purely personal reasons.

CC: Sandra L. Kelly

( KELLYS )

NATIONAL SECURITY COUNCIL

17-Dec-1991 14:56 ED

UNCLASSIFIED

MEMORANDUM FOR:

John A. Gordon

( GORDON )

FROM:

Dona F. Proctor  
(PROCTOR)

SUBJECT:

Meeting Request/Gen Scowcroft

Jim Woolsey and Graham Allison would like to see the General to discuss Soviet Nuclear weapons. Allison will be in town Thursday (to see General Powell), Friday & Saturday. What is your best recommendation????? Thanks

(828-2026 Woolsey)

CC: Sandra L. Kelly

( KELLYS )

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~  
NATIONAL SECURITY COUNCIL  
WASHINGTON, D.C. 20506

9202

December 17, 1991

*Thurs*  
*12/19*  
*2:00*

ACTION

MEMORANDUM FOR BRENT SCOWCROFT

THROUGH: DAVID C. GOMPERT *Howe*  
FROM: TONY WAYNE *W*  
SUBJECT: Visit of Pierre Morel

President Mitterrand's diplomatic advisor, Pierre Morel, will be here Thursday and Friday for talks about next steps on Libya and Pan Am 103. He would like to see you, and we suggest that he also meet Admiral Howe. (David will be in Brussels for the NAC, NACC and US-EC Ministerial.)

Morel's meetings on Libya are Friday morning. He is available Thursday afternoon from 2:00 p.m. on. If you want to minimize your time with Morel, we suggest 15 to 20 minutes with you, preceded or followed by a meeting with Admiral Howe. (He is also seeking a meeting with Eagleburger on Soviet assistance and Yugoslavia and has asked to touch base with Richard Haas on the peace process. He may also meet with Ted McNamara and Hank Cohen on Africa.)

Concurrence by: Ted McNamara *W*

RECOMMENDATIONS

That you agree to meet with Morel.

Approve ✓ Disapprove       

That Jonathan Howe agree to meet with Morel.

Approve        Disapprove       

DECLASSIFIED  
PER NSC WAIVER, 1500 2021-02  
By SS NARA, Date 3/6/24

~~CONFIDENTIAL~~

Declassify on: OADR

~~CONFIDENTIAL~~



NATIONAL SECURITY COUNCIL

17-Dec-1991 06:53 EDT

UNCLASSIFIED

MEMORANDUM FOR: SEE BELOW

FROM: Cathy Millison  
(MILLISON)

SUBJECT: B-C-S Breakfast Items

DOD has called to add the following items to the agenda for tomorrow's breakfast:

1. Key Issues on Former Soviet Union - POC: Jim Morrison  
(703) 697-7202

ACTION: BURNS

2. DOD Representative for President's Trip to Asia - POC:  
Chuck Downs (703) 697-7348

ACTION: PAAL

Your one page non-log paper is due to our office today at 3:00 pm. Thanks.

Distribution:

|                         |               |
|-------------------------|---------------|
| FOR: Douglas H. Paal    | ( PAAL )      |
| FOR: R. Nicholas Burns  | ( BURNS )     |
| CC: Cynthia M. Hindle   | ( HINDLE )    |
| CC: Patty A. Daniel     | ( DANIEL )    |
| CC: Kenneth J. Hill     | ( HILL )      |
| CC: William F. Sittmann | ( SITTMANN )  |
| CC: Betty A. Marshall   | ( MARSHALL )  |
| CC: Nancy H. Maxfield   | ( MAXFIELD )  |
| CC: Carol L. Scannell   | ( SCANNELL )  |
| CC: Lena Rae Steinhoff  | ( STEINHOFF ) |
| CC: Brenda I. Hilliard  | ( HILLIARD )  |
| CC: Wendy E. Gray       | ( GRAY )      |
| CC: Mary C. Emery       | ( EMERY )     |
| CC: Florence E. Gantt   | ( GANTT )     |
| CC: Wilma G. Hall       | ( HALL )      |
| CC: Kristen K. Cicio    | ( CICIO )     |
| CC: Dona F. Proctor     | ( PROCTOR )   |

NATIONAL SECURITY COUNCIL

17-Dec-1991 09:22 EDT

~~CONFIDENTIAL~~

MEMORANDUM FOR: Florence E. Gantt ( GANTT )  
FROM: Richard N. Haass (HAASS)  
SUBJECT: levi meeting at 1100 today

pls pass to Brent:

Israeli FM Levi might raise the subject of Ron Arad and other Israelis missing in Lebanon. The Israelis are concerned that the UN is not doing enough and that we will forget about this aspect of the hostage issue now that the Americans are out. If the subject does arise, I would suggest the President simply tell Levi that we agree there is unfinished business, including the remains of two Americans, the German hostages and the missing Israelis (as well as those held by Israel) and that we will remain engaged with the UN and others to do what we can.

Otherwise, I do think it important that the President give Levi a stiff message to take home that Israel, by engaging in all this procedural wrangling over venue, time and split delegations, as well as by its actions on the ground in the Territories, risks losing this opportunity and forfeiting sympathy and support here.

CC: Edmund J. Hull ( HULL )  
CC: Wilma G. Hall ( HALL )

DECLASSIFIED  
PER NSC WAIVER, 1500 2021-02  
By SS NARA, Date 3/6/24

Tell the Translators  
where to sit

~~GOVND~~

~~When not to serve  
coffee~~



*Mon*  
*Dec. 16, 1991*  
*4:00 pm.*

NATIONAL SECURITY COUNCIL

11-Dec-1991 08:46 EDT

UNCLASSIFIED

MEMORANDUM FOR: SEE BELOW

FROM: Eric D. K. Melby  
(MELBY)

SUBJECT: Machine Tool VRA Meeting

Florence: Following on the Dec. 5 Deputies Committee on Machine Tools, which the General chaired, we need to schedule a Principals meeting (which we assume Scowcroft would chair). We have agreement on the issues paper and request that you consult with Scowcroft on a time.

There is some urgency as if Principals decide to extend the VRAs, we only have until Dec. 31 to get Japan and Taiwan to agree.

We recommend that the following be invited:

Baker  
Cheney  
Mosbacher  
Brady  
Darman  
Hills  
Porter  
Boskin

We defer to Scowcroft on whether Lynn Martin should be invited. Labor has not participated in the meetings to date because we have focussed on the national security angle. However Labor can claim some relevance, especially if the decision is going to hinge on domestic politics.

Given the leaks coming out of the Deputies, we urge that the meeting be Principals only (recognizing that an exception may have to be made for State if Baker cannot attend).

Distribution:

|                        |                 |
|------------------------|-----------------|
| FOR: Florence E. Gantt | ( GANTT )       |
| FOR: Wilma G. Hall     | ( HALL )        |
| FOR: Dona F. Proctor   | ( PROCTOR )     |
| FOR: Kristen K. Cicio  | ( CICIO )       |
| CC: Pat A. Battenfield | ( BATTENFIELD ) |
| CC: Mary Cooper        | ( COOPER )      |
| CC: Timothy E. Deal    | ( DEAL )        |

PRINCIPALS COMMITTEE MEETING  
MONDAY, DECEMBER 16, 1991  
4:00 - 5:00 PM  
SITUATION ROOM

WHITE HOUSE

Samuel Skinner  
Brent Scowcroft  
Roger Porter  
Jonathan Howe

OVP

Karl Jackson

STATE

Robert Zoellick

DEFENSE

Deputy Secretary Donald Atwood

JCS

David Jeremiah

CIA

Director Robert Gates

OMB

Director Richard Darman

TREASURY

Secretary Nicholas Brady

CEA

Chairman Michael Boskin

COMMERCE

Secretary Robert Mosbacher

LABOR

Secretary Lynn Martin (will arrive late)

USTR

Amb Carla Hills

NSC

Tim Deal

Mon 12/11/91  
2:30 PM

OK

NATIONAL SECURITY COUNCIL

03-Dec-1991 13:02 EDT

UNCLASSIFIED

MEMORANDUM FOR:

Florence E. Gantt  
Wilma G. Hall  
Dona F. Proctor

( GANTT )  
( HALL )  
( PROCTOR )

FROM: Kathy Leahy  
(LEAHY)

SUBJECT: William Clark, U.S. Amb to India

Ambassador Bill Clark, U.S. Ambassador to India will be in DC this month and has requested a brief meeting (20 minutes) with the General. Best dates would be Dec 16 or 17. Does this look feasible? Thanks!



## REQUEST FOR APPOINTMENTS

To: Officer-in-charge  
Workers and Visitor Entrance System  
Room 065, OEOB

Please admit the following appointments on Monday, December 16, 19 91  
for Brent Scowcroft of National Security Council  
(name of person to be visited) (agency)

| <u>NAME</u>              | <u>DATE OF BIRTH</u> | <u>SOCIAL SECURITY NUMBER</u> |
|--------------------------|----------------------|-------------------------------|
| David <b>ABSHIRE</b>     | 4/11/26              |                               |
| Rita <b>CLEMENTS</b>     | 10/30/31             |                               |
| Marge <b>COOK</b>        | 5/10/38              |                               |
| Edward <b>DILLERY</b>    | 12/17/30             |                               |
| Stuart <b>EIZENSTAT</b>  | 1/15/43              |                               |
| Richard <b>FAIRBANKS</b> | 2/10/41              |                               |
| John <b>HUGHES</b>       | 4/24/30              |                               |
| Viviane <b>WARREN</b>    | 8/14/32              |                               |
| Abbott <b>WASHBURN</b>   | 3/1/15               |                               |
| Ben <b>WATTENBERG</b>    | 8/26/33              |                               |

### MEETING LOCATION

Building West Wing

Room No. Situation Room

Time of Meeting 11:30pm

Requested by NBD Nancy Bearg Dyke

Room No. 373 Telephone 395-5694

Date of request December 13, 1991

Additions and/or changes made by telephone should be limited to five (5) names or less.

**WAVES Center: SIG/OEOB — 395-6046 or WHITE HOUSE — 456-6742**

BIOGRAPHIES: FORMER HOSTAGES

TERRY ANDERSON--Former Chief Middle East Correspondent  
Press, taken 16 March 1985, released 3 December  
1991

ALANN STEEN--Former Professor of Mass Communications at  
Beirut University College, taken 24 January 1987,  
released 3 December 1991

JOSEPH CICIPPPIO--Former Deputy Comptroller, American  
University of Beirut, taken 12 September 1986,  
released 2 December 1991

THOMAS SUTHERLAND--Former Dean of Agriculture at American  
University of Beirut, taken 9 June 1985, released  
19 November 1991

JESSE TURNER--Former Professor of Computer Sciences and  
Mathematics, , Beirut University College, taken  
24 January 1987, released 21 October 1991

NATIONAL SECURITY COUNCIL

11-Dec-1991 09:43 EDT

UNCLASSIFIED

MEMORANDUM FOR: SEE BELOW

FROM: Jeffrey J. Jakuboski  
(JAKUBOSKI)

SUBJECT: Farewell Photo-op w/ General Scowcroft

The following individuals are scheduled to attend a farewell photo-op with General Scowcroft in his office on Thursday, December 12, 1991 at 3:30 p.m.

International Programs: Wendy Chamberlin

International Economic Affairs: Meg Lundsager

Information Management and Disclosure: Debbie Ierubino

Defense Policy and Arms Control: Mike Hayden  
Art Kuehne

Systems: Dick Broome  
David Hawes

Latin American Affairs: David Pacelli  
Mary Blair

European and Soviet Affairs: Adrian Basora

Situation Room: Eileen Wood

Legislative Affairs: Gardner Peckham

Immediate staff are welcome to join their former coworkers and family in the General's office. I had asked and cleared all participants to meet in the West Wing Lobby at 3:15 p.m. Should you have any questions, please feel free to call.

Thank you,

Jeff

Distribution:

FOR: Florence E. Gantt  
FOR: Wilma G. Hall

( GANTT )  
( HALL )



NATIONAL SECURITY COUNCIL

11-Dec-1991 09:43 EDT

UNCLASSIFIED

MEMORANDUM FOR: SEE BELOW

FROM: Jeffrey J. Jakuboski  
(JAKUBOSKI)

SUBJECT: Farewell Photo-op w/ General Scowcroft

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Thank you,

Jeff

Distribution:

FOR: Florence E. Gantt  
FOR: Wilma G. Hall

( GANTT )  
( HALL )

December 2, 1991

Thurs 12/5  
11:30 Am  
(brief)

General:

Klaus Schwab, head of Davos Forum, will be in town late January to attend the Forum. He would like to see you and Ed Hewett. Ed will see him and recommends you see him only if you want to.

Ed to see him and bring him by for brief mtg ✓ *short*

Regret \_\_\_\_\_

Ed Hewett

*It's not until January  
but Hewett's ofc is  
hoping for a quick  
Answer.*

MEMORANDUM  
OF CALL

Previous editions usable

Florence

☒ YOU WERE CALLED BY—

☐ YOU WERE VISITED BY—

Cynthia

OF (Organization)

Gordon Gottlieb's Ofc.

☒ PLEASE PHONE ►

☐ FTS

☐ AUTOVON

(212) 734-0400

☐ WILL CALL AGAIN

☐ IS WAITING TO SEE YOU

☐ RETURNED YOUR CALL

☐ WISHES AN APPOINTMENT

MESSAGE

Re: Setting up meeting  
for time during 25-27 Nov

This office sent a fax yesterday  
which explains his request

RECEIVED BY

DATE

TIME

Mary

11/12/91

11:25



VIA FAX 202-395-5221

# COUNCIL ON FOREIGN RELATIONS

Wed  
Dec. 4  
4:00 pm  
OK w/ John  
Swing

GIDON GOTTUEB  
Visiting Senior Fellow  
Director, Middle East Peace Program

11 November 1991

The Hon. General Brent Scowcroft  
Assistant to the President for  
National Security Affairs  
The White House  
Washington, DC 20500

Sec Shultz  
called Bush  
about the  
of they  
been doing  
some  
things  
have

Looking  
for a mtg  
on 11/25-27

HIS- 885-0999  
+ 4505

Dear General Scowcroft:

We wish to join so many others in telling you of our admiration for what has been achieved in Madrid. So many believed that your mission to convene a Middle East Peace Conference was an impossible one. You have proven all the skeptics wrong.

We would not take your time now had we not been encouraged to do so. We have reached a stage and attained results in our work that may well be relevant to the Administration's thinking. We came in to see Richard Haass on a number of occasions and we plan to tell him, as soon as I am back, about the detailed results of our visits in Israel and in Jordan. We have also kept the State Department informed. We remember from an earlier meeting that you wished to be kept informed of our own efforts.

Specifically, we have clear informal indications about versions of the land for peace formula that the parties may be disposed to consider. We have also been told about creative thinking to which they would be receptive on other issues such as the character of confederal arrangements to come.

We are in continuous contact with Prime Minister Shamir's office as well as with King Hussein and his senior staff. Our consultations had also involved at an earlier stage a senior aide of Yasser Arafat.

We are led to understand that the positions conveyed to us extend well beyond those expressed privately. Their coherence and seriousness are not in doubt. They come from the most authoritative sources and hence could deserve your personal attention.

With your permission John Swing and I shall phone your office to find out whether we can come in to see you to tell you about some of the more delicate aspects of our conversations.

Yours truly  
G

December 3, 1991

General --

Bill Sittmann wanted you to have a heads up on something Cheney may raise tomorrow:

Jesse Jackson has gotten a group together to charter a plane to fly into Guantanamo Bay with humanitarian supplies for the Haitians. Apparently Rangle and Cong Down will be on board the plane. Cheney approved this mission. Rangle and Down have asked to remain overnight. Cheney is going to turn this down because there are no accommodations available.

FYI

Florence

THE WHITE HOUSE  
WASHINGTON

617-495-1405

Ashton Carter

wants to come  
see General  
on Monday

POC Charles

— Hertzfeld  
Bromley's  
Staff

He will <sup>OEB</sup>  
be in ~~off~~  
Mon +  
Tues

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Brant -

Ash Carter dipped  
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Nunn, Lugar, & 19 others  
Lone blamed it.

To Brent - CAZ and I wanted you to have this as soon as it was released. We hope you find it helpful. All the best, Ash

Thursday 11/21

## **Soviet Nuclear Fission:**

PS - Key points are on pages

## **Control of the Nuclear Arsenal**

## **in a Disintegrating Soviet Union**

120-133.

by

Kurt M. Campbell, Ashton B. Carter,  
Steven E. Miller, and Charles A. Zraket

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## Contents

Introduction .... page i

Part I:        Command and Control of the Soviet Nuclear Arsenal:  
                 Anatomy of the Problem ... page 1

- A.    A Note on Sources, and on the Nature of Nuclear Command and Control
- B.    Background
  - 1.    Control at the Apex
  - 2.    Control of Individual Weapons
- C.    Strategic Nuclear Weapons
- D.    Non-Strategic Nuclear Weapons
- E.    The Nuclear Weapons Design and Fabrication Complex
- F.    Command, Control, Communications, and Intelligence Systems
- G.    Nuclear Weapon Delivery Systems

Part II:       Safe Custody During a Period of Transition: Issues and  
                 Options ... page 35

- A.    Unauthorized Use, Seizure, or Diversion
- B.    Proliferation Outside the Soviet Union
- C.    Approaches to Strengthening Control

Part III:      Who Will Inherit Control of Soviet Nuclear Weapons?  
                 Thinking Through Issues and Options ... page 48

- A.    How Many Nuclear Powers Among Soviet Successor States?
- B.    Discouraging Successor State Nuclear Proliferation



- C. If One, What Then?
- D. Successor State Proliferation: Coping with More Than One

Part IV: Recommendations and Implications ... page 120

- A. Encouraging and Assisting Prompt Implementation of the Bush-Gorbachev Reciprocal Unilateral Proposals Regarding Non-Strategic Nuclear Weapons
- B. Extending the Bush-Gorbachev Proposals to Strategic Weapons
- C. Assuring Safety and Security During a Transitional Period
- D. Addressing Proliferation Outside the Soviet Union
- E. Exposing the New Political Structures in the Former Soviet Union to Prevailing Conceptions of Nuclear Safety and Security
- F. Adjusting U.S. Military Policy to the New Nuclear Realities in the Soviet Union

## Introduction

For the past forty-two years, since the explosion of the first Soviet atomic bomb in 1949, the Soviet Union has reliably maintained custody of nuclear weapons without so much as a single major incident. The Soviet state created a nuclear command and control system -- weapons access and control devices, centralized and well-exercised operational procedures, stringent storage and transport protocols for nuclear materials and assembled weapons, and elaborate command, control, communications, and intelligence (C<sup>3</sup>I) systems -- that has protected tens of thousands of nuclear weapons against unauthorized access, seizure, and accidents year in and year out throughout this period.

This system is still in place as of this writing (November 1991). But the recent political and economic turmoil throughout all of the republics of the Soviet Union raises the possibility of devolution of control over this system from the center to a much more complex set of political forces than it was designed for, and raises the possibility of social disintegration of a kind that has been entirely absent for the last forty-two years. The system is still holding. And its performance has been remarkably stable through the past few years of total reorganization of executive and legislative authority, a coup and counter-coup, and a gradual erosion of the general authority of the center to which it is subordinated.

Yet this uneventful past and present performance does not provide full reassurance for the future. Soviet nuclear command and control is at root a social and political creation. However successful its designers have been in insulating it from all the problems they could foresee, it cannot be assumed capable of standing apart from turmoil throughout the society within which it embedded. And if even one-hundredth of one percent of the nuclear weapons in the Soviet stockpile falls into the wrong hands, destruction greater than the world has seen since Hiroshima and Nagasaki could result.

The destiny of the 27,000 nuclear weapons on the territory of what is increasingly referred to as the "former" Soviet Union is therefore a

## ii ... *Soviet Nuclear Fission*

paramount concern of our times. It is one without precedent and therefore without settled guidance. It calls for specific actions to be taken in the near term: there is no option to wait, deliberate, or negotiate at length. Yet each and every one of the near-term options is pregnant with long-term consequence. Thus an unusual amount of wisdom, foresight, and thorough analysis of the possibilities is required from all parties concerned -- the citizens of the former Soviet Union, the United States, and nations around the world.

This paper attempts to contribute to that thinking. We survey the elements and organization of the Soviet nuclear weapons complex, analyze the three cardinal dangers it presents in this time of turmoil, and make specific recommendations to the United States government, the government of the Soviet Union, and the governments of the emerging republics to ensure that the new custodians of Soviet military power preserve that nation's 42-year tradition of responsible control of nuclear weapons.

Briefly, the dangers to responsible control over the 27,000 nuclear weapons of the former Soviet Union are of three kinds.

First, as the Soviet Union devolves effective political power to republican or sub-republican political structures, there is a distinct possibility that control of nuclear weapons will also be dispersed in whole or in part. Such dispersal would create the danger that the ultimate disposition of the Soviet arsenal among those structures will lack elements that have been necessary to assure its safe custody and international nuclear stability.

Second, during the period of devolution or disintegration of political authority, there is a danger that nuclear weapons, components of nuclear weapons, or intimate knowledge about nuclear weapons will fall into unauthorized hands through desertion or mutiny of military custodians, seizure by political groups or terrorists, sale, or smuggling.

Third, nuclear proliferation might be spurred worldwide as nations and terrorist groups outside the Soviet Union seek to obtain nuclear weapons, fissionable material, or difficult-to-obtain weapon components from a chaotic Soviet weapons complex through theft or sale, or as



weapons scientists from the Soviet Union sell their knowledge to nations like Libya, North Korea, or Iran.

This paper describes these three potential problems, and policy approaches to preventing them, in four parts.

**Part I** describes the far-flung industrial and military complex that designs, builds, and guards nuclear weapons. From this survey emerge several important facts. First, it is necessary to look beyond the nuclear weapons themselves to the entire complex that produces special nuclear materials, builds bombs, transports and maintains bombs, and commands and controls them. Consideration of the entire complex indicates that the dangers of illicit diversion of key weapon-related technology do not end with the non-strategic and strategic deployments alone but extend to fissionable materials, components, delivery systems, and command and control systems. Additionally, a look at the entire complex indicates the difficulties that will be encountered in moving and dismantling nuclear weapons during the desired retirement and build-down of the Soviet arsenal.

Second, examination of the command and control systems reveals that safeguards against unauthorized actions with nuclear weapons, while strong and well-organized, have shortcomings. Third, of the republics of the Soviet Union, only Russia has within its borders anything like the technical means necessary for full-cycle operations and maintenance of a nuclear arsenal to world standards.

**Part II** deals with the more immediate pair of the three dangers identified above: the danger of unauthorized use or seizure of nuclear weapons by mutiny of custodians, political upheaval, or terrorism; and the danger that weapons, sensitive materials, or human technical know how will leak out of the Soviet Union and fuel nuclear proliferation around the world.

The main conclusions of this section are: First, it is necessary to deal with the Soviet arsenal largely as is; ideas to improve the technical safeguards on the arsenal by retrofitting coded locks or other devices cannot be implemented in time to meet the urgent need. The most

advanced and reliable locks are integral to the weapon itself and cannot simply be added on. Second, implementation of the Bush-Gorbachev reciprocal proposals on removal and destruction of non-strategic nuclear weapons of September 1991<sup>1</sup> is the single most important step that could be taken to strengthen security over Soviet nuclear weapons. Third, there are technical impediments to rapid and safe transport and disassembly of weapons, and to storage of weapons and special nuclear materials, that must be addressed and that might profit from U.S. assistance. Fourth, different weapon types present very different levels of physical susceptibility to use, blackmail, or sale.

**Part III** deals with the third and longer-term danger: that effective control over the nuclear weapons of the former Soviet Union will devolve to new custodians, and that those custodians will not have the knowledge or capability to exercise responsible control, or that their possession of nuclear weapons will not be conducive to military stability in central Europe. The main conclusions of this section are that the United States has a large stake in the outcome, and that it should and can try, using such instruments as the Strategic Arms Reduction Treaty and the Non-Proliferation Treaty, to influence the course of events so that only one system of custody for nuclear weapons emerges, even if it is one that is engineered to serve a coalition of political masters representing the center and the republics. An outcome where republics assume full custodianship of nuclear weapons on their own territory, while decidedly less desirable, will call for U.S. action to help educate the new custodians in standards of responsible custodianship and to help integrate them into international norms regarding nuclear weapons.

**Part IV** summarizes our recommendations for action by political structures in the former Soviet Union, the United States government, the world community, and extragovernmental analysts. These recommendations are organized into seven categories:

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1. For a succinct summary of the reciprocal proposals, see the table in "Nuclear Weapons: Going, Going," *The Economist*, October 12, 1991, p. 54.

1) Implementation of the Bush-Gorbachev reciprocal unilateral statements regarding withdrawal and dismantling of non-strategic weapons.

2) Forestalling unauthorized use or seizure of nuclear weapons in the coming period of change.

3) Minimizing the dangers that Soviet change will contribute to worldwide nuclear proliferation.

4) Managing the fate of strategic nuclear weapons, which alone threaten the United States directly and which (assuming the Bush-Gorbachev non-strategic nuclear forces [NSNF] proposals are successfully implemented) will pose the knottiest political and operational problems.

5) Incorporating issues of secure nuclear command and control into the wider context of the world community's efforts to promote economic and political progress in the former Soviet Union.

6) Ensuring the education of new political forces in the Soviet Union to their responsibilities as nuclear custodians, and to world-class standards for stewardship.

7) Incorporating the new danger from Soviet nuclear disintegration into U.S. nuclear doctrine and force planning.



## Part I

### Command and Control of the Soviet Nuclear Arsenal: Anatomy of the Problem

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- A. A Note on Sources, and on the Nature of Nuclear Command and Control
  - B. Background
    - 1. Control at the Apex
    - 2. Control of Individual Weapons
  - C. Strategic Nuclear Weapons
  - D. Non-Strategic Nuclear Weapons
  - E. The Nuclear Weapons Design and Fabrication Complex
  - F. Command, Control, Communications, and Intelligence Systems
  - G. Nuclear Weapon Delivery Systems
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- A. A Note on Sources, and on the Nature of Nuclear Command and Control Systems

We have surveyed the public sources of information about the workings of the Soviet nuclear command and control system. These sources do not present a consistent or complete account of the detailed workings of Soviet nuclear safeguards.

We further believe that a complete picture is not available to U.S. intelligence either. Such information as is available to the U.S. government is a mosaic of intelligence data collected over forty years of close observation of Soviet nuclear systems, and information volunteered by Soviet officials in official contacts, and by defectors, emigres, and visitors

## 2 ... *Soviet Nuclear Fission*

from the Soviet Union and Eastern Europe. This mosaic, while richer and more complete than the mosaic that can be pieced together from public sources, is unlikely to provide conclusive answers to key questions we will raise in this paper.

It is even implausible that the Soviet high officials who have authority over nuclear weapons, and who have been giving assurances to foreign leaders about their control of the situation, have such complete knowledge.

The reasons for our skepticism that a full and detailed story about Soviet nuclear safety is available spring from the very nature of nuclear command and control. Several of us have been involved in the study, design, and operation of U.S. nuclear command and control. We know that the physical and procedural safeguards vary from weapon system to weapon system, from military service to military service, from command echelon to command echelon, and throughout the cycle as a nuclear weapon passes through production of special nuclear materials, component fabrication, assembly, transport, storage, operational deployment, exercise, and retirement. We have never met an American with any level of security clearance whose specific knowledge spans all the pieces of the vast and diverse socio-technical complex that has grown up around U.S. nuclear weapons over half a century.

Add to the sheer complexity of nuclear command and control the fact that its key workings are easy to conceal from intelligence sources. Much can hinge on small technical and procedural details, and a small nuance in standard operating procedures can have portentous consequences for how the system would work under stress.

In addition, those familiar with U.S. command and control know that at certain times in U.S. history, vital questions about who had authority or physical capability to do what with one or another type of nuclear weapon had no clear answers, because political or military authorities did not take the time to clarify them, because political sensitivities engendered reluctance to clarify them, or because those with authority were simply unaware of them. Such ambiguity existed early in the nuclear age as the Defense Department and the Atomic Energy

Commission attempted, contentiously at times, to work out a formula for sharing authority over different components of nuclear weapons systems, and over the weapons themselves at different stages from fabrication to retirement. Other ambiguities arose in the late 1950s and early 1960s, as the United States entered into so-called "programs of cooperation" for sharing nuclear weapons with NATO allies.<sup>2</sup> And at the very apex of the command system, fuzzy or unrealistic plans for presidential control have reportedly persisted right up until recently as White House aides have labored -- frequently in the face of neglect or indifference on the part of the president himself -- to work out procedures that protect presidential prerogatives while satisfying the military's insistence that retaliation must be assured whatever the fate of the president. It seems quite plausible to us that the internal politics surrounding nuclear command and control in the Soviet Union are at least as complex as America's.

The Soviets have had to face the same set of fundamental questions about how to manage nuclear weapons over the past forty years that the United States has faced, but it would be a mistake to assume that they have always given similar answers to these questions. Command and control is a social and political as well as a technical matter, and the same dilemma can be resolved in startlingly different ways in different political cultures. Thus "mirror imaging" Soviet systems and procedures -- imagining them to be similar to their U.S. counterparts -- is likely to be an unreliable guide to understanding them.

Finally, and fundamentally, we are concerned in this paper about the potential behavior of the Soviet nuclear command and control system under severe stress, not about its normal or prescribed workings. Even a detailed description of how the system is supposed to work only hints at how it might work or be manipulated under stress. Thus descriptions of the "launch sequence" for Soviet missiles reported in the western press, even supposing them to be technically accurate, only tell us how President Gorbachev could order missiles launched according to established

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2. Peter Stein and Peter Feaver, *Assuring Control of Nuclear Weapons: The Evolution of Permissive Action Links*, CSIA Occasional Paper No. 2 (Cambridge, Mass.: Center for Science and International Affairs, Harvard University, 1987), pp. 30-31.



#### 4 ... *Soviet Nuclear Fission*

procedures. They bear only indirectly on the question of how missiles might be launched without him. To be sure, the prescribed procedures governing normal actions with nuclear weapons have doubtless been designed with the dangers of insanity, terrorism, civil discord, and perhaps even minor mutiny in mind. But it stretches credulity to the breaking point to suppose that throughout the half-century development of the Soviet nuclear command and control system, and across the deployment of several tens of different kinds of nuclear weapons systems to five different military services, Soviet military commanders and engineers have assiduously built in specific safeguards against the contingencies of political revolution, republican secession, and widespread civil chaos of the kinds that are distinctly possible in the Soviet Union today. Thus we are forced to contemplate the workings of a socio-technical system outside its range of design parameters and amidst the disintegration of the social system in which it is embedded. A conclusive enumeration of all the failure modes of this system would require information of a kind and amount that has not been assembled anywhere.

These difficulties of obtaining specific and comprehensive information about Soviet command and control have led us to proceed as follows: First, using our knowledge of U.S. command and control and simple logic, we identify the key issues and problems that necessarily exist for Soviet nuclear command and control. These issues revolve around such basic and unavoidable distinctions as those between enabling and authorizing codes, between delegation and devolution of authority to move or use nuclear weapons, and between technical and procedural safeguards. Second, we have used such information as is publicly available about the Soviet command and control system to describe how the Soviets have resolved those issues at each echelon of command and in each of many different parts of their nuclear force. Third, we have highlighted the many points at which publicly available information is inconclusive or probably incorrect. In this manner we try to paint as concrete and vivid a picture as possible, while ensuring that its main lines are correct.

## B. Background

### 1. Control at the Apex<sup>3</sup>

Much press attention during the August 1991 coup against President Mikhail Gorbachev, supreme commander in chief of the Soviet Armed Forces according to the Soviet constitution, was focused on "who had the football" (to use U.S. slang for the U.S. president's equivalent briefcase).<sup>4</sup> The football, according to these accounts, contains information for Gorbachev about the disposition and attack options of Soviet nuclear forces, and some type of code that would allow him to participate in the generation of a strike message to the forces. Presumably the principal focus of the football's contents is the strategic arsenal, though it may contain codes that would be involved in giving presidential authority to use non-strategic weapons as well.

This press attention to control at the apex is misplaced. In fact, as we shall see, the important dangers of misuse of nuclear weapons are not associated with the apex but largely with the lower echelons of the

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3. The best current sources on Soviet nuclear command and control are Stephen M. Meyer, "Soviet Nuclear Operations," in Ashton B. Carter, John D. Steinbruner, and Charles A. Zraket, eds., *Managing Nuclear Operations* (Washington, D.C.: Brookings, 1987) pp. 470-531; Bruce G. Blair, Testimony to the House Committee on Armed Services, July 31, 1991; Bruce G. Blair, Testimony to the European Affairs Subcommittee of the Senate Foreign Relations Committee, September 24, 1991; Bruce G. Blair, Testimony to the Legislation and National Security Subcommittee of the House Government Operations Committee, October 1, 1991; Gennadi A. Pavlov, Testimony before the European Affairs Subcommittee of the Senate Foreign Relations Committee, September 24, 1991; and Edward L. Warner III, "Command and Control of Soviet Nuclear Weapons," statement presented to the Defense Policy Panel of the House Committee on Armed Services, July 31, 1991. The authors are grateful to Bruce G. Blair for sharing the findings in his forthcoming book on accidental nuclear war which contains a wealth of information concerning the Soviet command system. See Bruce G. Blair, *The Logic of Accidental Nuclear War* (Washington, D.C.: Brookings, forthcoming).

4. Patrick Tyler, "Troubling Question of Coup: Whose Finger was on Soviet Nuclear Trigger?" *New York Times*, August 24, 1991, p. 9.

## 6 ... Soviet Nuclear Fission

command system. Gorbachev's football is not the sole repository of codes that physically release strategic nuclear weapons, let alone non-strategic weapons. And in any event, there is no particular reason to suspect that coup plotters, including elements of the military high command, would be more likely to unleash nuclear attack on the United States with Gorbachev out of the way than with him at place in the command system, in full possession of his football. Finally, even as the football's contents are not necessary to launch a nuclear strike, they are not sufficient, either: mere possession of the football would not be sufficient to overcome other, procedural, controls on launch of strategic weapons.

To describe control at the apex, we begin by asking what precise role might the football play in the control of the strategic forces of the Soviet Union. An extreme possibility is that some sort of code emanating from Gorbachev's football is physically necessary in order for strategic missiles and bomber weapons to be physically "unlocked."<sup>5</sup> It does appear likely (see below) that Soviet missile, bomber, and submarine crews require such external codes to be supplied or they cannot physically launch their weapons.<sup>6</sup> At the bottom of the command pyramid, strategic forces launch crews must receive not only coded orders authorizing them to use nuclear weapons, but also codes physically enabling them to use the weapons in their custody. It is also reported that efforts by launch crews to begin the launch procedures for ICBMs could be detected and monitored by higher echelons, and vetoed if they exceeded their authority.<sup>7</sup>

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5. The new chief of the Soviet General Staff, Vladimir Lobov, referred after the coup to "biophysical" safeguards associated with the exercise of presidential authority over nuclear weapons. Thus Gorbachev's interaction with the nuclear command and control system might be mediated by a retina scanner, fingerprint identifier, or audiogram identifier that uniquely certifies orders as coming from Gorbachev himself. Les Aspin, *A New Kind of Threat*, House Armed Services Committee White Paper, September 12, 1991, p. 2.

6. Warner, "Soviet Command and Control," p. 5.

7. Blair, "Testimony to the House Committee on Armed Services," p. 5.



It is implausible that Gorbachev's football is in fact the sole source of such enabling codes, since if it were, its destruction would physically incapacitate the Soviet strategic arsenal. Thus enabling codes must exist at echelons between the president and the executing forces. If so, someone else besides Gorbachev is physically capable of issuing strike messages that would be effective -- that is, that would be recognized by missile, bomber, and submarine crews as authorizing and enabling them to use nuclear weapons.

Almost certainly the General Staff headquarters, at a minimum, is a place from which such orders can be generated.<sup>8</sup> But if the General Staff headquarters can generate effective strike messages all by itself, what role does Gorbachev's football play? At one extreme, the answer could be, "no necessary role at all." In this view the defense minister carries enough "political" authority to speak, in procedural terms, for the non-military leadership; and he, together with the chief of the General Staff, can muster the full political-military standing that is physically necessary to initiate strike messages that will be obeyed by lower echelons as if Gorbachev himself had issued them. (Reports have indicated that the defense minister and the chief of the General Staff carry their own footballs when they travel, so these two officials surely play some role. Below this level, the commanders-in-chief of the Strategic Rocket Forces, the Air Force, and the Navy are probably also involved in generating launch orders.)<sup>9</sup> Standard operating procedures might require the defense minister and the chief of the General Staff, and the commanders-in-chief of the relevant branch of the armed forces, to act collectively in some sort of voting scheme with the option of vetoing one another. Control over the generation and transmission of strike messages, including the appropriate enabling and authorizing codes at lower echelons, probably also involves a complex procedural system of votes and vetoes by lower-ranking military officials, some of whom have been specially trained apart from the operating forces expressly to exercise a separate chain of control.

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8. With regard to Soviet non-strategic nuclear weapons, there is little dispute that military command echelons at the General Staff level or lower possess "unlocking" or enabling codes.

9. See Blair testimony, September 24, 1991, p. 3.

## 8 ... Soviet Nuclear Fission

A second possibility is that the messages that the General Staff headquarters or lower echelons could issue without presidential participation, while containing all the codes enabling the crews to launch, would lack a piece of code authenticating them as having presidential authority. This arrangement is unlikely, however, since the top military command would not leave it to launch crews to decide whether they should launch or not if the message did not indicate explicit presidential authority. What is more likely is that either the launch message does not contain information indicating to the crews whether the president actually participated in generating it; or that the crews are under instructions to respond to the order whether or not it contains a code authenticating presidential authority to the strike. In either event, Gorbachev's football would be irrelevant under the conditions of a coup involving the military leadership. Gorbachev's "vote" would not be physically necessary to initiate launch.

This second scheme points up the vital difference between procedural and technical safeguards, as well as between enabling and authorizing codes, in a nuclear command and control system. The existence of the football clearly signifies that specific provision is made for presidential participation in the normal launch procedure. But that is not the same thing as saying that his participation is somehow physically required for Soviet nuclear weapons to be used. A similar distinction must be made throughout the command system between actions that colluding groups of individuals in the system could physically take, and those that would merely be procedurally abnormal.

A third possibility is that, while Gorbachev's own football is not necessary to the generation of strike messages that missile, bomber, and submarine crews have been trained to obey, someone representing political authority other than the Defense Minister must participate in the generation of such messages. In this scheme, Gorbachev is the first link in a chain of political authority, and the participation of someone in that chain -- even if not its first link -- must supply the same enabling or authorizing codes that Gorbachev would provide. A scheme of this sort would be set up to ensure that even if the Soviet president did not survive an attack on the Soviet Union, retaliation would not be possible unless some representative of the presidency gave assent.



This third possibility presumably would correspond to the situation in the United States. According to the Constitution and the 1947 Presidential Succession Act, the presidency devolves to the vice president upon the president's death, and thence to the speaker of the House of Representatives, the president pro tem of the Senate, and then to the cabinet officers in the order of the creation of their offices (State, Treasury, Defense, Justice, Interior, and so on). The Constitution is also understood to permit the president to delegate launch authority to whomever he wishes, establishing a chain of delegation as well as a chain of devolution. The only constraint on delegation is that a president may not bind his successor: that is, if the president is killed, his chosen chain of delegation is voided and the new president (to whom the office has devolved) has the right to choose his or her own chain of delegation. In the U.S. forces, the codes contributed by the political leadership to the strike messages are authorizing codes, not enabling codes -- at any rate such must be the case with the submarines, since they are widely reported to require no external enabling codes in order to launch. (U.S. bomber and ICBM crews require enabling codes, but it has not been revealed which echelon of command has custody of those codes.)

The essence of this third possible system of Soviet control at the apex is that someone from the presidential chain of devolution (or delegation) must contribute an enabling (or merely authorizing) code in order for launch crews to be physically capable, in the case of enabling codes, or authorized according to their training, in the case of authorizing codes, to launch their weapons. In view of the relatively new vintage of the presidency as the true apex of political authority in the Soviet Union, and the total absence of a widely shared view of what constitutes legitimate succession in Soviet power politics, it would be surprising if a scheme as elaborate as this were in place in the Soviet Union.

It has not been revealed which of the three possible systems of control and their several variants is in fact in use today in the Soviet Union. It is doubtful that the full story is available to U.S. intelligence. Gorbachev himself may not know whether his participation enables, authorizes, or is even necessary to prepare a strike; whether "backup" versions of his codes are available elsewhere (for example, in the General Staff headquarters); or whether those who designed the code system or



## 10 ... *Soviet Nuclear Fission*

who maintain it have the knowledge to circumvent it. But whichever of the three schemes most closely corresponds to current Soviet practice, in none of them is Gorbachev's football physically necessary to enable launch of Soviet strategic forces. Thus the whereabouts of the "football," so much discussed, probably bear only indirectly on the actual possibility for unauthorized or erratic conduct of Soviet strategic nuclear command and control.<sup>10</sup>

Since any system of nuclear safeguards is bound to be complex, elaborately engineered (involving, e.g., cryptographic support for the system of codes), and a matter of great political sensitivity and secrecy, it is furthermore unlikely that its essential workings can change nearly as fast as political change and reform in Soviet politics. Thus future declarations about shared decisionmaking between the center and the republics, and among the republics, even if accompanied by the passing about of "footballs" to new political leaders like Yeltsin of Russia, Kravchuk of Ukraine, and Nazarbayev of Kazakhstan, will be more symbolic politically than binding operationally.

In sum, it is doubtful that there exist in the Soviet strategic arsenal, let alone the nuclear arsenal as a whole, safeguards that physically prevent either of the two concerns implied in discussions of command and control at the apex: First, Gorbachev or other political authorities probably cannot prevent the senior military commanders from exercising effective control over nuclear weapons in a leadership crisis, or from launching them. The widely publicized existence of a presidential football, however, probably contributes in a general way to a culture of political, top-down control in the chain of command, even if that control can be physically circumvented at the General Staff level or at lower echelons of the operational chain of command.

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10. Thus, it is likely that soviet political authorities authorize nuclear use, while military commands enable it. See Pavlov, Testimony Before European Affairs Subcommittee of the Senate Foreign Relations Committee, p. 2; and Blair, Testimony to the Legislation and National Security Subcommittee of the House Government Operations Committee, p. 3.

In the second place, it is also unlikely that launch crews would necessarily behave differently depending on whether their orders originated from Gorbachev, from a group of coup plotters, or from their superiors in the military chain of command. But at higher echelons of the strategic command and control system, there are probably procedural safeguards to guarantee that simple possession of the football does not automatically grant the power to initiate a nuclear strike, but only makes its possessor a potential contributor to a collective procedure by which strike messages could be generated that would be obeyed. Gorbachev's football is probably neither necessary nor sufficient to initiate Soviet nuclear attack.

## 2. Control of Individual Weapons

At the other end of the command and control chain from the apex, let us consider the situation of an individual nuclear weapon perched atop a strategic missile, stored in a bunker near an airfield, tactical missile unit, or artillery unit, or travelling between its place of fabrication and its place of deployment. What safeguards exist against unauthorized seizure, movement, launch, or detonation of this weapon? There are six distinct types of safeguards that might pertain to a Soviet nuclear weapon. All six types of safeguard reportedly exist in the Soviet arsenal.<sup>11</sup> But it is by no means the case that all six safeguards have been applied to each and every one of the 27,000 weapons. Thus an individual weapon probably has two or three -- but not all six -- safeguards.

First, it appears that with the exception of ICBMs, SLBMs, and some tactical naval systems, nuclear warheads are not normally mated to the delivery systems that would carry them to their targets -- airplanes, tactical missiles, artillery pieces or other delivery systems. Nor are they normally in the custody of the military personnel who would operate them in hostilities. Instead, they are stored separately under the custody of special troops of the Ministry of Defense. Similar special units move them to and from assembly and deployment sites. In order for a nuclear

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11. Warner, "Command and Control of Soviet Nuclear Weapons," pp. 3-5.

## 12 ... Soviet Nuclear Fission

artillery shell to be fired, for example, the custodial units would need to receive orders through their own command system to release the weapon to the Ground Forces unit that operated the artillery piece. The Ground Forces unit would then receive its employment instructions through its own, separate military command system.<sup>12</sup>

This institutional segregation between peacetime custodians and wartime operators ensures that the most obvious path to unauthorized use of tactical nuclear weapons, i.e., a path hewing closely to the "normal" approved sequence for wartime use, would necessitate collusion between personnel from two different, and by all accounts rigidly distinct, organizational cultures.

A second line of safeguards governs the procedures for possessing, moving, inspecting, repairing, exercising, or using nuclear weapons. These procedures, by all accounts, are highly formalized in the Soviet system (as in the American system). All operations involving nuclear weapons must be conducted by groups of individuals, acting collectively (never individually), and in rigidly prescribed fashion. These procedural safeguards obviously do not physically preclude unauthorized actions. But they make collusion by several parties necessary in order for unauthorized actions to take place, and they establish a normal way of doing things so that deviations from the norm are clearly evident to others not involved in the collusion, who might be able to intervene to stop the unauthorized activity.<sup>13</sup>

A third type of safeguard results from physical security at the storage sites. The many tens of tactical and national storage sites for nuclear weapons throughout the Soviet Union are surrounded with barbed

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12. David Isby, *Weapons and Tactics of the Soviet Army* (London: Jane's, 1981), p. 210.

13. Much of the "terrain" of the U.S. nuclear complex broadly defined comprises "no lone zones." These zones are areas in which no individual can go unaccompanied, and in which no sensitive procedure can be performed by fewer than two people with the same training and authority. See Donald Cotter, "Peacetime Operations," in Carter, Steinbruner, and Zraket, *Managing Nuclear Operations*, p. 50.



wire fences (many electrified) and mine fields, and have adequate security forces to repel modest-sized assaults. It is probable that these custodial units could furthermore be rapidly reinforced if they were in danger of being overrun. It is almost certain, moreover, that the security at the storage sites does not end with fences and sentries. They may resemble some storage "igloos" housing U.S. nuclear weapons that are specially constructed with heavy concrete and steel vaults to make them physically difficult to breach. If breached, they hold unpleasant surprises in the form of mechanisms to detect, confound, and immobilize the intruders. Some (though not all) Soviet storage sites probably have the same special physical barriers against access to the stored weapons. At the same time, it is obviously the case that the custodial units can gain access to the igloos and to the weapons if they follow their normal maintenance and other procedures, or if they know how to circumvent the security systems.<sup>14</sup>

A fourth line of safeguard is provided by mechanisms associated with at least some types of weapons to prevent their accidental detonation in the event they are caught in a fire, dropped, or subjected to electrical disturbance. Though intended for safety rather than security, such mechanisms, which are probably present in at least the newer Soviet nuclear weapons, play a role in preventing unauthorized use, since they prevent detonation from occurring except via the arming and fuzing circuitry. Terrorists or renegades could therefore not credibly threaten to detonate a seized weapon by burning or dropping it, but could only do so if they gained access to this critical circuitry.<sup>15</sup>

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14. There is actually a tradeoff, here as in so many other areas, between measures to deny or delay unauthorized access, and those to ensure safe and prompt authorized access. See Thomas A. Julia, "Nuclear Weapons Security and Control," in Paul Leventhal and Yonah Alexander, eds., *Preventing Nuclear Terrorism* (Lexington, Mass.: Lexington Books, 1987), p. 173-177. For a vivid description of such a Soviet storage bunker, see John J. Fialka, "The Risk Now Posed by Soviet 'Nukes' is One of Management," *Wall Street Journal*, November 20, 1991, p. 1.

15. These measures include one-point-safe high explosive shells, insensitive high explosives, fire resistant fissile pits, and strong link/weak link electronic circuitry. For a brief discussion of these and other safety measures, see Sidney Drell, John Foster, and Charles Townes, *Report of the Panel on Nuclear Weapons Safety of the House Armed*

## 14 ... *Soviet Nuclear Fission*

The fifth and sixth types of safeguard -- environmental sensing devices and coded locks -- govern access to the arming and fuzing circuitry.

Environmental sensing devices (ESDs) prevent a weapon from arming until it has experienced the physical environment of intended use.<sup>16</sup> Thus a bomb equipped with an ESD will not detonate unless it has experienced free fall, a change in barometric pressure accompanying a change in altitude, and/or deceleration due to impact or deployment of a parachute. A missile warhead will not detonate unless it has sensed the acceleration of launch, a period of free fall, and/or the vacuum of space. A cruise missile will not detonate unless its circuitry receives a signal from the guidance computer indicating that it has reached its programmed target. An artillery shell requires a swift acceleration from its launching tube, a depth bomb the hydrostatic pressure of deep water, and so on. Soviet spokesmen have indicated that at least some Soviet weapons have ESDs.

Related to ESDs are tamper-proofing mechanisms that would detect attempts to penetrate the weapon and render it unusable, either by changing the precise geometry required of the special nuclear materials in the warhead or by partially detonating the warhead's high explosive.<sup>17</sup> Custodians might be capable of activating such mechanisms and rendering their weapons unusable if they are in danger of being overrun. Mechanisms could also be designed to hide the details of the weapon design if tampering is detected.

The sixth and final type of safeguard is the coded switch that prevents arming and fuzing unless a code is entered. Such coded switches might be integral to the weapon itself, in which case informal usage gives

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*Services Committee* (Washington, D.C.: U.S. Government Printing Office, 1990), p. 24-31.

16. For the early development of ESDs for U.S. weapons, see Stein and Feaver, *Assuring Control of Nuclear Weapons*, pp. 22-23.

17. Warner, "Command and Control of Soviet Nuclear Weapons," p. 5.

it the name Permissive Action Link (PAL), or it might be associated with the missile, airplane, or other delivery means.<sup>18</sup> Whether on the weapon or on the delivery system, such locks are meant to prevent those who have or gain physical possession of nuclear weapons and launchers from using them without enabling codes (as opposed to mere authorizing codes) supplied by higher commanders. The Soviets reportedly use such coded switches extensively, though it is unclear which of the many types of Soviet nuclear weapons possess which types of locks, nor who creates or has custody of the codes. But it is likely that there is considerable variety in the Soviet arsenal, and that weapons of older vintage have less sophisticated locks.

Coded switches make it time-consuming for even a technically skilled person to obtain a nuclear yield from a seized weapon. So-called PALs are designed to buy time for authorities to regain custody of stolen weapons, but they do not guarantee that terrorists or political factions who manage to hold onto seized weapons will never be able to use them. Delay is an adequate design criterion when facing the threat of isolated terrorist incidents taking place against a background of a coherent society able to act quickly to recapture seized weapons. However, the existence of PAL-type devices on certain types of Soviet weapons cannot provide reassurance that these weapons would be useless to mutinous custodians or political factions who had prolonged possession of the weapons, especially if they had technical expertise.

Collectively, these six types of safeguard present multiple but not absolute obstacles to those who would possess or use the nuclear weapons of the former Soviet Union in unauthorized fashion. At the same time, it must be emphasized that it is unlikely that all six types of safeguard are associated with each of the 27,000 nuclear weapons of the former Soviet Union. Moreover, no safeguard is proof against a clever attacker, especially if the attacker possesses knowledge of the system. In the

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18. Such devices can range from simple mechanical combination locks to elaborate digital electronic devices. Stein and Feaver, *Assuring Control of Nuclear Weapons*, pp. 55-58. For a more detailed discussion of technical safeguards against accidental and/or unauthorized use used in U.S. weapons see Donald Cotter, "Peacetime Operations," in Carter, Steinbruner, and Zraket, *Managing Nuclear Operations*, pp. 42-51.



United States, some 200,000 personnel (about two-thirds Defense Department and one-third Energy Department) occupy sensitive positions involving nuclear weapons. Many more have occupied such positions in the past. Presumably, similarly large numbers of citizens of the former Soviet Union have at least fragmentary knowledge of their country's nuclear weapons and safeguards. Furthermore, the most important safeguards are procedural, which means that groups of well-informed or well-placed individuals, acting in collusion, can certainly circumvent them.

In the last analysis the custodial system for nuclear weapons is a social system. It will be strong when the society in which it is embedded is stable, and it will behave according to its intended design when organizational norms and routines are being followed by most of the people most of the time. But it is not possible to exhibit, or even to imagine, a set of safeguards on the Soviet arsenal that gives total reassurance against abuse in the midst of general social upheaval.

### C. Strategic Nuclear Weapons

Control of Soviet strategic nuclear weapons is of the most immediate concern to Americans because these weapons are capable of reaching the United States directly. Non-strategic weapons, on the other hand, would more likely become involved in civil war or terrorism in the Soviet Union, or be smuggled to other troubled regions of the world, although they too could certainly be a threat to the United States if they found their way to terrorist groups or hostile nations.

The Soviet strategic arsenal comprises seven categories of direct weapon-related facilities: ICBM silo fields and mobile ICBM garrisons (containing together about 8000 weapons), SLBMs at sea and in port (about 1400 weapons), bombers of the Long Range Aviation and their separate weapon storage sites (1200 weapons, including bombs, cruise missiles, and air-to-surface missiles), and other storage sites for strategic

nuclear weapons (1700 weapons).<sup>19</sup> (Facilities indirectly related to strategic weapons, like those that provide the data that allow the weapons to be targeted, or that build and launch missile warning satellites, are treated below in sections E, F, and G.)

It appears that launch procedures for strategic forces parallel the procedures for non-strategic weapons (see section D below), even though ICBM and SLBM weapons are always mated to their missiles and usually configured for immediate launch. That is, release to launch occurs in two steps, analogous to the two steps involved in releasing tactical or bomber weapons from their custodians and mating them to the delivery vehicles controlled by their operators. In the strategic missile force, one type of message "unblocks" the missile, apparently allowing launch crews to open its launch circuits for another type of message that enables launch. A special command chain responsible for custody of nuclear weapons controls unblocking, and the responsible military arm, the Strategic Rocket Forces, controls launch. These messages are both physically necessary for launch to occur: i.e., strategic missiles of all four types (silo ICBMs, mobile ICBMs in garrison and on patrol, SLBMs on patrol, and ready SLBMs in port) must be enabled externally. According to most accounts, enabling mechanisms in the Soviet strategic missile forces are associated with the launcher rather than integral to the nuclear warhead itself.<sup>20</sup> At least some types of bomber and missile warheads are probably also equipped with ESDs that would prevent easy arming and fuzing of a weapon seized by a party lacking time or technology to circumvent the ESD.

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19. Warner, "Command and Control of Soviet Nuclear Weapons," pp. 1-2.

20. Blair, testimony to the House Armed Services Committee, July 31, p. 11. This distinction is important. In the case of enabling mechanisms associated with the launcher, safety devices block unauthorized access only to the launch circuits of the delivery system - whether a missile or an aircraft. In the latter case, they block access to the arming and fuzing circuitry of the warhead itself, whether or not it is mated to its launcher. Coded switches associated with launching circuitry do not safeguard the associated warhead when the latter is separated and in storage. U.S. Strategic Air Command safeguards are generally associated with the launcher and not the weapon. Stein and Feaver, "Assuring Control of Nuclear Weapons," pp. 65-70.

The seven categories of strategic forces are thus controlled as follows:<sup>21</sup>

1. **Launch crews** for silo-based missiles require two-channel external enabling codes to launch. Launch messages consist of two parts conveyed by separate communications from two separate authorities: a preliminary unblocking signal opening the launch circuitry to subsequent messages, and a launch message specifying the time of launch. It is unclear whether codes physically enabling launch (as opposed merely to authorizing launch) are contained in the unblocking message, in the launch message, or both.

The system can reportedly also be configured to bypass launch crews in the silo field entirely, allowing newer ICBMs to be launched directly by higher commanders operating from fixed command centers in the Moscow area or from trainborne or other mobile command centers (see below).

2. **Launch crews** for mobile ICBMs on patrol also require two types of message, and are not enabled without external codes.

3. **Mobile ICBMs** in garrison are sometimes reported to have special rapid-launch procedures in addition to the two-channel procedures that govern them on patrol.

4. **SLBMs on patrol** require external enabling codes to launch, unlike U.S. SLBMs. In some accounts, launch messages are relayed in two parts, an unblocking part and a launch part, over two communications channels, as with ICBMs. Other accounts portray one message as sufficient to enable and authorize launch.

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21. Blair, testimony to the House Armed Services Committee, July 31, pp. 7-10; Blair testimony to the Legislation and National Security subcommittee of the House Government Operations Committee, October 1, pp. 2-4; and Pavlov, testimony before the European Affairs Subcommittee of the Senate Foreign Relations Committee, September 24, 1991, pp. 2-3.



5. **SLBMs in port** might have special procedures for rapid launch, like the newer silo ICBMs and mobile ICBMs in garrison.

6. **Bombers** do not normally have nuclear weapons "uploaded" on them. Their weapons are delivered to them by organizationally distinct custodial crews from storage sites. It is unclear whether their bombs contain integral coded enabling locks or whether the enabling mechanisms are associated with the aircraft.

7. Associated with the strategic forces are **weapons storage sites** near bomber airfields, in submarine ports, and in the vicinity of silo and mobile ICBM sites for maintenance and changeout.

Unlike non-strategic weapons, which are more widespread, Soviet strategic weapons are deployed in only four republics: Russia, Ukraine, Byelorussia, and Kazakhstan.<sup>22</sup>

**RUSSIA:** Russia has by far the greatest concentration of strategic forces, comprising 12 fixed ICBM fields, 10 garrisons for SS-24 rail mobile and SS-25 road mobile ICBMs, 11 strategic bomber bases, and all 6 of the Soviet Union's SSBN ports.

**UKRAINE:** Ukraine contains silo fields for 120 SS-19 ICBMs (6 warheads each) at Pervomaysk and Derazhnya, a silo field for 56 SS-24 ICBMs (10 warheads each) at Pervomaysk, and 8 strategic bomber bases.

**BYELORUSSIA:** Byelorussia contains two garrisons for SS-25 mobile ICBMs (one warhead each) at Lida and Slonim, and 5 bomber bases.

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22. Arms Control Association Fact Sheet, October 10, 1991; Robert S. Norris, "Nuclear Notebook," *Bulletin of the Atomic Scientists*, November 1991, pp. 48-49; and Warner, "Command and Control of Soviet Nuclear Weapons," p. 3.

**KAZAKHSTAN:** Kazakhstan contains two silo fields for SS-18 ICBMs with a total of 104 missiles (10 warheads each) at Imeni Gastello and Zhangiz Tobe, and one bomber base.

One additional feature of the command and control of the strategic offensive arsenal is worth noting. It seems that some of the newest silo-based ICBMs can be configured so they can be launched directly from central command centers in the Moscow area without the intervention of launch crews in the silo fields. Such a "skip-echelon" procedure might have been designed to allow missiles to be launched on warning or under attack. If such a procedure exists, it is worth some concern, since its express purpose is to bypass the normal procedural safeguards on launch. On the other hand, the special expedited launch process presumably originates with the high command, which already possesses the physical capability to authorize and enable launch. The only difference is that the skip-echelon mode does not give lower command echelons the opportunity to intervene to thwart a launch order from higher command.

Finally, it is important to consider the strategic defensive forces, consisting of nuclear warheads for surface-to-air missile (SAM) defenses against air-delivered weapons, and anti-ballistic missile (ABM) defenses. As many as 2700 nuclear warheads exist for SA-2, SA-5, and SA-10 SAM systems. Like most tactical offensive systems, the SAM nuclear warheads are stored separately from their launchers under the custody of military personnel other than the launch crews. Air defense weapons, like tactical weapons, are more widely dispersed around the republics than strategic offensive weapons. At least 100 warheads exist for the 100 Gazelle and Galosh ABM interceptors that defend Moscow.<sup>23</sup>

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23. Warner, "Command and Control of Soviet Nuclear Weapons," p. 3.

#### D. Non-strategic Nuclear Weapons

About 8800 Soviet nuclear weapons are in service for tactical use by the Air Force and Ground Forces, and another 3400 for non-strategic use by the Navy.<sup>24</sup> Though the non-strategic weapons are not capable of reaching the United States directly, in other respects they are more troubling than the strategic weapons. Non-strategic weapons are more widely dispersed around the republics than strategic weapons, they exist in a greater variety of types and vintages, and at least some of the older models are probably not equipped with integral safety and security features.

The Air and Ground Forces deploy nuclear weapons for use with artillery, short-range missiles, land mines, anti-air missiles, bombs, and air-to-ground missiles. The Navy deploys nuclear torpedoes, depth bombs, anti-air missiles, anti-ship cruise missiles, land-attack cruise missiles, air-to-surface missiles, and anti-submarine missiles. Most of these weapons exist in more than one model, and many of them are decades old.

Most of the non-strategic weapons are stored separately from their launchers. The custodians of the storage sites are a distinct cadre of Ministry of Defense troops; the separate troops who would fire the warheads would only receive custody of them when use was imminent. An important exception to this practice of separate storage and custody is the Navy, which puts to sea with nuclear weapons in the custody of the normal crew that would fire them.<sup>25</sup> (Nuclear weapons stored at naval ports might also be under naval custody rather than under the custody of special troops reporting directly to Moscow.)

Unlike strategic weapons, which the Soviets have deployed only in four republics, non-strategic weapons have in the past been deployed in every Soviet republic except Kirghizia, and throughout Eastern Europe.

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24. Ibid.

25. Blair, testimony to the House Armed Services Committee, July 31, 1991, p. 12.



It appears, though this cannot be confirmed, that all non-strategic nuclear weapons (and thus all Soviet nuclear weapons) have been removed from Germany, Hungary, Czechoslovakia, and Poland; from the Baltic nations of Latvia, Lithuania, and Estonia; and from the republics of Armenia and Azerbaijan.<sup>26</sup> If these reports are correct, Soviet non-strategic nuclear weapons remain only in Russia, Kazakhstan, Tadjikistan, Uzbekistan, Turkmenistan, Georgia, Ukraine, Moldavia, and Byelorussia.

Storage sites are of two major types: those associated with particular deployments of ground, air, and naval forces; and "national" storage sites holding weapons no longer in service, in transit, or in the process of deployment. Hundreds of such storage sites exist around the Soviet Union. It is possible that a great many more than the 27,000 nuclear weapons normally accredited to the Soviet Union exist in these storage sites. Reports are unclear about whether Soviet nuclear weapons retired from service have been dismantled, as in the United States, or simply stored. (The United States has built 60,000 nuclear weapons since 1945, but only 18,000 are in the stockpile today, most of the rest having been dismantled and their special nuclear materials [SNM] re-used.)<sup>27</sup>

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26. There have been contradictory reports on this point with respect to all the regions in question. Michael Dobbs, "Soviets Moved Warheads, Top General Confirms," *Washington Post*, September 28, 1990, p. A1; Michael Dobbs, "Soviets Deny Having Moved Nuclear Arms," *Washington Post*, October 4, 1990, p. 43.

27. The U.S. stockpile reached its peak in 1965 and has been declining steadily ever since. The Soviet stockpile grew in essentially linear fashion from the early 1950s through the 1980s. See *Ending the Production of Fissile Materials for Weapons, Verifying the Dismantlement of Nuclear Warheads: The Technical Basis for Action*, Federation of American Scientists, June 1991, p. 14.

### E. The Nuclear Weapons Design and Fabrication Complex<sup>28</sup>

The problem of responsible control in the face of political change in the Soviet Union is not confined to the weapons themselves. The Soviet Union possesses a vast and far-flung complex that produces special nuclear materials, designs weapons and firing mechanisms, fabricates the nuclear and non-nuclear components of weapons, assembles the weapons, assembles test weapons and fires them, periodically inspects and maintains deployed weapons, and transports weapons from site to site around this complex. The Soviet nuclear weapons complex cannot be left out of considerations of nuclear safety and security during this period of political change.

Publicly available data on the Soviet complex is difficult to come by, but a glance at its American counterpart gives some idea of the scale and complexity of the facilities required to maintain a nuclear arsenal. The U.S. Department of Energy's nuclear weapons complex consists of 15 major installations in 13 states. The complex employs over 100,000 people and costs about \$10 billion per year to operate.<sup>29</sup> To this government complex should be added a host of smaller facilities where subcontractors make various special components and materials for nuclear weapons.

Another indication of the sheer complexity of the task of maintaining a nuclear arsenal is to consider what goes into producing a single

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28. This section draws upon David Albright, Peter Gray, and Tom Zamora, "A Smaller Safer Weapons Complex Through Arms Reduction," *Arms Control Today*, July/August 1991, pp. 3-10; Thomas B. Cochran and Robert S. Norris, "A First Look at the Soviet Bomb Complex," *The Bulletin of the Atomic Scientists*, Vol. 47, No. 4, May 1991, pp. 25-36; "Conclusions of the International Workshop on Verified Storage and Elimination of Nuclear Warheads," Federation of American Scientists, Washington, D.C., June 1991; and Thomas B. Cochran, William M. Arkin, Robert S. Norris, and Jeffrey I. Sands, *Nuclear Weapons Databook*, Vol. IV: *Soviet Nuclear Weapons* (Cambridge, Mass.: Ballinger, 1989).

29. Albright, Gray, and Zamora, "A Smaller Safer Complex," *Arms Control Today*, July/August 1991, p. 3.

weapon. The U.S. B-61 bomb, for example, contains approximately 1800 discrete parts supplied by nearly 570 different contractors. These parts are combined into 120 sub-assemblies at nine different sites before the bomb is finally assembled at the Department of Energy's Pantex facility near Amarillo, Texas.<sup>30</sup> In addition to containing special nuclear materials like plutonium, uranium, and tritium, the bomb contains a wide range of unique and sensitive non-nuclear components like radar and pressure fuzes, electronic neutron generators, special radiation-resistant large-scale integrated circuits, electronic high-explosive detonators, insensitive high explosives, special sealants and insulation, structural support and casings, and so on. Multiply the complexity of this one weapon by the many types and vintages of nuclear weapons in the Soviet stockpile, and the scale of the overall enterprise becomes apparent.

The enormous scale of the nuclear weapons complex that supports the Soviet arsenal poses two important issues for this paper. First, the Soviet nuclear weapons complex -- with its stockpile of fissionable materials, sensitive facilities, and skilled bomb-builders -- poses a problem of diversion to political factions, terrorists, or potential proliferants around the world that is nearly as severe as the problem of diversion of assembled weapons. Second, a clear view of the scale, complexity, and cost of the enterprise may cause political leaders in the newly independent republics to realize that there is a lot more to possessing a nuclear arsenal than possession of the weapons themselves.

The facilities and activities of the Soviet nuclear weapons complex can be divided into eight categories: design and testing, production of special nuclear materials, fabrication of nuclear components, final assembly of weapons, storage and transport of weapons, maintenance of weapons, storage and transport of nuclear materials, and fabrication of sensitive non-nuclear components. It appears that this complex, while widespread, consists of a smaller number of facilities than its American

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30. Thomas B. Cochran, William M. Arkin, Robert S. Norris, and Milton M. Hoenig, *Nuclear Weapons Databook*, Vol. II: *U.S. Nuclear Warhead Production* (Cambridge, Mass.: Ballinger, 1987), p. 39.



counterpart, that they are more vertically integrated, and that most important facilities are located in the Russian republic.

**DESIGN AND TESTING.** The Soviet Union is reported to have two nuclear weapons design laboratories, like the Los Alamos and Livermore Laboratories of the United States.<sup>31</sup> Both Soviet laboratories are in Russia. These laboratories doubtless contain not only scientists and engineers intimately familiar with bomb design, but also facilities for working with plutonium and for fashioning test weapons. The two Soviet underground test sites, at Novaya Zemlya in arctic Russia and Semipalatinsk in Kazakhstan, likewise probably continue to contain sensitive facilities, even though testing has ceased at both sites due to local opposition. The location of the design of safety, security, and fuzing devices (performed at the Sandia National Laboratory for the United States arsenal) has not been revealed.

**PRODUCTION OF SPECIAL NUCLEAR MATERIALS.** Nuclear weapons contain plutonium, enriched uranium, tritium, lithium-6, and/or deuterium. Of these nuclear materials, the most important and sensitive are plutonium, enriched uranium, and tritium.

Plutonium, the material of choice for designing compact and lightweight fission "pits" or "primaries" for advanced thermonuclear weapons as well as simple fission bombs of the kind that terrorists or new proliferants would seek, does not exist in nature. It must be produced by bombarding uranium with neutrons in a reactor. Such plutonium production reactors must in turn be fueled by enriched uranium and must receive special uranium "targets" for the neutrons to convert to plutonium. Thus the production of plutonium depends on the uranium complex (see below). A third type of facility in addition to the uranium enrichment plants and plutonium production reactors are the reprocessing facilities capable of carrying out chemical separation of plutonium from the

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31. They are, respectively, the All-Union Scientific Research Institute of Experimental Physics and the All-Union Institute of Technical Physics. The first is in Sarova, south of Gorkiy, and the second is near Kasli, north of Chelyabinsk. See Cochran and Norris, "A First Look at the Soviet Bomb Complex," p. 30.

irradiated production reactor fuel rods. This chemical separation must be accomplished in the presence of high levels of radioactivity. Its final product is weapons grade plutonium, consisting mostly of plutonium-239. All three types of facility involved in plutonium production for the Soviet arsenal are located in the Russian republic, though reactors of a design similar to those involved in plutonium production are also found in Lithuania and Ukraine.<sup>32</sup>

Enriched uranium is an alternative to plutonium for making simple fission bombs. Natural uranium mining and processing is concentrated to a great degree in Kirghizia, while mining and milling operations can also be found in other central Asian republics and the Ukraine.<sup>33</sup> Natural uranium contains only 0.7% of the fissionable weapons-capable uranium isotope U-235, the remainder being mostly U-238. Uranium enriched in U-235 is used to fuel plutonium production reactors, naval propulsion reactors, and civil electricity generating reactors. Thus the Soviet Union, like the United States, has built extensive facilities for separating U-235 from U-238. The Soviets have used, or experimented with, all known uranium separation techniques, including gaseous diffusion, centrifuges, laser isotope separation, and calutrons. The Soviet Union is reported to have stockpiled a large amount of highly enriched uranium. All uranium enrichment facilities are reported to reside on the territory of the Russian republic.<sup>34</sup>

After the highly enriched uranium (HEU) is separated from the natural uranium, it is fashioned into reactor fuel rods or into bomb components. A separate set of industrial facilities is required to process the enriched uranium. In the U.S. nuclear weapons complex, uranium processing takes place in an entirely different locale from uranium

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32. Cochran, et al., *Nuclear Weapons Databook*, Vol. 4: *Soviet Nuclear Weapons*, pp. 84-85. See also Cochran and Norris, "A First Look at the Soviet Bomb Complex," May 1991, pp. 25-31.

33. Cochran, et al., *Nuclear Weapons Databook*, Vol. 4: *Soviet Nuclear Weapons*, p. 92.

34. Ibid. p. 94.

separation, although a similar geographic separation of these steps does not necessarily exist in the more vertically integrated Soviet complex.

Tritium is a heavy isotope of hydrogen that is used to enhance or "boost" the performance of the fission part of a hydrogen bomb. Tritium, like plutonium, does not occur in nature and must be produced in a nuclear reactor by bombarding lithium (Li-6) with neutrons. Tritium production for Soviet weapons has thus necessitated yet another set of nuclear facilities on Soviet territory. The Soviet weapons complex's tritium production reactors, like its plutonium production reactors, plutonium reprocessing plants, and uranium enrichment plants, are reported to be located on the territory of the Russian republic.<sup>35</sup>

Tritium decays rather quickly, with a half life of 12.26 years. Thus nuclear weapons that contain tritium for "boosting" eventually lose their explosive power unless the reservoir of tritium they contain is replenished with fresh tritium from a production reactor. The replenishment of tritium reservoirs is one form of maintenance of deployed nuclear weapons. Such maintenance procedures require periodic access to and movement of deployed nuclear weapons. This constant process of moving nuclear weapons around and transferring custody of them must not be forgotten in assessing the safety and security of Soviet nuclear weapons.

Finally, lithium-6 and deuterium are also used in thermonuclear weapons design as lithium deuteride and, though less sensitive than plutonium or HEU, swell further the size of the complex. Deuterium (heavy water) is also used in much larger quantities as a coolant and moderator in plutonium and tritium production reactors of the Savannah River type. Deuterium appears to be obtained as a byproduct of the synthetic ammonia industry at three sites, two in Ukraine and one in Armenia.

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35. Cochran and Norris, "A First Look at the Soviet Bomb Complex," *The Bulletin of the Atomic Scientists*, p. 26, lists the Soviets as having four heavy water production reactors, one at Kyshtym and three at Dodonovo. These heavy water reactors, or some of them, are the source of Soviet tritium production.



**FABRICATION OF NUCLEAR COMPONENTS.** The next set of facilities in the Soviet nuclear weapons complex are those that fashion plutonium, uranium, beryllium, and other metals into the precise shapes required, manufacture and fill the tritium reservoirs, and fashion lithium-6 deuteride components for the fusion (thermonuclear) part of the bomb. In the U.S. nuclear weapons complex, these tasks are performed at three separate sites. Each site is sensitive because it routinely holds weapons-grade materials and components.

**FINAL ASSEMBLY OF NUCLEAR WEAPONS.** Final assembly of weapons takes place at a single site in the United States (Pantex in Texas). Reportedly several sites serve the same purpose in the Soviet Union, and these sites are in Russia.<sup>36</sup> Such sites obviously contain weapons-grade material, finished weapons, and a cadre of personnel intimately familiar with bomb building.

The final assembly facility would probably also be the place where retired weapons were brought for disassembly, to have their nuclear components put into storage or used to make new weapons, and to have their non-nuclear components destroyed. The capability of such a Soviet facility to take weapons apart -- involving specially trained personnel operating special types of equipment under appropriate safety and security controls -- will determine the rate at which Soviet nuclear weapons slated for dismantlement under the Bush-Gorbachev agreement can actually be dismantled.

**STORAGE AND TRANSPORT OF NUCLEAR WEAPONS.** Finished weapons are transported from the final assembly sites to storage areas or, in the case of ICBMs, SLBMs, and naval non-strategic nuclear weapons, deployment areas. Retired weapons are returned to disassembly or storage facilities. Weapons undergoing maintenance might also be moved. The Soviet complex, like its U.S. counterpart, reportedly

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36. The authors are indebted to Frank von Hippel for providing information concerning remarks made by Victor N. Michailov, Deputy Minister of Atomic Power and Industry of the USSR, at the International Workshop on Verified Storage and Elimination of Nuclear Warheads, co-hosted by the Federation of American Scientists and the Natural Resources Defense Council in Washington, D.C., on October 18-19, 1991.

employs specially designed trucks, rail cars, helicopters, and planes for transport of nuclear weapons. Under normal circumstances there must be hundreds of Soviet nuclear weapons on the move at any one time.<sup>37</sup> The technical design of Soviet transport vehicles has not been revealed, although physical security surrounding Soviet weapons movements is reportedly heavy, involving convoys of guards and covering vehicles. U.S. weapons transport vehicles are specially designed to withstand collisions, to immobilize the wheels of trucks if drivers suspect they are about to be hijacked, and to fill with a sticky foam to immobilize intruders if breached.

The nature of the Soviet weapons transport system is important for two reasons. First, weapons in transit might be even more attractive targets for unauthorized seizure than weapons in storage. Second, if nuclear weapons are to be withdrawn from storage sites in the republics in accordance with the Bush-Gorbachev agreement to remove non-strategic weapons from deployment, the capacity of this transport system might be stretched and might cause delays in Soviet implementation of the agreement.

**MAINTENANCE OF NUCLEAR WEAPONS.** Nuclear weapons require periodic inspection to assure their safety and reliability, and to replenish their reservoirs of tritium. These necessary procedures introduce yet another set of occasions to have access to or move nuclear weapons, and another set of personnel familiar with the custody and movement of nuclear weapons.

**STORAGE AND TRANSPORT OF NUCLEAR MATERIALS.** The Soviet Union has produced an enormous amount of plutonium and enriched uranium since World War II. The total Soviet plutonium stockpile is in excess of 100 metric tons (100,000 kg), and the highly enriched uranium stockpile is in excess of 500 tons.<sup>38</sup> Only 3-7 kg of

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37. In the United States, weapons movements average 1000 vehicle trips and one million miles per year. See Sidney Drell, John Foster, and Charles Townes, "How Safe is Safe?" *Bulletin of the Atomic Scientists*, April 1991, p. 39.

38. *Nuclear Weapons Databook*, Vol. IV: *Soviet Nuclear Weapons*, pp. 86-94.

plutonium is needed to make a plutonium fission bomb. 10 kg of highly enriched uranium, or about 25 kg of uranium enriched beyond 20 percent in U-235, suffices to make a uranium fission bomb. Thus the enormous stockpile of fissionable material presents a substantial potential proliferation threat. This material poses a long-term problem of security, since the half-life of U-235 is 713 million years and the half-life of plutonium 239 is 24,400 years.

Not all of this nuclear material is fashioned into weapons. Some is stored as bulk metal in facilities designed, to prevent the fissionable material from approaching criticality. The availability of Soviet facilities for storing and transporting plutonium resulting from the dismantlement of non-strategic weapons in accordance with the Bush-Gorbachev agreement might affect the speed with which the agreement can be implemented.<sup>39</sup>

**FABRICATION OF SENSITIVE NON-NUCLEAR COMPONENTS.** A host of non-nuclear components go into nuclear weapons: detonators, neutron generators, special explosives, metal and plastic components, arming and fuzing circuitry, coded locks ("PALs"), and so on. While not dangerous in themselves, such components are actively sought by nations involved in the proliferation of nuclear weapons, and they are routinely subject to strict export controls for this reason. Relaxation of political controls over the fabrication and sale of these components in the Soviet Union would therefore pose a proliferation threat. Design knowledge of such components, in addition to the components themselves, is also a proliferation problem.

Also of concern must be the political fate of those personnel who design and operate PALs and other coded switches or who generate the codes that control nuclear use. These individuals obviously possess intimate knowledge of the workings of the command and control system. Their loyalty and control must therefore be a matter of concern.

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39. "Conclusions of the International Workshop on Verified Storage and Elimination of Nuclear Warheads," October 29, 1991, p. 4.



## F. Command, Control, Communications, and Intelligence Systems

Alongside its vast arsenal of nuclear weapons, the Soviet Union has erected a similarly large and complex system of command, control, communications, and intelligence (C<sup>3</sup>I). Though not dangerous in themselves like the nuclear weapons, these C<sup>3</sup>I systems are the stuff of classical strategic stability. It is worth questioning whether the canons of strategic stability as they evolved over 45 years of U.S.-Soviet standoff are so universal as to be pertinent to the nuclear relationship between the successor states of the Soviet Union and other nuclear powers around the world. But it is worth reciting here how these canons apply to C<sup>3</sup>I systems, because fragmentation of the Soviet Union would have serious consequences for those systems.

C<sup>3</sup>I systems -- comprising tactical warning and attack assessment sensors, command centers, and communications links -- contribute to strategic stability in several ways. They provide warning of attack and thus help assure the survivability of bombers and other retaliatory weapons that depend on warning to survive attack. They assess the size and nature of a nuclear attack, thus helping to avoid unnecessary escalation. Survivable command centers assure top political and military leaders that decisions will remain in their hands even under nuclear attack, and guarantee would-be attackers that retaliation will be possible. Communications links also need to be reliable to assure control and retaliation.<sup>40</sup>

Thus, whatever remains of the Soviet strategic arsenal, no matter in whose hands it rests, will have need of a C<sup>3</sup>I system. But an examination of the Soviet C<sup>3</sup>I system reveals that, like the arsenal and the nuclear weapons complex, it does not divide easily into self-sufficient parts that have all the capabilities so laboriously built by Soviet military authorities over the years. Without the facilities in the other republics, for example, the Russian republic would not have all of the warning systems that have

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40. For a discussion of the ingredients of a strategic command and control system, and the relationship of its parts to strategic stability as understood during the Cold War, see Ashton B. Carter, John D. Steinbruner, Charles A. Zraket, eds., *Managing Nuclear Operations* (Washington, D.C., Brookings Institution, 1987).

traditionally been considered necessary for stability. None of the other republics that now house Soviet strategic weapons possesses the warning systems, command post structure, or communications links that would be regarded as desirable according to the canons of strategic stability.

Consider, for example, capabilities for tactical warning and assessment of strategic attack. The Soviet Union, like the United States, has relied on "dual phenomenology" provided by two different types of sensors: infrared sensors aboard satellites to spot the exhaust plume of missiles in their boost phase, and ground-based radars to see upper stages (and sometimes individual warheads) in midcourse flight through space.

It is not known where Soviet warning satellites are built, but it is known that they are launched from the Plesetsk launch facility in Russia.<sup>41</sup> It also appears that the ground sites that receive downlinked data from the satellites, process it, and transmit warning messages to command centers are also in Russia. However, other satellites involved in managing nuclear forces or crises are launched from Tyuratam in Kazakhstan, including some types of photo-reconnaissance satellites, the Glonass navigation satellites (analogous to the U.S. Global Positioning System), the Soviet anti-satellite (ASAT), and most electronic intelligence and ocean reconnaissance satellites. Though located in Kazakhstan, the Tyuratam launch site is reported to be staffed mostly by ethnic Russians, who also make up most of the population of the surrounding region. Tyuratam is the only launch facility that launches the largest Soviet boosters (Proton and Energia) and that services geosynchronous orbit.<sup>42</sup>

The situation with radar warning is similarly complex. The Soviet warning radar net has never been complete. The Soviets have gradually been filling gaps in coverage, most notably through construction of the infamous Krasnoyarsk radar, which was apparently intended to fill a northeasterly gap in the direction of U.S. Trident submarine patrol areas.

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41. Nicholas L. Johnson, *The Soviet Year In Space: 1988* (Colorado Springs, Colo.: Teledyne Brown Engineering, 1988), pp. 125-131.

42. *Ibid.*, p. 7.

A great many radars, naturally are located on the periphery of the Soviet Union, and most of them are outside the Russian republic. Specifically, phased array radars are located at Pechora, Murmansk, Mishelevka, and Krasnoyarsk (not operational) in Russia, Skrunda in Estonia, Boronovichi in Byelorussia, Mukachevko in Ukraine, Lyaki in Azerbaijan, and Sary Shagan in Kazakhstan. "Hen House" radars are located in Murmansk and Mishelevka in Russia, Skrunda in Estonia, Mukachevko and Sevastopol in Ukraine, and Sary Shagan in Kazakhstan. Over-the-horizon backscatter (OTH-B) radars are located in Komsomolsk (Russia), Minsk (Byelorussia), and Nikolayev (Ukraine).<sup>43</sup>

As for command centers, all of the major fixed command posts involved in the control of strategic nuclear weapons are in Russia, in the Moscow area. Bases for airborne and trainborne command posts are in Russia. Special communications for nuclear forces, including satellite ground stations and very low frequency (VLF) broadcast antennas for submarines, are likewise for the most part in Russia.

In summary, if the four republics that currently house strategic nuclear weapons remained a single entity with regard to nuclear command and control, this entity would contain virtually all of the C<sup>3</sup>I facilities of the Soviet Union with the exception of some warning radars. Russia alone would likewise have an almost complete strategic C<sup>3</sup>I system except for radar warning. But none of the other three republics housing strategic nuclear weapons would alone possess anything like the complement of warning systems, command centers, and communications systems to perform the key functions of warning, attack assessment, and survivable control considered necessary for "strategic stability" according to the canons of Strategic Stability developed during the Cold War.

One final point is worth noting from the point of view of possible devolution of nuclear authority to the republics of the Soviet Union: in addition to the ingredients cited above that are critical from the point of view of classical stability, nuclear forces require a host of other informa-

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43. U.S. Department of Defense, *Soviet Military Power* (Washington, D.C.: U.S. Government Printing Office [U.S. GPO], 1987), pp. 48-49.



tion systems that might easily be overlooked by those unfamiliar with nuclear weapons systems. For example, secure communications and coded locks (PALs) require cryptographic support, a type of expertise that is doubtless highly centralized in the Soviet Union, almost certainly in Russia. Likewise, ICBMs and SLBMs cannot be targeted without intelligence about the geodetic coordinates of targets and without the assistance of guidance software programmed with gravity maps of the earth (themselves obtained from satellites). Cruise missiles likewise require sophisticated guidance inputs. Thus Ukraine, for example, would almost surely not be able to target the ICBMs on its territory on any but their current targets without the aid of Russia.

### G. Nuclear Weapon Delivery Systems

Finally, it is worth considering the fate of the enterprises that make Soviet ballistic missiles, bombers, cruise missiles, and other sophisticated systems. Two issues arise here. First, how would the defense industry that produces these nuclear delivery systems fragment if the Soviet Union itself fragments? Would Russia find itself with wingless Blackjack bombers, or with SS-18 guidance kits but no SS-18 missiles? More critically, the enterprises making ballistic missiles and other items of proliferation concern around the world might find themselves strapped for cash and no longer under strict foreign policy control from Moscow, and thus join China, North Korea, and other states that export ballistic missiles or other advanced military technology around the world.<sup>44</sup>

The fate of these nuclear-related enterprises, and of the people whom they employ, is itself a significant concern -- second only to the nuclear weapons complex itself.

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44. For instance, SS-18s are designed by the Yangel bureau whose main production facility is at Dnepropetrovsk in the Ukraine. The Dnepropetrovsk Missile Development and Production Center is the largest integrated facility of its type in the world. Cochran, et al., *Nuclear Weapons Databook*, Vol. IV, p. 77.

## **Part II**

### **Safe Custody During a Period of Transition: Issues and Options**

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- A. Unauthorized Use, Seizure, or Diversion
  - B. Proliferation Outside the Soviet Union
  - C. Approaches to Strengthening Control
- 

This Part II treats the first two of the three problems described in Part I that are posed by the rapid political change overtaking the Soviet nuclear weapons complex: the danger of unauthorized seizure or use of weapons or materials during a period of political and social turmoil; and the danger of leakage of weapons or their ingredients from this vast complex outside the Soviet Union, where they could greatly accelerate the proliferation of nuclear weapons to other nations. Part III then addresses the devolution of control over nuclear weapons -- assumed orderly -- to emerging political forces in the republics, creating a proliferation of legal custodians within the territory of the former Soviet Union.

Part I makes it clear that common sources of reassurance about unauthorized use or seizure and about proliferation are not well grounded in fact. Not all weapons of the former Soviet Union have coded locks or "PALs," and some have rudimentary versions that could easily be bypassed. Even relatively advanced PALs would not prevent, but only delay, abuse of a nuclear weapon seized by terrorists or political factions. It is entirely implausible that, for such weapons as do have such coded locks, President Gorbachev or any other combination of leaders at the apex is the sole source of "the codes" physically required for use.

While it is true that only four republics house strategic nuclear weapons, the non-strategic weapons are probably more deserving of concern in connection with the problem of unauthorized seizure or use, and these non-strategic weapons are distributed throughout several other republics and a great number of storage sites. It is not a straightforward matter to "affix modern PALs" to these weapons, a step frequently called for. Nor is it a simple matter to move, dismantle, destroy, or place into secure long-term storage these many nuclear weapons. What is more, concern should not be confined to the weapons themselves, but should extend to the entire complex that builds and supports them.

Finally, the Soviet arsenal and command and control system are varied and complex enough that it is doubtful that assurances from Soviet or U.S. leaders on this score are grounded in what the military calls "ground truth," that is, the actual complexity of the facts in the field, rather than the condensation of the facts briefed to high officials.

Thus there are real problems with safe and secure custody of the Soviet arsenal. This section attempts to identify the most urgent dangers and to explore the technical feasibility of suggestions that have been made to alleviate these dangers.

#### **A. Unauthorized Use, Seizure, or Diversion**

We organize our assessment of the danger of unauthorized use, seizure, or diversion of the 27,000 nuclear weapons, or sensitive weapon components, belonging to the arsenal of the Soviet Union according to the various parties that might carry out such unauthorized acts. Such a context could involve civil or military strife or civil war. These parties are: 1) the military high command; 2) regional military commanders; 3) individual military units of the Ground Forces, Navy, Air Force, and strategic offensive forces, and strategic defensive forces; 4) special custodial troops of the Ministry of Defense who guard storage sites and



supervise movement of nuclear weapons; 5) operators of facilities in the nuclear weapons complex; and 6) local political factions and terrorists.

We further divide the danger according to four potential types of abuse of nuclear weapons: 1) direct use against the United States; 2) direct use within the territory of the former Soviet Union; 3) blackmail; and 4) sale to parties outside the Soviet Union.

Table 1 summarizes our conclusions about the physical capability of the various parties to carry out different types of unauthorized actions during periods of civil or military strife.

**THE MILITARY HIGH COMMAND.** As indicated in Part I, the military high command most likely has the physical capability to issue orders directing the movement and even use of nuclear weapons that would be obeyed by subordinates, without the physical necessity for assent to such orders from the political leadership or others possessing their "footballs." Such actions would probably require the procedural collusion of the Minister of Defense, the Chief of the General Staff, and other senior leaders. Of course, subordinates in the field who had to carry out such orders could balk if they thought them improper. However, certain ICBMs can apparently be configured so they could be launched directly from command centers in the Moscow area without the participation of lower command echelons or even the launch crews in the silo fields. Thus we assess the risk of unauthorized use by the military high command as relatively high.

**REGIONAL MILITARY COMMANDERS.** The operational military units under the command of regional commanders do not normally have custody of the nuclear weapons they would use in wartime. These weapons are stored apart from their launchers under the guard of special custodians responsive to a separate chain of command from Moscow. On the other hand, regional military commanders could conceivably mount operations to take control of storage sites from their

special custodians or seize weapons convoys as they were attempting to withdraw weapons from peripheral regions.

**GROUND FORCE, AIR FORCE, AND STRATEGIC AIR AND MISSILE DEFENSE UNITS.** Individual units of the ground and air forces, and units of the strategic air and missile defenses, do not normally have custody of nuclear weapons. On the other hand, they do have knowledge of how to use weapons once they get possession of them, and possibly information about the means of security at storage sites.

**NAVY UNITS.** Navy ships apparently put to sea with full custody of the tactical nuclear weapons aboard, and the physical capability to use them. (SLBMs, treated below under strategic rocket forces, reportedly cannot be launched without external codes.) Some of these weapons might have environmental sensing devices (ESDs) that would prevent detonation except in a form of use that closely resembled their intended use, but some may not possess ESDs. All are subject to procedural safeguards that would require a conspiracy of a number of individuals to initiate an unauthorized action. Naval tactical nuclear weapons could not reach the United States unless the ship itself sailed there.

**STRATEGIC MISSILE FORCE UNITS.** ICBM launch crews and their local commanders, and SLBMs and their submarine crews, are reportedly physically incapable of launching their missiles. They may well also not have the technical knowledge or geodetic and guidance data to retarget their missiles. Maintenance crews who have access to silos thereby have access to reentry vehicles containing nuclear warheads, but at least in the newer systems these warheads are probably protected with ESDs and perhaps with other tamper-proofing mechanisms.

**SPECIAL WEAPON CUSTODIANS.** The special troops who guard storage sites and who manage transport and maintenance of nuclear weapons are, of all those involved in the command and control system, the most capable, from the physical point of view, of seizing nuclear weapons. By all accounts, they are a tightly knit, tightly controlled group

with their own chain of command, tight procedural controls, and strict tests of mental stability (similar to the Personnel Reliability Program in force with U.S. custodians) and of political reliability. Their political loyalties in today's Soviet Union, their cohesiveness as an organization, and their continuing sense that they serve a coherent command structure are critical factors about which little is known. Of any group in the command structure, these special troops have the greatest physical potential to cause trouble.

#### PERSONNEL IN THE NUCLEAR WEAPONS COMPLEX.

Bomb designers, builders of bomb assemblies for testing, custodians of the Soviet Union's excess supply of special nuclear materials, manufacturers of sensitive components, and employees of final weapons assembly facilities all have some sort of access to nuclear materials and even to finished bombs. They also possess knowledge of the deployed weapons and have personal contacts among the custodians and military. In this period of drastic cuts in military purchases, managers of these facilities may find themselves with large numbers of disgruntled workers seeking to use their special access and knowledge for political or economic gain.

#### LOCAL POLITICAL FACTIONS AND TERRORISTS.

Nuclear storage sites are well guarded, but a mass assault by local political forces determined to seize them might well overwhelm guard forces, which are probably sized for repelling small-group attack rather than such mass assaults. Custodians might also be fearful or unwilling to use force against an allegedly popular movement. Local demonstrators might also be successful in stopping convoys trying to move weapons in accordance with the Bush-Gorbachev proposals. In fact, transport might be a uniquely dangerous time for weapons security. Part I emphasized that if nuclear weapons are seized, there is no guarantee that they will be physically incapable of use by their captors: many will have no sophisticated locks or safeguards at all, and those safeguards that exist will delay but not prevent use, especially if the captors have some knowledge of how the safeguards work.



# Table 1. The Risks of Unauthorized Actions with Nuclear Weapons or Components.

## Operating Military Units

|                              | The Military<br>High<br>Command | Regional<br>Military<br>Commanders | Ground Forces, Air Forces,<br>and Strategic Air and<br>Missile Defense Forces | Navy | Rocket<br>Forces | Strategic Weapons<br>Custodians | Special Nuclear Weapons<br>Complex | Custodians of<br>Factions and<br>Terrorists | Local Political |
|------------------------------|---------------------------------|------------------------------------|-------------------------------------------------------------------------------|------|------------------|---------------------------------|------------------------------------|---------------------------------------------|-----------------|
| Direct use<br>(against U.S.) | 1                               | 2                                  | 3                                                                             |      | 2                | 3                               | 3                                  | N/A                                         | 3               |
| Direct Use<br>(internal)     | 1                               | 2                                  | 3                                                                             |      | 1                | 3                               | 2                                  | N/A                                         | 2               |
| Seizure and<br>blackmail     | 1                               | 1                                  | 2                                                                             |      | 1                | 2                               | 1                                  | 1                                           | 1               |
| Sale to<br>others            | 2                               | 1                                  | 3                                                                             |      | 1                | 2                               | 1                                  | 1                                           | 1               |

1. = Probably physically possible

2 = Probably physically difficult

3 = Probably physically impossible

Each of the physical capabilities shown in Table 1 is worrisome, but three issues stand out. First, capture or sale of non-strategic weapons is a paramount concern, both because they are widely distributed and because many types of them are likely to be capable of detonation by their captors, even if those captors have relatively meager technical capabilities. Second, theft or sale of nuclear materials or sensitive components is probably considerably easier than theft or sale of fully assembled weapons. Third, and most significantly, a systemic disintegration of the nuclear command and control system -- accompanied by a general loss of discipline or confusion of political loyalties -- would lay open virtually all of the 27,000 weapons to abuse, since in the end it is the procedural safeguards that matter most. These procedural safeguards will be reliable only so long as most custodians and groups of custodians look upward in their chain of command and see political order, reasonable prospects for pay and status, and hope for a continued future career.

## B. Proliferation Outside the Soviet Union

SALE OF NUCLEAR WEAPONS OR COMPONENTS. There is ample evidence of a huge potential global market for nuclear weapons, fissionable materials, and sensitive components like special detonators.<sup>45</sup> In view of this huge and lucrative potential market, recent reports of "entrepreneurial" activity by members of the Soviet Union's military industrial complex are sobering. Cash-strapped enterprises might do almost anything to gain hard-currency earnings, as evidenced by the recent

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45. There were reports that, in the immediate aftermath of the Iraqi invasion of Kuwait, the Saudis attempted to buy nuclear warheads for their CSS-2 missiles from China. William Safire, "Trusting Our Allies," *New York Times*, December 6, 1990, p. A27. There are more reliable reports that the Libyans sought to buy nuclear weapons from the Chinese during the 1970s. Leonard S. Spector, *Nuclear Ambitions* (Boulder, Colo.: Westview Press, 1990), p. 175.

efforts of members of the Soviet nuclear weapons testing establishment to market "peaceful nuclear explosions" to foreigners.<sup>46</sup> Many types of military equipment are reportedly for sale to republic forces within the Soviet Union and for export outside the Soviet Union. Export control laws are not being enforced in orderly fashion. Some republics have claimed to control their own borders, yet these republics have no organized customs police. Republics newly gaining their independence will need to be integrated into international norms regarding arms exports, to establish appropriate laws, and to set up systems of enforcement. None of these steps will take place quickly or automatically. They are unlikely to receive higher priority for attention than the rampant economic and political problems. Add to the potential disintegration of export control enforcement the prevalence of corruption and organized crime in the former Soviet Union, and one has the ingredients of a serious hole in the world community's efforts to stop nuclear proliferation.

**SALE OF MISSILE TECHNOLOGY.** International sale of ballistic missiles and other delivery means for weapons of mass destruction is also worrisome. Manufacturers of these systems are probably even less tightly controlled than the nuclear weapons complex.

**BRAIN DRAIN.** The shrinkage of military orders, and the general contraction of the Soviet economy, together amount to the largest dismantlement of a high-technology military establishment since the collapse of Hitler's Germany. Like the German rocket scientists who moved west to the United States or east to the Soviet Union to staff the new superpower missile programs, technical personnel associated with the Soviet nuclear weapons program may look outside the Soviet Union's territories for the money, status, and reputation to which they are accustomed.

### **C. Approaches to Strengthening Control**

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46. William J. Broad, "A Soviet Company Offers Nuclear Blasts for Sale to Anyone With The Cash," *New York Times*, November 7, 1991, p. A18.



### 1. Inventory and Data Exchange.

If disorder does descend on all or part of the Soviet Union, it will be important to have had a complete itemized inventory of weapons and critical components. Importantly, such an inventory would also provide the spur to authorities to assess how well the custodial system was functioning. A comprehensive inventory of non-strategic weapons could be called for as part of the implementation of the Bush-Gorbachev non-strategic nuclear forces (NSNF) proposals. An inventory covering warheads for strategic weapons could be added to the START agreement's data exchange on delivery systems. Finally, the United States might propose to the Soviet Union that both sides exchange data on their inventories of special nuclear materials and their production facilities.

### 2. Withdrawal to Central Storage.

The Bush-Gorbachev mutual proposals call for many types of non-strategic weapons to be removed from storage sites near their delivery systems to central storage. One can ask whether the Soviet custodial system has the number of special guard teams and specially constructed trucks, rail cars, planes, and helicopters to carry out this movement of thousands of nuclear weapons according to their normal procedures within the next few months. If not, a decision will have to be made whether it is safer to keep the weapons in place or to move them without the usual safeguards.

Though no republics have yet asserted any intention to prevent removal of nuclear weapons from their territory, there is every chance that such claims will be made in coming months,<sup>47</sup> in which case careless evacuation procedures could be even more dangerous. It is possible that the United States could assist this movement of nuclear weapons by lending its own "safe and secure" transport containers to the Soviet Union. But it remains likely that the numbers of weapons to be moved in accordance with the agreement are such that long delays can be expected

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47. David K. Shipler, "Report from Moscow: After The Coup," *The New Yorker*, November 11, 1991, pp. 47-77, esp. p. 76.

unless security is dangerously compromised. Likewise, the capacity of central storage facilities to store large numbers of weapons in close proximity might be stressed, at least if safety associated with the high explosive is considered. If that is the case, the better part of wisdom might be to arrange some novel form of multi-party in situ custody (see below).

It is desirable for nuclear weapons aboard Navy ships to be transferred to port storage immediately, and certainly for ships to cease putting to sea with nuclear weapons, even if the weapons cannot be moved to central storage sites.

### 3. Joint or International Custody in Situ.

An alternative to mass movement of weapons to central storage would be to arrange some form of multi-party custody of non-strategic nuclear weapons in their existing storage sites throughout the republics. The presence of a few non-Soviet, non-republican guards outside the storage site fence might serve as a useful buffer between the center and the republics. Such guards could warn of incidents and diversions even if they could not stop them. And multi-party custody in the period -- perhaps quite long -- before weapons can be dismantled (see below) would signal, and in effect carry out, the professed wishes of some republics to be free of nuclear weapons yet to be unwilling to allow Russia to take possession of weapons now on non-Russian territory.

The United States could offer joint custody of non-strategic weapons with the Soviet central authorities as an extension of the Bush-Gorbachev proposals. Even if reciprocity requires the United States to accept joint custody of U.S. storage sites in Europe, the enhancement of security for Soviet weapons might still be worth the price. Preferable to U.S.-Soviet joint custody would be international custody by the United Nations or the International Atomic Energy Agency (IAEA). If the precedent of an international body having custody of nuclear weapons is undesirable, custody could be given only to those states that are declared "nuclear weapon states" under the Nuclear Nonproliferation Treaty.

### 4. "Affixing PALs."

A number of analysts have called for "affixing PALs" to deployed weapons. But, as we have seen, the most advanced and reliable PALs are integral to the weapon itself and cannot simply be added as an applique. Command destruct mechanisms for ballistic missiles are also frequently recommended. Such proposals may have symbolic value, but the time and effort to install them are not commensurate with the urgency of the problem. A better idea would be to provide safe and secure storage containers for those older non-strategic weapons that probably do not have any kind of coded switches integral to the weapon or affixed to its case. Yet another possibility is the construction of vaults that are very hard to breach for these weapons. U.S. technical assistance in these tasks might be of considerable practical as well as symbolic value.

In any case, the objective for non-strategic weapons, which present the greatest danger, should be to disable or dismantle them as soon as possible, not to store them.

#### **5. Disabling Weapons.**

Before weapons are moved or dismantled, they might be disabled so that if they were seized they would be incapable of being detonated with nuclear yield. The ease of permanent disablement would depend on the precise weapon design, but all weapons depend on special geometries and arrangement of components and so should be capable of disablement. Removing tritium bottles or the batteries that power the arming and fuzing circuitry are forms of disablement for some weapons. So-called "command-disable" systems allow custodians to disable weapons if they are in danger of seizure. (Even explosive command-disable schemes that result in the scattering of plutonium if activated might be better than allowing a weapon to be seized.)

#### **6. Dismantling Weapons.**

Dismantlement involves taking the arming and fuzing system out of the weapon, separating the nuclear materials from the high explosive, and storing the special nuclear material (SNM). The rate at which nuclear weapons can be dismantled under normal procedures is determined by the capacity of special transport, the availability of special storage at the



assembly/disassembly facilities, the capacity of the high-explosive shielded halls where the bombs are disassembled, and the capacity to process the resulting special nuclear materials for secure storage. Processing plutonium need only involve melting it, casting it into hand-sized pieces, and plating the pieces to protect handlers from poisoning (radiation is not a concern).

Soviet officials have stated that the capacity of their assembly/disassembly facilities (of which there are probably two) is no more than 2000 weapons per year if normal procedures are followed.<sup>48</sup> Thus implementation of the Bush-Gorbachev agreement would take several years if these normal safeguards are not relaxed. An alternative to relaxing safeguards would be to disable weapons so they could not be detonated with nuclear yield, as discussed above, and to disassemble them later.

#### **7. Storage of Special Nuclear Materials.**

Storage of special nuclear materials is straightforward except for the obvious necessity to maintain tight security. It is possible that the United States could assist the Soviet Union in inventorying and constructing safe and secure storage for plutonium and enriched uranium.

#### **8. Disposal of Special Nuclear Materials.**

An alternative to storage of plutonium and enriched uranium (necessarily a long-term proposition, since Pu-239 has a half-life of 24,400 years and U-235 a half-life of 713 million years) is to attempt to dispose of it. Enriched uranium can be mixed with natural or depleted uranium until its level of enrichment approaches that of natural uranium.

Plutonium, on the other hand, cannot as easily be isotopically diluted. The only choice is to mix it chemically with highly radioactive, long-lived waste and store it. Reprocessing the stored mixture to recover the plutonium would be possible, but would require a special facility.

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48. See note 36 above.

Burning either material in a reactor is technically possible, but it is more feasible for uranium. Naval reactors use relatively large quantities of highly enriched uranium, but most civil reactors use low-enriched or natural uranium. Plutonium oxide mixed with uranium oxides (mixed oxide or "MOX") can be used in reactors, and plutonium can be used in breeder reactors, though neither of these paths is in common use anywhere in the world.

### 9. Contingency Plans for Evacuation, Defense, Location, and Recapture of Seized Weapons.

The U.S. Department of Energy reportedly maintains special anti-terrorist teams trained in the location and recapture of stolen nuclear weapons. These teams have neutron and gamma ray detectors for short-range detection of weapons.<sup>49</sup> DoE also maintains fast-response security teams to react to terrorist incidents. It is possible that equipment or tactics in use in the United States could be shared with the Soviet Union. In this context, the role of PALs and ESDs in delaying, if not totally preventing, terrorists from detonating weapons is crucial for giving response teams time to work.<sup>50</sup>

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49. Neutron detection is mainly useful for detecting the spontaneous fission of the small admixture of Pu-240 in the Pu-239 in the fission pit of a modern bomb. Gamma ray detectors can be tuned to detect the particular spectral emissions from various processes (fission, inelastic neutron scattering, decay of daughter nuclei, etc.); of particular value is the 1 MeV signal from a decay product of depleted uranium.

50. For background on these nuclear emergency search teams (NEST), see Mahlon E. Gates, "The Nuclear Emergency Search Team," in Leventhal and Alexander, eds., *Preventing Nuclear Terrorism*, pp. 397-402. For an excellent discussion of the potential of building on existing agency-to-agency dialogues between Soviet and American officials in this and other areas of concern, see Scott D. Sagan, "A New Agenda for Military-to-Military Talks and Operational Arms Control," in General George L. Butler, Major General Anatoli V. Bolyatko, and Scott D. Sagan, *Reducing the Risk of Dangerous Military Activities*, Center for International Security and Arms Control, Stanford University, July 1991, pp. 27-39.

## Part III

### Who Will Inherit the Soviet Nuclear Arsenal? Thinking Through the Issues and Options

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- A. How Many Nuclear Powers Among Soviet Successor States?
  - B. Discouraging Successor State Nuclear Proliferation
  - C. If One, What Then?
  - D. Successor State Proliferation: Coping with More Than One.
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It is a matter of great urgency to clarify U.S. interest in the future Soviet nuclear force, for this enormous nuclear establishment is the one element in the accelerating dissolution of the Soviet Union that can directly call into question America's safety and security. Identifying U.S. interests involves answering two fundamental questions.

First, into whose hands should the Soviet nuclear weapons establishment fall? In starkest form, this boils down to a single near-term choice: should the United States prefer one, or more than one nuclear power among the successor states of the Soviet Union? While it could also matter which republic might become a nuclear power, the first-order question is whether any proliferation in Soviet Eurasia is in the U.S. interest.

Second, given the concerns and cautions discussed in Parts I and II of this essay, how should the United States prefer that the nuclear force or forces of the successor states be configured? What force size, character, doctrine, and command and control systems should the United States encourage? How can the U.S. best see that the force size is reduced as much as possible and excess weapons dismantled?



Obviously the United States is not in a position to call the shots, either as to the dissolution of the Union and eventual form of the successor states, or as to the devolution, dispersal, or dismantling of the Soviet nuclear force. But the United States may have some important leverage if its preferences and influences are identified early and acted upon quickly and coherently. This Part III, therefore, assesses the possible answers to these questions and what the United States can do to encourage the preferred outcomes. The aim is to think through the implications and options for the United States.

**A. How Many Nuclear Powers Among Soviet Successor States?**

In term of U.S. interests, there are three possible outcomes that must be considered in analyzing the post-Soviet disposition of the Soviet nuclear establishment: zero, one, and more than one. The hierarchy of U.S. preferences follows the same order: zero would be best, while one is better than more than one. The following discussion outlines why this is true and what the United States might be able to do to push outcomes in the direction of its preferences.

**1. Soviet denuclearization: Can the United States facilitate the zero outcome?**

It is obvious that the denuclearization of Soviet Eurasia has considerable appeal. The "zero outcome" may seem very unlikely, but it should not be overlooked for three reasons. First, we are living through a period in which a number of very unlikely outcomes have actually occurred; at a time when scholars and analysts are at risk of being left in arrears by the morning headlines, no bold prospect should be neglected. Second, the benefit of this outcome from the point of view of American security would be enormous. And third, if no thought is given to what steps might help make this desirable outcome more plausible, this may guarantee that it remains a remote possibility.

The obvious and enormous advantage of Soviet denuclearization is that it would eliminate most of the nuclear threat to U.S. security and survival. To be sure, some residual, marginal nuclear threats would remain or might emerge. The Chinese, for example, have some capacity to threaten the United States with nuclear weapons. Other proliferators or nuclear terrorists could conceivably find a way to threaten the United States with one or a small number of weapons. But the specter of thermonuclear holocaust on a scale that calls into question the very survival of American society is overwhelmingly associated with the Soviet nuclear threat. The zero outcome would remove this single greatest threat to American security.

This outcome is not entirely unproblematic, however desirable it may be from the American perspective. For one thing, at the pragmatic level, it would raise the problem of the safe destruction of tens of thousands of nuclear weapons and the safe long-term disposal of huge quantities of weapons-grade nuclear materials. As noted in Part II, these are not trivial concerns. But it is undoubtedly worth tackling the management of this problem if the result would be the elimination of the large-scale nuclear threat to U.S. society. A second source of concern is the potential geostrategic consequences of Soviet denuclearization. Insofar as nuclear weapons have played a substantial role in keeping the peace, Soviet denuclearization would increase the risk of war in the Eurasian heartland.<sup>51</sup> It is at least plausible, for example, that the Chinese, the Iranians, the Poles, or others, might be more aggressive at pressing their

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51. See, for example, John Lewis Gaddis, "The Long Peace: Elements of Stability in the Postwar International System," in Sean M. Lynn-Jones, ed., *The Cold War and After: Prospects for Peace* (Cambridge, Mass.: MIT Press, 1991), pp. 22-25, which argues that nuclear weapons were a major stabilizing factor in the Cold War international system. Those who accept this argument may at least pause before embracing the denuclearization option. On the other hand, those who come to a different conclusion about the pacifying effects of nuclear weapons will have no reason for hesitation. See John Mueller, "The Essential Irrelevance of Nuclear Weapons: Stability in the Postwar World," in Lynn-Jones, *The Cold War and After*, pp. 45-69, for the argument that nuclear weapons have not been a major factor in keeping the Cold War peace.

territorial or ethnic claims against a non-nuclear Moscow. Conflict in such settings would undoubtedly touch U.S. interests to at least some extent, since it seems unlikely that the United States could (or even would want to) remain aloof from significant conflict in Eurasia. But again, an increased risk of conventional conflict in Eurasia is, we think most would agree, an acceptable price to pay for the elimination of the major nuclear threat to the United States.

The inheritors of the Soviet nuclear complex, however, are unlikely to find denuclearization to be in their interest for one clearcut reason: they will themselves face a number of actual or potential nuclear threats and will therefore have very strong incentives to retain at least some nuclear deterrent capability. Even if Moscow (i.e. the central government) were sufficiently confident of the enduring benevolence of the Western industrial nuclear powers (i.e., the United States, Britain, and France) to contemplate denuclearization, it would still face along its borders both nuclear-capable states such as China and India and potential proliferators such as North Korea, Pakistan, Iran, and Iraq. Further, pessimists among Moscow's security policymakers might worry about the long-term threat of proliferation in such states as Germany and Poland. It is easy to see why Moscow would arrive at the conclusion that security calculations require it to possess a nuclear deterrent capability. This instinct would probably be reinforced by prestige considerations: being a large nuclear power confers a status that guarantees that one is a major player on the international scene. There are, in short, strong reasons for thinking that at least one Soviet successor state will believe that its security requires the possession of nuclear weapons.

It is nevertheless worth considering, in view of the massive benefit this outcome would provide, what steps the United States might be able to take to change this calculation. Obviously, given the magnitude for Moscow of a decision to denuclearize, more than minor concessions would be required for U.S. policy to have any substantial effect on Moscow's decisionmaking. What might the United States be able to offer the Soviet Union in return for denuclearization? One possibility is that it could offer up its own nuclear forces. This would provide the deep appeal



of a symmetrical outcome in terms of Soviet and American forces. But this would solve only part (albeit admittedly much the largest part) of the nuclear threat to Moscow (which would have far graver worries about nuclear neighbors than would the United States) and, moreover, the United States would have the same powerful incentives as Moscow to retain a nuclear capability. Hence, this approach does not seem especially promising.

Perhaps more alluring would be the offer of massive economic assistance, up to and including full integration into the Western economic system. There has been much discussion of linking U.S. and Western economic assistance to political and economic reform in Soviet Eurasia. While those are concerns of great consequence, they pale by comparison with the U.S. stake in eliminating Soviet nuclear weapons.<sup>52</sup> While the scale of assistance required to weigh adequately in the balance against Soviet denuclearization is probably beyond anything hitherto under discussion in the West, public support for such assistance could be extremely high if it were understood that the United States and its allies were, in effect, "purchasing" the Soviet nuclear weapons capability and thereby "buying" a large increment of security for the United States and its allies. After all, a society that has spent tens of billions annually in an effort to neutralize the Soviet nuclear threat ought to be willing to spend commensurately for the better solution of eliminating the Soviet nuclear threat; indeed, properly construed, massive economic transfers and assistance to Moscow to facilitate denuclearization should be regarded not as mere aid but as defense spending. On the Soviet side, Moscow has a desperate need for help and few chips to offer in exchange for it, apart

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52. Part of the rationale for Western assistance conditional on Soviet political and economic reforms has been precisely a concern that Soviet instability increased nuclear risks to the United States and its European allies, whereas a measured reform program could increase the likelihood of coherent and responsible control of Soviet nuclear weapons by central authorities. See particularly Graham Allison and Robert Blackwill, "America's Stake in the Soviet Future," *Foreign Affairs*, Vol. 70, No. 3 (Summer 1991), pp. 90-91. Linking Western or U.S. assistance to denuclearization pushes this logic a step further and addresses nuclear anxieties in a direct rather than an indirect fashion.

from its nuclear capability. Not so long ago a "Grand Bargain" linking Western economic assistance to movement in Soviet Eurasia toward democracy and market economics would have been deemed preposterous. Perhaps the idea of a "Grander Bargain" that makes massive Western economic assistance conditional on Soviet denuclearization seems equally so today. But however remote the prospects, it is arguable that there is a greater than zero chance that Moscow, facing acute economic (and associated political) problems at home, might be willing to trade its only remaining bargaining card of any significance, its nuclear weapons capability, in return for large-scale U.S. investment in the socio-economic overhaul of the former Soviet Union.<sup>53</sup> At the least, therefore, an overture along these lines seems worth exploring, both at home and with Moscow.

But economic inducements, however large and tempting, will not address Moscow's nuclear-related security concerns, which therefore loom as a large potential impediment to the denuclearization scenario. A coherent U.S. approach to the denuclearization bargain must accordingly tackle the security as well as the economic side of the equation. This, too, will require thinking on a bold and dramatic scale if Moscow's concerns about being left naked against actual and potential nuclear threats are to be adequately allayed. Indeed, a "Grander Bargain" in the security realm would amount to a geopolitical revolution of breathtaking proportions. This is true because central to any security scheme sufficient to warrant a denuclearization decision by Moscow would in all likelihood be U.S. security guarantees to Moscow, including an extended nuclear deterrence commitment. This arrangement could take the form of full membership of Moscow in a revised NATO,<sup>54</sup> or a bilateral treaty

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53. For an account of Soviet economic desperation and its effects on Moscow's international behavior, see Richard A. Melcher, "The Great Soviet Sell-Off," *Business Week*, September 30, 1991, pp. 38-39.

54. This outcome is not far beyond schemes already under consideration by Western policymakers. See, for example, "U.S.-German Call for Closer NATO Ties with East," *Financial Times*, October 4, 1991, which reports an initiative by Secretary of State James

between Moscow and Washington (perhaps on the model of the U.S.-Japan treaty), or some other multilateral form. But it would probably take a full and credible security embrace of Moscow by the United States to reassure Moscow that it is adequately safeguarded against the actual and potential nuclear powers that ring its territory.

Reasoning logically, this solution ought to be satisfactory to both parties: Moscow gains access to enormous Western economic resources while providing adequately for its security, while the United States pays the price of a major overseas security commitment for the benefit of escaping large-scale nuclear jeopardy. Thinking politically, however, this solution is fraught with difficulties. It would, for example, undoubtedly be a struggle to muster the necessary support within the United States to provide security guarantees to a vast Eurasian state surrounded by potential enemies, several of whom are nuclear-armed. Further, Moscow could quite plausibly want protection against the British and French nuclear forces, raising for the United States the awkward possibility of contemplating extended nuclear deterrence commitments against its own close allies.

But the biggest problem is that it would be extremely difficult to render the U.S. commitment credible to the leaders in Moscow who would need total confidence in such guarantees if they were to place the security of their state in U.S. hands. For decades, doubts have been expressed that the United States would really be willing to sacrifice its own cities to protect Paris or London against the Soviet threat. But Moscow's leaders would need to believe fully that the United States would be willing to run similarly grave risks to protect Moscow or Minsk against, say, the Chinese nuclear threat. As the endless debates within NATO on the subject of extended deterrence demonstrate, there is no clear or fully satisfactory answer to this problem, but the NATO model probably

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Baker and German Foreign Minister Hans-Dietrich Genscher to create, under the auspices of NATO, a formal "North Atlantic Cooperation Council" that would include Soviet and East European states.



provides the basic inventory of possibilities. Extrapolating from the NATO model of extended deterrence brings one face-to-face with the question of stationing U.S. forces, including nuclear weapons, on Moscow's territory. That this would be a portentous step for both Moscow and Washington need hardly be said. Can one envision U.S. troops deployed along the Sino-Russian border, defending Moscow from the Chinese threat? In all probability, such a scenario is outside the visual capacities of both Moscow and Washington. But even if it were not, it is unlikely that such an arrangement would fully negate Moscow's fears, just as U.S. guarantees to Western Europe failed to persuade the British and French to forgo the nuclear option. At a minimum, then, one must conclude that it will be extremely difficult to give security guarantees to Moscow adequate to facilitate a decision to denuclearize.

Conceivably, however, the United States could offer large-scale assistance in the creation of defenses in return for a decision to denuclearize.<sup>55</sup> The critical question is whether Moscow could be sufficiently defended against nuclear attack that it could comfortably contemplate denuclearization. The usual arguments against strategic defenses--that they would not work effectively and that they might destabilize the Soviet-American relationship--would be vitiated in this context. Because the threats to be defended against would be far more circumscribed than the multi-thousand warhead attacks that were conceivable in the Soviet-American context, the feasibility of defenses might be greater and the risks of leaks smaller. Because the previous strategic nuclear relationship between Moscow and the United States would be dismantled, concerns about defense-induced instabilities would become moot, at least in the Soviet-American context. If Moscow could be convinced that it could,

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55. The United States has already had discussions with Moscow about cooperation in developing missile defenses. See Gene Gibbons, "U.S. Agrees to Consider Limits on Star Wars Deployment," *Boston Globe*, October 16, 1991. But the U.S. Department of Defense denied a report published in Britain that the aim of such cooperation was to help defend Moscow against successor state proliferators. See Peter Jenkins and Christopher Bellamy, "U.S. Helping Russia Build Missile Shield," *The Independent*, October 15, 1991.

with high confidence, defend itself against the various nuclear threats it faces, this might make denuclearization more acceptable.

As with the other options discussed here, though, problems abound. The dominant obstacle is the intractable fact that a small amount of leakage in defenses against nuclear weapons results in a large amount of devastation. Given the impossibility of promising Moscow leakproof air and missile defenses, its leaders could not conclude that defenses were an adequate replacement for their own nuclear deterrent capability. Even very good defenses, in short, would probably not look good enough from Moscow's perspective to warrant a denuclearization decision.

Another complication is that Moscow's defense policymakers could well have a residual concern about the nuclear threat from the United States. Not only is the problem of defending against a nuclear threat of that size and variety much more difficult, which reduces the feasibility of defenses, but it would put the United States in the bizarre position of trying to assist Moscow in attaining defenses that were adequate against U.S. nuclear capabilities. This could be acceptable in terms of U.S. interests, however, since Washington would presumably have little reason to pose a nuclear threat against a non-nuclear Moscow, particularly one to whom it might be extending security guarantees. Indeed, the United States could try to reduce Moscow's residual anxieties by offering additional deep reductions in its own nuclear forces (although presumably the United States would want to retain a fairly substantial, even if much smaller, nuclear capability for the sake of flexibility and stability). Nevertheless, an arrangement of this sort, in which the United States held Moscow at nuclear risk while helping to protect it from other nuclear threats, would be one in which Moscow would be remarkably beholden for its security to the United States. It is doubtful that Moscow's political leaders would find this preferable to retention of their own nuclear deterrent.

All told, the prospects seem poor for increasing the likelihood of Soviet denuclearization by addressing the security anxieties such a step would produce in Moscow. Upon close examination, all the available

options for providing Moscow with reason to believe that the security risks associated with denuclearization are manageable seem likely to appear less attractive than continued reliance on a nuclear deterrent capability.

Nevertheless, the moment seems ripe for a bold and creative stroke. Only rarely in international history are there opportunities for radical change that will dramatically alter the character of the system or fundamentally recalibrate the relationship between great power antagonists. We are now living through such a period. This period of enormous fluidity cannot last forever, and it seems logical to conclude that the United States ought to pursue to the fullest its maximum interests while this opportunity still exists. Hence, it seems worth asking whether the United States could offer a package of the measures described above that might tempt Moscow to seriously consider denuclearization. The package might include some or all of the following:

- \* Massive economic assistance, perhaps calculated as a percentage of U.S. or NATO defense spending, and possibly accompanied by large subsidies for foreign investment in Soviet Eurasia, and full integration into the Western economic system.
- \* Deep additional cuts in U.S. nuclear forces to reduce the nuclear threat to Moscow and help normalize the relationship between Moscow and Washington.
- \* Security guarantees to Moscow, possibly including an extended nuclear deterrence commitment, to help compensate for the nuclear deterrence effects lost via denuclearization.
- \* A large joint program for the development and deployment of air and missile defenses that could provide both the United States and Moscow with some protection against other nuclear threats.



\* A vigorous joint commitment to non-proliferation, possibly including joint military planning to provide preventive and preemptive options, to reassure Moscow about potential near- and long-term proliferators such as North Korea, Pakistan, Iran, Iraq, Germany, and Poland.

Clearly, to offer such a package in return for denuclearization would be a monumental step, entailing a fundamental reorientation of the U.S. role in Eurasia. However, considering that there is no external threat to the United States remotely as dangerous as that posed by Soviet nuclear weapons, and considering the magnitude of that threat, it would seem that the United States ought to be willing to consider taking some dramatic steps to escape this nuclear jeopardy. And while, for reasons outlined above, the prospects for the success of such an initiative are not high, it is not completely unimaginable that Moscow and the republics would find this package tempting. The economic, environmental, and political duress in the former Soviet Union is so great that Moscow and the republics might be willing to run some risks with respect to external security to secure Western assistance of the magnitude suggested above.<sup>56</sup> If political and economic conditions in Soviet Eurasia should worsen, which certainly seems possible, political leaders might grab at an offer such as this to avoid or escape internal chaos and to facilitate a return to economic solvency and political stability.

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56. A risk over the long run, however, is that a recovered Russian state or new confederal union could come to resent the denuclearization bargain as one made at a moment of dire weakness that it need not respect once its power is restored. Such resentment could damage US relations with Moscow over the long-term. This possibility might diminish the appeal of the denuclearization option. Our analysis, however, assumes that substantial cooperation between Moscow and Washington on security policy is a prerequisite for the denuclearization scenario. The existence of such cooperation may inhibit the breakdown of a one-sided denuclearization arrangement. (For insightful comments on this and other points in this essay, we are grateful to Professor Charles Glaser.)

From the perspective of advancing U.S. interests, the notion of offering a "Grand Bargain" in return for Soviet denuclearization is a low-probability, high-payoff option. But it is arguable that even a small chance of eliminating the only cataclysmic threat to American security and survival is a chance worth grasping. The alternative is to be concerned about the nuclear capabilities of one or more Soviet successor states for decades to come.

## **2. The Soviet nuclear legacy: Is one nuclear power better than more than one?**

Denuclearization is an intriguing but unlikely possibility. Meanwhile, thousands of nuclear weapons, delivery systems, and their associated nuclear infrastructure are spread throughout the fifteen Soviet republics. Short of denuclearization, this nuclear complex will for the indefinite future remain in the hands of one or more Soviet successor states. If one assumes that nuclear weapons will remain on formerly Soviet territory, what should the United States prefer in terms of the disposition of that capability? In how many hands? Whose? Configured how?<sup>57</sup>

There are a range of possible answers to these questions, but one is likely to be dominant. The United States should prefer that, whatever happens in the Soviet Union, there be only one nuclear power among the successor states of the Soviet Union. Its nuclear force should be

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57. These questions are less interesting if one assumes that Moscow will maintain sole control of the Soviet nuclear arsenal. The discussion below presumes, however, that one or more of the former Soviet republics may be tempted to exercise the nuclear option, either collectively with Moscow or individually, which raises the question of what this would mean for U.S. interests and what the United States could do about it, if anything. For a strong dissent from this premise, see Mark Kramer, "Warheads and Chaos: The Soviet Threat in Perspective," *The National Interest*, Fall 1991, pp. 94-97, which argues that "concerns about the emergence of 'fifteen nuclear powers' are unwarranted" (p. 95). Kramer's discussion is at variance with the analysis in this essay, both in general and in particulars regarding Soviet command and control.

configured in a way that ensures that reliable command and control will be available to central authorities, the arsenal is safeguarded against unauthorized seizure or use, and its force posture is sufficiently stable to reassure both Soviet and U.S. leaders and military establishments. Obviously, in practical terms this means that the United States should prefer that the Soviet nuclear complex remain firmly in Moscow's hands and that the coherent Soviet nuclear infrastructure remain as intact as possible.<sup>58</sup>

The advantages of this outcome, from the American point of view, are multiple. It would increase the likelihood that Soviet nuclear capabilities remain in the custody of a mature and experienced nuclear establishment which more fully possesses the human, organizational, and physical resources to provide for safe and sober management of these capabilities. Insofar as Moscow inherits something akin to the present Soviet nuclear establishment (less those parts that are located in newly-independent republics), it will retain a substantial command and control capability that has been attentive to the problem of preventing unauthorized use, facilities and procedures designed to protect nuclear assets from seizure by terrorists or other renegade groups, sufficient warning capability to have reasonable assurance of recognizing a nuclear attack, and enough survivable nuclear weapons to be fairly confident of having a retaliatory deterrent capability. Large-scale instability within Russia itself could call into question all of these attributes, or the political process in Russia could bring leaders to the summit of power who failed to appreciate, exploit, or preserve these attributes. Nevertheless, of the Soviet republics, only Russia (and whichever of the other republics choose to remain bound to it in a unitary state) has the potential to possess a

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58. There has been strikingly little explicit consideration in the scholarly literature of what U.S. preferences should be in connection with the future of Soviet nuclear forces. An exception is the brief discussion in Jeremy R. Azrael, "The Soviet 'Nationality Front': Some Implications for U.S. Foreign and Security Policy," in Michael Mandelbaum, ed., *The Rise of Nations in the Soviet Union: American Foreign Policy and the Disintegration of the USSR* (New York: Council on Foreign Relations Press, 1991), pp. 94-95.



nuclear complex that is, from the point of view of safety and controllability, at all reassuring from the American point of view.

In contrast, proliferation in successor states (some of whom might find themselves in immediate possession of some components of a nuclear infrastructure, including weapons and delivery systems, if they are able to obtain control of Soviet capabilities deployed on their territory) would put nuclear weapons in the hands of inexperienced and possibly unstable governments, which are likely to be populated by people new to the problem of security policy. These governments will not immediately have in place organizations and procedures for the safe and secure handling of their nuclear assets. They will have little reason for confidence in the survivability of their nuclear capabilities, and hence are likely to fear preventive or preemptive attacks, with all the destabilizing consequences that flow from such fear. Moreover, it is plausible to expect conflict within and between some of the Soviet successor states, in which nuclear weapons might become a target for grabbing in some civil conflict or become an issue or, worse, an instrument, in interstate conflict. In short, most of the reasons that the United States regards it as in its best interest to oppose nuclear proliferation apply, perhaps with special intensity, to the case of Soviet successor states.<sup>59</sup> This is a strong reason for preferring that a single nuclear state arise out of the disintegration of the Soviet Union.

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59. It has become increasingly evident in recent weeks that the Bush administration harbors these concerns and that they are influencing U.S. policy. See, for example, Strobe Talbott, "Towards a Safer World," *Time*, October 7, 1991, pp. 18-20. Commenting on precisely this set of issues, one anonymous administration official is quoted as saying, "We've got the makings of one hell of a Tom Clancy novel here" (p. 20). See also Tom Morganthau, "Will Bush's Plan Work?" *Newsweek*, October 7, 1991, p. 21, which describes the administration's concern with the "loose-nukes problem." These worries received formal expression at the NATO Summit in Rome in November 1991, at which NATO issued an appeal for safe central control of Soviet nuclear weapons. See NATO Press Communique, "Developments in the Soviet Union: Statement Issued by the Heads of State and Government Participating in the Meeting of the North Atlantic Council in Rome on 7th-8th November 1991," Communique No. S-1(91)87, November 8, 1991.

In addition, the emergence from Soviet Eurasia of a single nuclear power is likely to be by far the best outcome in terms of expediting future nuclear arms control efforts. Successor state proliferation would be at least a major complication for, and perhaps a fatal blow to, the nuclear arms control process. It would impose far more complicated security calculations on Moscow and the nuclear successor states, would probably require far more tangled multilateral negotiations, and would create a situation in which it would probably be exceedingly difficult to determine, much less successfully negotiate, equitable arms control outcomes. This consideration is of great relevance to the pursuance of U.S. interests since arms control is one of the few, (perhaps the primary) means by which Washington can exert direct influence on the size and character of the Soviet nuclear force. U.S. interests in moving toward smaller but stable nuclear forces or toward the more ambitious goal of a more cooperatively managed nuclear relationship would be impeded or thwarted by successor state proliferation.

The preference for a single nuclear state is not without costs and difficulties, however. For one thing, it involves the championing of Moscow's preservation of nuclear superpower status. This may not be universally popular in domestic terms in the United States. It also has profound geostrategic consequences for Soviet Eurasia and adjacent areas. In effect, it has to do with what sort of security order emerges in the East. And what is preferable for the United States may not be so attractive in Warsaw or Kiev.

This leads directly to a second point, which is that the U.S. preference for a single nuclear power would deeply influence U.S. relations with the successor states, in one of two contrary ways. On the one hand, it could put the United States at cross purposes with successor states that had an interest in acquiring a nuclear capability. Understandably, states that have concluded that nuclear weapons are necessary for their security may not be swayed from this path because it is inconvenient for the United States, nor are they likely to be pleased by U.S. efforts to pressure them onto a different path or prevent them from attaining nuclear capability. On the other hand, it is conceivable that the United States

could end up in the business of providing, or would be pressed to provide, security guarantees to Soviet successor states as an inducement to forgo the nuclear option. This would obviously be a major foreign and security policy step, pregnant with risks and costs. It would also put the United States in the somewhat awkward position of championing Moscow's nuclear status while offering protection to those who might be threatened by it. Thus, the U.S. interest in a single nuclear power in Soviet Eurasia may be strong and compelling, but it is not without its potential complications.

There are, in addition, some counter-arguments that should not be completely ignored. Several arguments could be made in support of the proposition that U.S. interests could be furthered, or at least not harmed, by nuclear proliferation among the Soviet successor states.<sup>60</sup> First, there is the neo-Waltzian argument that nuclear proliferation could be stabilizing and that this could be a blessing in a region that may be conflict-prone.<sup>61</sup> Against this can be set all the usual arguments about the difficulty of replicating nuclear stability in regional settings, among states that lack the enormous technical and financial resources of the United States and the Soviet Union. But if one believed that proliferation would be stabilizing if safely handled, this could shift the focus of policy from preventing to managing the spread of nuclear capabilities.

Second, it could be argued that insofar as nuclear proliferation occurs among the Soviet successor states, the resulting nuclear capabilities are likely to be mostly directed at one another. Nuclear successor states are unlikely to have any reason to threaten the United States with nuclear

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60. For an excellent discussion of the arguments about the implications of nuclear proliferation for American strategy, see Robert Art, "A Defensible Defense: America's Grand Strategy After the Cold War," *International Security*, Vol. 15, No. 4 (Spring 1991), pp. 23-30.

61. See Kenneth Waltz, *The Spread of Nuclear Weapons: More May Be Better*, Adelphi Paper No. 171 (London: International Institute for Strategic Studies [IISS], Autumn 1981).



weapons, but plenty of motivation to threaten Moscow. It could be in the U.S. interest to have Moscow worried about the nuclear threat from the Ukraine, for example, or Kazakhstan. It might be desirable if Moscow had to divert some of its nuclear attention away from the United States. This could, arguably, weaken Moscow in relative terms and thereby enhance America's geostrategic interests in Eurasia.

A third argument is suggested by the second: a basic tenet of U.S. grand strategy has been the importance of protecting industrial Eurasia against the threat from Moscow. At least with reference to Western Europe, proliferation to states such as the Ukraine or Byelorussia could produce a nuclear-equipped buffer zone that would stand between Moscow and America's industrial allies in the West. This might be thought a desirable reinforcement against the tremendous potential power and long-term threat that still resides in Russia, however tame and weakened it appears to be in the short run.

Finally, it could be argued that many of the troubles that might ensue if there is proliferation among the Soviet successor states do not centrally engage U.S. security interests. If there is nuclear terrorism within the Soviet empire or nuclear use by one successor state against another, that is a terrible human tragedy but not a threat to American security.<sup>62</sup> If one accepts this point, then it is possible to argue that the United States can accrue the benefits of successor state proliferation as described above, while the evident downsides of such proliferation seem most likely to impinge on others. Thus, it is possible to make a case that proliferation within the Soviet empire is in the U.S. interest.

There is a logic to these arguments and they cannot be dismissed out of hand, but they must be weighed against several countervailing considerations in addition to the case against proliferation outlined above.

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62. This general argument is advanced, although not in the context of Soviet successor state proliferation, by Robert W. Tucker in *A New Isolationism: Threat or Promise?* (New York: Universe Books, 1972), pp. 39-54.

One is the general American interest in global peace and stability, which is conducive to U.S. power and prosperity; insofar as proliferation produces instability or increases risks of conflict (as we believe it might in the conditions that are likely to exist in Soviet Eurasia), this is contrary to U.S. interests. Similarly, successor state proliferation could increase the risk of nuclear use, because of the difficulty most of these states would have in creating stable military balances; any nuclear use anywhere is likely to be deeply alarming to the United States and indeed to the entire international community, given the implications of breaking the taboo associated with nuclear use. A third is the distinct possibility that nuclear conflict in the Soviet empire could spill over into areas of strong U.S. interest, particularly in Europe. Fourth, Soviet successor states (or various groups within them who might get their hands on nuclear weapons) might be willing to transfer nuclear weapons to settings such as the Middle East which contravene U.S. interests and preferences; these are political environments in which the nonproliferation ethic may not be worshipped as universally as one might hope. Fifth, the United States could not be certain that a nuclear embroglio among the successor states would not directly affect its safety, since at least one among them would possess intercontinental capabilities, and conflict could produce stresses and dislocations that might result in irrational, accidental, or unauthorized nuclear attack on the United States.

In addition, it seems unlikely that the United States, as the predominant power in the system, could remain completely isolated from entanglement of some sort in a nuclearized conflict in the Eurasian heartland; if the international community has difficulty standing aside from a small, internal, and geostrategically minor conflict in Yugoslavia, could it stand by and watch a small nuclear conflict among Soviet successor states? Finally, proliferation among the Soviet successor states, particularly if it were endorsed or facilitated by the United States, could erode the nonproliferation regime more generally in ways that could redound to U.S. disadvantage. In short, even if one accepts the argument that some benefits for U.S. interests might result from nuclear proliferation in the Soviet empire, it seems very unlikely that the United States can remain insulated from all the negative consequences that would or might ensue.

All things considered, then, and in the absence of Soviet denuclearization, the U.S. interest seems to be in the retention of a single nuclear power in Soviet Eurasia. If this conclusion is accepted, the question then becomes: What can the United States do to help achieve this outcome?

#### **B. Discouraging Successor State Proliferation**

It is obvious that whatever U.S. preferences may be, the fate of the Soviet nuclear force and its associated nuclear complex will be determined by the choices made by an array of political elites in Moscow and the republics. What U.S. policy can attempt to do is to influence the incentives of those whose decisions will determine the outcome.

The ease or difficulty with which American policy can help to push outcomes in the direction of its preference will depend on the inclinations of the decisionmakers it is attempting to influence. As of this writing, it is still unclear how many and which of the republics will opt for full independence. Nor is it at all certain that any of those republics that opt for complete sovereignty will choose to become nuclear weapons states. Insofar as there is no interest on the part of Soviet successor states in exercising the nuclear option, then plainly the challenge for U.S. policy is slight and the operational concern will be to devise a scheme acceptable to the newly independent republics for the safe and secure removal of the nuclear weapons on their territory. As noted in Parts I and II, complete removal would raise some risks in terms of transportation and storage, but at least the successor state proliferation problem would not exist. This would be the best case, one that ensures the result that the United States prefers.

This outcome cannot be taken for granted, however, despite whatever rhetoric actual or potential Soviet successor states have promulgated on the subject. There are three reasons why one or more successor states may be tempted to acquire a nuclear weapons capability: security, status, and leverage. The security motivation could be strong. Unfortunately, all of the non-Russian republics of the former Soviet Union



will, if they choose to become fully independent, suffer the uneasy fate of living with a giant neighbor whose potential power is tremendous and whose historical propensity to devour its neighbors is proven definitively by their own unpleasant history of subjugation to Moscow.<sup>63</sup> All will feel relatively small and weak by comparison. All are likely to be uneasy if, and some may find it unacceptable that, Moscow is the sole nuclear power in Soviet Eurasia. Moreover, quite apart from relations with Moscow, some of the republics have grievances toward one another. Some have borders that are both disputed and difficult to defend. The successor states will not find it easy to be confident of their own security.

In an ideal world, it could be hoped that relations between Moscow and newborn neighboring states, and among the republics more generally, would evolve in ways that would bring to mind U.S.-Canadian relations. But this is a part of the world with a difficult history, ridden with historical, ethnic, religious, and territorial enmities.<sup>64</sup> The potential for friction and hostility is great. One or more successor states could regard its long-term security problems as intractable in the absence of a nuclear deterrent capability. They could easily feel, as the states of Eastern Europe have felt, weak, vulnerable, and isolated, and conclude that only nuclear weapons can provide a level of security compatible with the full enjoyment of sovereignty.

A second motivation, less primal than security but nevertheless potentially real, is a desire for the status that accompanies being a nuclear weapons state. The nuclear club is a select group. In a variety of international settings, including the NPT regime, the nuclear weapons

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63. This presumes, of course, that Russia itself holds together. Even if it does not, however, a state centered on Moscow and comprising only European Russia would still be large and potentially powerful enough to worry to its neighbors. On the menace that might emanate from a jingoistic Russia, see Azrael, "The Soviet 'Nationality Front'," pp. 95-96.

64. See the essays in Mandelbaum, ed., *The Rise of Nations in the Soviet Union*, passim.

states are accorded special standing and have different rights and responsibilities from other states. Nuclear status guarantees that a state is a major player, at least in a regional context and also possibly in some global contexts. And it is hard for others to ignore or leave out a nuclear weapons state when negotiating arms control or other regional security arrangements. These kinds of considerations could produce nuclear temptation in some of the Soviet successor states. It is plausible that the Ukraine, for example, would prefer that the nuclear status of Soviet Eurasia not be determined in bilateral discussions between Moscow and Washington. Having nuclear status itself would be one way of precluding that possibility.

Third, Soviet successor states may want to get their hands on nuclear weapons, at least for a while, because of the diplomatic leverage that they may provide.<sup>65</sup> Because they are an asset of great concern to others, they are a potential bargaining chip of substantial proportions. They could have large value in two very important relationships: those with Moscow and those with the United States (as well as other Western powers). It could be very tempting for a successor state to retain or exercise a nuclear option in order to see what it could get in the way of concessions for giving up the nuclear assets in its hands. From Moscow, it might seek military cuts, security assurances, and even preferential economic arrangements. From the United States and the West, it might seek aid, trade, and access to Western economic and security institutions. It is hard to see what other bargaining assets the successor states possess or might possess that would give them leverage equivalent to that provided by a nuclear capability.

Inherent in the idea of a bargaining chip is the premise that the chip eventually will be cashed in. In that sense, the bargaining chip rationale for successor state nuclear forces poses less of a long-term

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65. For clear evidence that some politicians in the republics are thinking in these terms, see Frances X. Clines, "Soviet Army on Defense in the Ukraine," *New York Times*, November 12, 1991, p. 1.

proliferation risk than the other motivations for nuclear acquisition. Nevertheless, it raises at least two serious worries. One is that safety and security risks will persist as long as the successor state retains custody of nuclear weapons on its territory, for reasons described in detail above. The other is that successor states may exercise the nuclear option in order to obtain a bargaining chip, but over time become convinced of the security or status benefits of their nuclear capability. It seems reasonable to worry that the longer a successor state possesses nuclear assets, the more likely it is that there will be a nuclear debate that comes out the wrong way from the perspective of U.S. preferences.

There are, in short, several motivations for acquiring nuclear capability. They could manifest themselves quite strongly among Soviet successor states. None of this means that successor state proliferation is inevitable or that any among them is sure to exercise the nuclear option.<sup>66</sup> But it does mean there is reason to believe (and to fear) that they may be tempted. Consequently, it seems sensible to design U.S. policies to try to circumscribe the successor state proliferation problem and to discourage those who may be tempted to acquire nuclear weapons.

What can the United States do? There are a number of ideas worth considering:

#### 1. Minimize Soviet disintegration.

One solution to the successor state proliferation problem would be to have no successor states. In terms of American policy, this would mean supporting the emergence of a single unitary state from the former Soviet Union. In this case, however, policies aimed at minimizing proliferation in Soviet Eurasia may come into conflict with broader U.S. geostrategic interests. From the point of view of enduringly circumscrib-

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66. Rose Gottemoeller, for example, emphasizes the strong anti-nuclear sentiments that exist in several of the key republics. In Gottemoeller, *Future Options for the Soviet Nuclear Arsenal: Two Scenarios*, unpublished ms., The Rand Corp., October 1991, pp. 8-9.



ing Moscow's potential threat to areas of vital interest to the United States, such as Western Europe and Japan, a single, Moscow-centered state does not seem to be the ideal outcome. Indeed, one could argue that, proliferation worries aside, the U.S. interest is in maximum disintegration of the Soviet Union, since this would shrink the power base controlled by Moscow while surrounding it with states that would have a strong incentive to balance against it. If nuclear weapons did not exist, there would seem to be a strong case for supporting the full fracturing of the Soviet Union.<sup>67</sup> As we have seen, nuclear weapons change this calculation dramatically.

In fact, U.S. policy over the past several years has tilted strongly towards Moscow and against disintegration. There has been a clear preference for dealing with central authorities in Moscow and a clear reluctance to deal with, legitimize, or recognize the republics as sovereign entities. However, since a number of republics have either already attained or have declared themselves to be on the road to full independence, this outcome now seems impossible. Still, to the extent that the disintegration of the Soviet state can be minimized, proliferation worries can be circumscribed. The full extent of Soviet disintegration has yet to be determined, and it makes a big difference in terms of proliferation whether republics such as the Ukraine, Byelorussia, and Kazakhstan opt for autonomy within a single, Moscow-centered state or for full sovereignty. Therefore, the United States still has an incentive to prefer as little disintegration as possible.

In the face of bitter historical enmities and intense nationalisms in Soviet Eurasia, the United States may have little leverage on the

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67. The argument that U.S. interests are best served by international peace and stability, which the disintegration of the Soviet Union could undermine is a reasonable counter to the pro-disintegration argument. But, in the absence of nuclear weapons, it is not a decisive argument, since there is no guarantee that the existence of a single Soviet successor state would necessarily facilitate international peace and stability. Moreover, it is arguable that "managed disintegration" could provide the geostrategic benefits of fracturing while minimizing the destabilizing effects.

disintegration question. But it can try to create incentives for union rather than independence. This could be attempted, for example, by making it clear that U.S. (and perhaps Western) economic assistance will be negotiated with and funnelled only through Moscow. Similarly, the United States could make it clear that it will not discuss security matters separately with the republics, but only with central authorities in Moscow. There is no guarantee that such policies will be effective, however, and they cannot be undertaken except at some (probably considerable) cost in terms of U.S. relations with the republics; indeed, insofar as substantial disintegration is inevitable whatever U.S. policy is attempted, these measures could be counterproductive, antagonizing the very states that the United States will need to influence if it is to have any effect on the nuclear proliferation decisions of newly independent republics. Moreover, such measures are difficult to square with the general U.S. commitment to the principle of self-determination. In any event, given the present trend toward disintegration in the Soviet Union, it does not seem likely that the West's successor state proliferation worries will be completely ameliorated by Moscow's success in holding together a wide union of formerly Soviet republics. Accordingly, the United States should be sensitive to the risk of damaging relations with successor states by its efforts to bolster Moscow.

## 2. Encourage withdrawal of nuclear weapons from the republics.

A second approach would be to encourage Moscow to pull all its nuclear capabilities back into territory that it would surely control, whatever the extent of Soviet disintegration. There have been indications that Moscow may have been doing just this, to at least some limited extent.<sup>68</sup> Obviously, to the extent that this can be done safely and

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68. See, for example, Edward L. Warner III, "Command and Control of Soviet Nuclear Weapons and Risks Associated with an Uncertain Soviet Future," Testimony to the House Armed Services Committee, July 31, 1991, p. 3; Peter D. Feaver, "Does Moscow Know Where Its Nukes Are?" *Los Angeles Times*, December 22, 1990; and Kramer, "Warheads and Chaos: The Soviet Threat in Perspective," p. 96, all of which suggest that Moscow has pulled nuclear weapons out of areas of ethnic unrest.

successfully, it would ameliorate at least the near-term concerns about what might be called "instant" successor state proliferation. As noted in Part II above, however, the pragmatic difficulties associated with removing, transporting, destroying, or safely storing large numbers of nuclear weapons, particularly in conditions of political instability, make this a solution a complex one. It is desirable to minimize the risks associated with the withdrawal option by interim multi-party custody of weapons, disablement in place, and U.S. technical assistance for movement and dismantlement.

Another concern is that an effort by Moscow to withdraw nuclear weapons and associated capabilities from the republics could create a powerful "window" logic for the republics, forcing them into a "decide now, grab now" posture vis-a-vis the nuclear weapons on their territory. This could well provoke an immediate grab, if only to preserve an option (or a bargaining chip) that was about to disappear. Not only would this put custody of nuclear capabilities in the hands of the potential proliferators, but the act of grabbing nuclear weapons now in the possession of and protected by forces controlled by Moscow could be a source of conflict. Thus, it is probably not desirable to encourage a rapidly closing window of opportunity regarding custody of nuclear weapons in republics whose nuclear weapons policies are ambiguous or unsettled. Furthermore, some republics seem inclined toward the position that the Soviet nuclear weapons on their territory should not go back to Moscow even if the republics themselves do not wish to retain them.<sup>69</sup> An attempt by

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69. This appears to be the position of the Ukraine, for example, whose president has stated that the nuclear weapons on its territory would be moved only for the purpose of destruction under international agreement. See "Ukraine Demands a Voice on Nuclear Disarmament," *Boston Globe*, October 5, 1991. Evidence on this point can also be found in Fred Hiatt, "Soviet Republics See A-Weapons as Bargaining Chips," *Washington Post*, October 24, 1991. President Nazarbayev of Kazakhstan has also rejected the idea of moving nuclear weapons from the republics to Russia. See Rose Gottemoeller, "Future Options for the Soviet Nuclear Arsenal: Two Scenarios," unpublished ms., The Rand Corp., October 1991, p. 9. According to one report, Russian President Boris Yeltsin has "offered to take all his neighbors' nuclear weapons onto his territory for safekeeping," but this has been rejected by the other republics. Clines, "Soviet Army on Defense in



Moscow to remove nuclear capabilities could also provoke conflict in which these capabilities were both the proximate cause and the primary stake. Without a doubt, this is a scenario best avoided. The weapons pullback option, then, offers an endpoint that is compatible with the U.S. preference for a single nuclear state in Soviet Eurasia, but raises transitional problems of a magnitude that call into question the wisdom of this path. It would be downright counterproductive if Moscow's pullback policy were to provoke a nuclear weapons grab in one or more of the republics.

**3. Utilize START or the NPT to remove nuclear weapons from the republics.**

A third option, which could be regarded as a variant of the "weapons pullback" idea, would be to exploit existing agreements that are or might be applicable to the weapons deployed in the republics. For example, the Strategic Arms Reduction Treaty (START) could be used as a mechanism to arrange for removal of strategic nuclear forces from Byelorussia, the Ukraine, and Kazakhstan. (This would supplement the Bush-Gorbachev initiative, which provides the framework for addressing non-strategic nuclear weapons in the republics.) The START agreement requires Moscow to reduce from 2483 delivery systems to 1600. The required reduction of 883 substantially could cover all of the 352 ICBMs and 30 heavy bombers deployed in the three non-Russian republics in which strategic nuclear systems are deployed.<sup>70</sup> Further, the treaty calls for the elimination of 154 SS-18 ICBMs; the entire strategic deployment in Kazakhstan consists of 104 SS-18s. So all of the strategic weapons deployed outside of Russia could be eliminated by implementing the START agreement. This might be more acceptable to the republics in question than a simple Moscow pullback, since this would take place under an international agreement, the weapons in question could be

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Ukraine."

70. Soviet deployment numbers are from "Soviet Strategic Nuclear Weapons Outside the Russian Republic," Fact Sheet, The Arms Control Association, October 10, 1991.

destroyed rather than returned to Moscow's arsenal, and there would be outside (that is, American) monitoring of the process. Indeed, this appears compatible with the declared policy of the Ukraine, at least.<sup>71</sup> Thus, capitalizing on START would be a logical way of addressing some of the worrying capabilities and of involving the United States in the process.

For this to be a meaningful option to address near-term proliferation concerns, several requirements have to be met. First, the treaty must be promptly ratified, otherwise it has no legal force. On the U.S. side, the expectation is that the treaty will be ratified, but the Senate ratification hearings are not scheduled to begin until early 1992. On the Soviet side, the picture is even more vexing. The disintegrative tendencies that have taken hold since the abortive coup in August 1991 have undermined the Soviet parliament, to the point that many members are not participating in its activities and there is open skepticism that it can play any legitimate legislative role. Hence, even though President Gorbachev has called on the Soviet parliament to provide early ratification of START,<sup>72</sup> it is not clear that it will be capable of such action, and equally unclear how meaningful it would be in the context of post-Soviet internal politics even if it did succeed in ratifying the treaty. Despite these ratification delays in both Washington and Moscow, the usefulness of START could be hastened if Presidents Bush and Gorbachev were each to proclaim immediate adherence to the treaty, not instead of but as a prelude to ratification.

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71. See "Ukraine Demands a Voice", and Francis X. Clines, "Legislators Back Effort to Create a Ukrainian Army," *New York Times*, October 22, 1991, which reports Ukrainian Foreign Minister Anatoly Zelenko's reassurance that most strategic nuclear weapons in the Ukraine would be eliminated with the implementation of existing "disarmament proposals" (presumably referring to START). "Ukraine Seeks Say in Nuclear Arms," *Washington Post*, October 25, 1991, reports that the Ukrainian legislature has pledged to observe the START agreement.

72. Paul Quinn-Judge, "Gorbachev Protests Arming of Republics," *Boston Globe*, October 22, 1991, provides a discouraging account of the first session of the new parliament.

A second requirement is that the relevant republics have to be willing to respect the implementation of the treaty on their territory. If they are, it would be fairly easy and straightforward to utilize START to tackle the problem of strategic forces located outside of Russia. Otherwise, this will appear to be merely a pretext for the weapons pullback option. Third, the implementation schedule associated with the treaty would have to be accelerated. The treaty allows seven years to bring force postures into compliance with agreed limits. For example, Moscow agreed to dismantle 18 SS-18s per year over a seven-year period.<sup>73</sup> This rather lengthy timetable may reflect pragmatic concerns about the difficulties of dismantling and disposing of large numbers of nuclear systems, but it does not accord with the preference to move swiftly to circumscribe the nuclear problem in the context of grave political instability. Perhaps there should be follow-on discussions with Moscow about implementing the treaty as soon as possible.

Finally, Moscow must agree that it is desirable to accord priority in treaty implementation to the forces outside the Russian republic. It is likely to do so, since successor state proliferators are likely to have primarily Russian locations on their nuclear target lists. But it should not be forgotten that START provides freedom to mix within the proscribed quantitative limits, so that while the treaty can be applied to forces outside Russia, it need not be if Moscow chooses otherwise.

If these four requirements can be met (probably a big "if"), the START agreement may prove a useful instrument for addressing some of the concerns associated with the successor state proliferation problem. While it would deal with only some of the nuclear weapons deployed in the republics, from the American point of view it is important to remember that these are the systems that can reach and are presently targeted against the United States.

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73. For START provisions, see "U.S.-Soviet Strategic Nuclear Developments," *The Military Balance, 1991-1992*, pp. 216-220; and Dunbar Lockwood, "START Treaty Signed: Brings Historic Cuts in Strategic Warheads," *Arms Control Today*, September 1991, pp. 25-32.



A related point is that START provides an elaborate scheme for verification, encompassing a number of varieties of intrusive inspection, including continuous monitoring of a small number of facilities (namely, mobile ICBM production plants), short-notice inspection of facilities and deployments, and routine on-site inspection, as well as data exchange.<sup>74</sup> Insofar as it would be useful, informative, and perhaps even reassuring to have Americans on the ground in the former Soviet Union legitimately examining big chunks of the Soviet nuclear infrastructure and able to interact with their interlocutors on the other side, START is the mechanism which facilitates that also.

The Nuclear Non-proliferation Treaty (NPT) is another existing agreement that may have applicability and utility in addressing the nuclear weapons issue in the former Soviet Union. Moscow has a clear legal obligation under Article I of the NPT, whereby the nuclear weapons states "undertake not to transfer to any recipient whatsoever nuclear weapons...or control over such weapons or explosive devices directly, or indirectly," and agree "not in any way to assist, encourage, or induce any non-nuclear weapon state to manufacture or otherwise acquire nuclear weapons."<sup>75</sup> So long as Moscow claims to be, and is regarded by the international community as, the sole legitimate guardian of the full Soviet nuclear arsenal, Article I would clearly apply to the relationship between Moscow and independent successor states and would prohibit any transfer of nuclear weapons or associated technologies from Moscow to the republics. If the republics genuinely want to be non-nuclear, but prefer to be denuclearized under international agreement and with international monitoring, this could be accomplished in the context of the NPT and under the auspices of the International Atomic Energy Agency. Indeed, republics that intended to accede to the NPT could declare their willing-

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74. For a brief account of the START verification regime, see Sidney D. Drell, "Verification Triumphs," *Bulletin of the Atomic Scientists*, November 1991, pp. 28-29.

75. The text of the NPT agreement can be found in Coit Blacker and Gloria Duffy, eds., *International Arms Control: Issues and Agreements* (Stanford: Stanford University Press, 1984), pp. 392-396.

ness to accept safeguards as required under Article III of the NPT, which would provide a legal framework for international monitoring of nuclear "materials" on their territory.

Conversely, Moscow could appeal for help from the IAEA in fulfilling its NPT obligations in the face of recalcitrant republics. In either case, the NPT provides grounds for international involvement in monitoring and perhaps resolving the issue of nuclear spread in the former Soviet Union.

Thus, existing agreements may provide leverage in tackling the successor state proliferation problem, and have the substantial advantage, in view of the potential urgency of the situation, that they can be utilized relatively rapidly.

#### 4. Take advantage of declared positions of the republics.

As indicated in the above discussion of START, some of the republics have issued statements about nuclear weapons that are reassuring in one or more respects. Ukrainian officials, for example, have specifically stated that they have no interest in being a nuclear weapons state and that they are willing to observe the START treaty.<sup>76</sup> Kazakhstan and Byelorussia have also declared denuclearization of their territory to be a

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76. "Ukraine Wins Troop Victory," *Financial Times*, November 4, 1991, reports the Ukrainian defense minister as saying that the Ukraine has no desire to take over the nuclear weapons on its territory but wishes a veto over their use. This is consistent with other official Ukrainian statements about nuclear weapons. See particularly, "Statement by the Verkhovna Rada of Ukraine on Non-Nuclear Status of Ukraine," mimeo, October 24, 1991, which rejects the nuclear option and pledges adherence to both START and the NPT; and "Statement by Mr. Victor Batiouk, Representative of Ukraine in the General Debate on Disarmament Issues in the First Committee at the 46th Session of the UN General Assembly," mimeo, October 28, 1991, which reiterates these commitments. (We are grateful to Professor William Hogan for making these documents available to us.)

goal.<sup>77</sup> It is hard to know how much weight to attach to declaratory rhetoric in a period of turbulence. But the United States has little to lose in treating these declared positions as serious policy statements and attempting to act accordingly. If they are in fact genuine policy pronouncements, this would expedite the policy implementation process. If the commitment of the republics to these positions is shaky, prompt steps that take them at their word may lock them into their declared policy. And if the attractive rhetoric obscures a genuine desire to possess nuclear weapons, this approach would at least force such intentions out into the open and make clear which successor states presented proliferation problems.

Conceivably, the United States could implement this policy by holding bilateral talks with those republics that had expressed a preference for non-nuclear status, with the aim of identifying a scheme for removal of nuclear weapons that is acceptable to the republics. This could result in multiple and fragmented discussions, however, that would implicitly treat the republics as nuclear powers and that would probably further undermine what little authority is left in the center.

A better approach might be to encourage the relevant political authorities, including the central government and the appropriate republics, to jointly enter negotiations with the United States on matters relating to the implementation of existing nuclear arms control measures, and perhaps also on the creation of new agreements or arrangements.

One set of talks could focus on rapid implementation of START, and would involve the four republics in which strategic forces are deployed, plus the central government (i.e., a "4+1" negotiation).<sup>78</sup> This could serve as a catalyst and a forum for serious discussions between

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77. See Gottemoeller, "Future Options for the Soviet Nuclear Arsenal," p. 8.

78. We are grateful to Professor Robert Legvold of Columbia University for suggesting this formulation to us.



the republics and the center on this question.<sup>79</sup> It would also be a logical setting for discussion of the legal and practical considerations associated with arms control obligations that the republics may inherit from the Soviet Union. And most importantly, it could explicitly address the procedures and timetables associated with the application of START to the strategic forces in the republics. For republics which truly wished to be rid of these weapons, this process could only be beneficial. Similarly, a joint discussion of the implementation of the Bush-Gorbachev initiatives could take place, involving the United States, the central authorities in Moscow, and all of the republics in which tactical nuclear weapons are deployed or stored. This could entail detailed collaborative investigation of the implementation process, including identification of bottlenecks and of ways in which U.S. technical or financial assistance might facilitate the operational fulfillment of the Gorbachev unilateral initiative of October 5, 1991.

These ideas may not be the only or the best ways of capitalizing on the apparent present willingness of some of the republics to forgo the nuclear option. But the present position of these republics represents an opportunity, perhaps transitory, to congenially address the issue of nuclear spread in Soviet Eurasia in a manner compatible with both U.S. interests and their stated policies. There should certainly be serious consideration of ways in which the United States can capitalize on this opportunity.

**5. Threaten to withhold recognition and aid unless non-nuclear status is assured.**

A fifth policy option would be to make important elements of U.S. relations with successor states conditional on their non-nuclear status. This could take the form of an insistence that they sign the Nuclear Non-Proliferation Treaty (NPT) and accept the associated international

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79. According to one account, some such discussions did take place in the aftermath of the August 1991 coup attempt. See Kenneth L. Adelman, "Just a Sideshow," *Bulletin of the Atomic Scientists*, November 1991, p. 21.

inspection regime if they wish to have normal or friendly relations with the United States. The United States might also wish to insist that the successor states pledge their adherence to the arms control agreements, such as START and Conventional Forces in Europe Agreement, that Moscow has signed, although how those agreements would apply to newly independent states whose existence was not contemplated in the negotiations remains to be seen. There might need to be negotiations among the Soviet successor states on the joint implementation of the agreements.

A number of aspects of the relationship with newly-independent republics could be linked to non-nuclear status. The United States could withhold diplomatic recognition until the NPT had been signed.<sup>80</sup> Economic assistance and normal economic intercourse (including access to U.S. markets and capital) would be deemed to be out of the question until clear and tangible evidence of non-nuclear status had been given. The United States could, on the same conditions, also resist or discourage the inclusion of now-sovereign republics in international institutions such as the UN, the Conference on Security and Cooperation in Europe (CSCE), and the European Community (EC). Moreover, it could pressure its Western friends and allies to follow the same policies. Taken together, such measures could substantially retard the acceptance and integration of possible Soviet successor states by the international community and could compound their inevitably difficult economic circumstances. Such policies would not be onerous to Soviet successor states that had no interest in having a nuclear capability. They could provide incentives to avoid the nuclear option in states that were debating the issue. And they would substantially penalize any successor state that chose to exercise the nuclear option.

The threat of ostracism could substantially undermine the status motivation for acquiring nuclear weapons. If it seems likely that, far from

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80. The US does not seem to have made this an explicit condition for recognition of the independence of the Baltic states, which it has already formally recognized. From the point of view of discouraging successor state proliferation, this was an unfortunate precedent to set.

joining an exclusive club, a state turns itself into an international pariah by acquiring a nuclear capability, presumably this path would be considerably less attractive.<sup>81</sup> The security calculation, if regarded by successor states as sufficiently compelling, could still overpower this inhibition, but this would surely be a more difficult choice.

The potential costs of such an approach should not be ignored, however. It must be assumed that successor state proliferators will be deeply alienated by this treatment. They may feel, with reason, that sovereign states have the right, and even the responsibility, to make adequate provision for their national security and that they ought not be punished if, in their judgment, their security requires nuclear weapons. They may resent the double standard inherent in the imposition of anti-proliferation sanctions by outsiders (the United States or NATO) who have themselves heavily relied on nuclear weapons for their own security. Moreover, threats of punitive sanctions may be both antagonizing and ineffective, since the ways that past proliferators have been dealt with may cast doubt on threats of outcast status. None among Britain, France, China, Israel, or India has suffered full or lasting opprobrium as a consequence of its nuclear status.<sup>82</sup> Why should Soviet successor states feel that they will end up being different? And they may feel that a few

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81. This inverts the argument that states become proliferators because they are pariahs, suggesting that states become pariahs because they proliferate. For states which are already international outcasts, there may be little to lose. But this will not be the case with most of the formerly Soviet republics, who seem to want to be integrated into the international system and who clearly need economic assistance. On the pariah notion, see Richard Betts, "Paranoids, Pygmies, Pariahs, and Non-Proliferation," *Foreign Policy*, No. 26 (Spring 1976), pp. 157-183.

82. On this point see Michael Nacht, "The Future Unlike the Past: Nuclear Proliferation and American Security Policy," *International Organization*, Vol. 35, No. 1 (Winter 1981), pp. 193-212. Nacht surveys the impact of proliferation on US relations with each of these states and concludes: "The political relationship between the U.S. and each new nuclear weapons state was not fundamentally transformed as a result of nuclear proliferation" (p. 202).



years of international discomfort are a price worth paying in order to join the nuclear club.

There are, finally, the potentially adverse consequences of creating international outcasts. In a condition of "pariahhood,"<sup>83</sup> states have little to lose in flouting international standards of behavior, little reason to cooperate in creating or maintaining international regimes or norms, and considerable motivation to behave in reckless or dangerous ways. Moreover, pariahs often find aid and comfort with one another; it is conceivable that a state such as Kazakhstan, finding itself ostracized, would turn to the Iraqs or Libyas for help. This is an outcome that would not be regarded as desirable from the American point of view. Thus, the dilemma for the United States is that threatening sanctions seems one of the most direct and powerful ways of influencing the incentives of potential successor states proliferators, but it also risks forfeiting (or at least damaging) U.S. influence in precisely the most worrisome cases, successor states with a strong interest in proliferating.<sup>84</sup>

It is not clear that there is an adequate answer to this dilemma. But the United States might be insulated from the adverse effects of an anti-proliferation ostracism campaign by internationalizing it. This could take two closely related forms. First, a redoubled commitment to strengthening of the international norm of non-proliferation could help persuade potential successor state proliferators that the international community is unwilling to accept future proliferation, despite what the previous record suggests. Second, the campaign of ostracism should be multilateral, so that it does not appear that the United States is taking it

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83. This term was coined by Robert Harkavy in "Pariah States and Nuclear Proliferation," *International Organization*, Vol. 35, No. 1 (Winter 1981), p. 135. Harkavy discusses the international implications of pariah state desperation.

84. See Zbigniew Brzezinski, "Conflicted in Europe," *New York Times*, November 10, 1991, p. 19, for the related argument (made in the specific context of the Ukraine) that the United States should work not to resist Soviet disintegration but to insure that its consequences are as benign as possible.

upon itself to punish states who undertake policies deemed unacceptable by Washington. Logically, this suggestion is sound, but it requires that the international non-proliferation regime function more effectively than it has to date. And the United States, as the sole superpower, may be unable to avoid the adverse repercussions of aggressive non-proliferation policies no matter how multilateral they appear to be. All things considered, it is arguable that it is better to interact with and attempt to influence potential or actual successor state proliferators than to ostracize and alienate them.

**6. The "bribery" option: offer aid, payment or other concessions in return for denuclearization.**

The obverse of threatening sanctions is to offer inducements in return for non-nuclear status. In one variant, the United States could guarantee aid packages or promise to facilitate successor state inclusion in international economic institutions such as the International Monetary Fund, in return for repudiation of the nuclear option. Another variant would involve a more straightforward financial transaction: the United States could literally buy nuclear weapons and special nuclear materials from the republics or central authorities in Moscow.<sup>85</sup> The market value of such items is high, and sales of this sort could transfer hundreds of millions or even billions of dollars to economies with a desperate need for hard currency.<sup>86</sup>

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85. Thomas L. Neff, "A Grand Uranium Bargain," *New York Times*, October 24, 1991, proposes precisely such a deal. Neff suggests that the resulting stocks of plutonium and enriched uranium could be used to fulfill Department of Energy commitments to deliver reactor fuel to domestic users.

86. Discussion of the commercial value of nuclear materials is found in *Ending the Production of Fissile Materials for Weapons: Verifying the Dismantlement of Nuclear Warheads* (Washington, D.C.: Federation of American Scientists, June 1991), p. 35, esp. note 58.

This scheme would, in effect, respond to the bargaining chip motive for nuclear acquisition by inviting the republics to cash in their chips. It would create an incentive for the republics to gain the benefits of disposing of the nuclear assets on their territory in a manner acceptable to the United States.

There are several possible complications. First, a declared U.S. policy of offering inducements could create an incentive for the republics to grab the nuclear bargaining chips at their disposal. This raises the distinct prospect that a policy of inducements could help create the problem that it aims to solve. Perhaps this wouldn't matter since the end result, if the policy succeeded, would be denuclearization of the republics in question. Still, this approach may increase the odds of at least temporary successor state custody of nuclear assets, if only to sell them off. However, if the policy does not succeed completely, the result would be more nuclear spread among Soviet successor states. Second, if successor states are going to sell off their nuclear assets, it would be natural for them to want the highest possible price. This could result in awkward bargaining in which the successor states seek to squeeze more tribute out of the United States, in which the U.S. willingness to "bribe" provokes a successor state effort to "blackmail." This would reduce the likelihood of the success of the policy, since it is not certain that the United States could or would be willing (particularly given domestic constraints) to pay the asking price. Third, it may not be wise to encourage successor states to think in terms of selling their nuclear capabilities to the highest bidder because there may be states other than the United States who are willing to meet almost any asking price. States that covet nuclear capabilities, such as Iraq or Libya, may be willing to pay staggering sums for one or a small number of nuclear weapons. This would clearly not be compatible with U.S. interests.

#### **7. Offer security guarantees.**

The United States could provide security guarantees that might help to assure newly-independent republics that they did not need nuclear weapons for security reasons. It has been suggested above that some of



the successor states would regard themselves as facing severe security problems, and that the security motivation for acquiring nuclear weapons could therefore be strong. Perhaps such states would be willing to trade the nuclear option for security guarantees from the United States or NATO, particularly if preserving the nuclear option would have adverse repercussions in the international community. The question is then whether the United States, either singly or in league with its allies, would be willing to grant such guarantees.

The calculation is by no means an easy one, because set against the proliferation benefit would be several potential complications. These are all related to the fact that this would put the United States in the position of committing its power against Moscow. This would tend to harm relations with Moscow, but even more worrying, it would mean that, in the event of conflict (far from unlikely in this part of the world), the United States would be caught in the middle. This might be a risk worth running in return for denuclearization, but is it worth running only to contain the proliferation problem? Perhaps not, if other options might be sufficient.

#### **8. Discourage proliferation and encourage responsible behavior by nuclear education?**

Finally, the successor state proliferation problem might be limited through a program of "nuclear education." This could involve both official and unofficial efforts to inform leaders in the new republics of the economic, organizational, foreign policy and security costs and implications of attempting the nuclear solution.

Nuclear education could have some counterproductive effects. It is arguable that exposing decisionmakers in the republics to information and expert advice about nuclear matters is more likely to whet their appetites than to discourage them. Nuclear education could draw this set of issues to the attention of policymakers who have hitherto been more inattentive than not. It could cause these policymakers to have a greater

appreciation for the bargaining chip value of nuclear weapons. These are, in our view, legitimate and serious concerns.

But the political elites of fully independent successor states may be making decisions about the nuclear weapons on their territory in an environment of potentially strong security, status, or bargaining chip motivations for acquiring a nuclear capability. Because of the previous centralization in Moscow of all authority and expertise regarding foreign and military affairs, these elites are unlikely to be well versed in these matters. Indeed, democratic processes could thrust into positions of authority individuals who are neophytes in the world of politics, and for whom the realm of foreign policy, much less the arcana associated with the nuclear weapons complex, is unfamiliar turf. If it were possible to be certain that all of these new policymakers were surely and definitively going to repudiate the nuclear option, there would be little need for nuclear education.

The problem is that until all nuclear weapons are removed from the republics (except Russia), an option exists, or may be thought to exist, about which a decision must be made. And whatever the rhetoric today, minds may change tomorrow about the desirability of possessing nuclear weapons. Severe rupture of relations between the republics, the outbreak of hostilities among them, a resurgence of totalitarian forces in the center or in Russia would put the nuclear weapons issue in a different light. Some of these elites may end up debating (or may already be debating) the nuclear option. It would be unfortunate if they made their decision on the basis of ill-informed or mistaken beliefs about the implications and consequences of their choice. Some of these new political authorities could end up presiding over their own nuclear force despite U.S. preferences and policies. It is desirable that such elites understand what is required to provide responsible management of their nuclear assets.

As a consequence, we think it is worth considering what messages a campaign of nuclear education should convey and what likely myths or misimpressions it could usefully correct. We believe, on balance, that it is more useful to communicate these ideas than not.

Nuclear education should reinforce the perception that pursuing the nuclear option can produce damaging consequences for a state's foreign relations. It was suggested above that a vigorous and concerted campaign of ostracism has disadvantages from the U.S. point of view, but even short of such a campaign, the successor states should understand that the acquisition of nuclear weapons will at least complicate, and perhaps damage, its relations with other states and international institutions.<sup>87</sup> For states that seem to have both a desire and a need for integration in and help from the international community, this is likely to be one of the most important considerations against the nuclear option.

Strong emphasis on the ostracizing consequences of the nuclear option might result in covert proliferation along the lines of the Israeli model; Israel seems to have been able to reap the benefits of presumed nuclear capability while avoiding many of the threatened costs to proliferators.<sup>88</sup> For a state such as Kazakhstan, whose small population and unfortunate geostrategic location, wedged between Russian and China, confront it with difficult security problems, a covert nuclear capability may seem the best compromise between insecurity on the one hand and ostracism on the other. Obviously, the more Soviet successor states fear revanchism in Moscow, the more incentive they will have to pursue the

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87. As one analysis puts it, the West should offer the former Soviet republics "some friendly dos and don'ts," and suggests that "the ex-Soviet republics should expect Western help only if they play by the rules." "Divide and Free," *The Economist*, October 19, 1991, pp. 18-19. This analysis does not shy away from conditional sanctions, suggesting that threatening sanctions is substantially different from and in contradiction with "friendly dos and don'ts."

88. See Shai Feldman, *Israeli Nuclear Deterrence* (New York: Columbia University Press), for a description and analysis of Israel's nuclear strategy. "The Bomb That Never Is," *The Economist*, October 19, 1991, pp. 45-46, suggests that the Israeli nuclear stockpile consists of more than 100 weapons. A new study claims that the U.S. government "consciously ignored" the covert Israeli nuclear program although it knew of its existence; this option is not available to the United States in cases where the nuclear program is overt. See Joel Brinkley, "Book on Israel's Nuclear Arsenal Says It Exceeds Estimates by U.S.," *New York Times*, 4October 20, 1991, p. ?.



nuclear option despite the risks that this path holds of becoming a pariah state, and the covert approach may seem the best way to limit or avoid the international political damage of nuclearization.

To circumscribe the covert nuclear option, a campaign of nuclear education should indicate the difficulties associated with the covert option so that it does not seem a ready solution to the threat of pariah status for proliferators. First, it should highlight the difficulty of maintaining secrecy while gaining the deterrent effects of nuclear weapons. Unless nuclear capability is at least suspected, little gain in security will be achieved (except a dramatic option of last resort in the event of conflict, which might in fact seem useful to a vulnerable state such as Kazakhstan); but if nuclear capability is suspected, the adverse diplomatic consequences may ensue. Second, an education campaign should point out that covert nuclear programs will depend on secrecy, which may be difficult to maintain in the face of the commitments to transparency and openness that the international community may demand (for example, IAEA inspections in the context of the NPT) if the state in question is to avoid some degree of ostracism. Raising these points should reduce the chance that emphasis on ostracism will change only the form, but not the probability, of successor state proliferation.

A campaign of nuclear education should also help potential successor state proliferators to understand fully the facts and implications of the nuclear choice they face. There are several points which, if properly appreciated, might reinforce the tendency to reject the nuclear option.

First, potential successor state proliferators should understand the fragmentary, incomplete, and possibly unsuitable character of the nuclear assets that they might seize as an inheritance from the Soviet Union. While it is natural for the international community to worry about the "instant" proliferation that could result if one or more republics grab a piece of the Soviet nuclear legacy, it is important that this concern not mislead the republics into exaggerating the extent of their nuclear option. Obviously, this point applies to varying degrees to the various republics.

The Ukraine or Kazakhstan have within their borders rather large numbers of nuclear weapons and delivery systems. Others appear to have no nuclear weapons at all on their territory but may possess some piece--a production facility or early warning radar, for example--of the Soviet nuclear infrastructure. But none of the republics, except Russia, will possess anything close to the full infrastructure necessary for maintaining and managing a coherent and responsive nuclear weapons capability. Moreover, as noted in Part I above, the nuclear weapons they inherit will probably decay as usable devices in the absence of a full nuclear infrastructure capable of servicing the arsenal. In addition, nuclear capabilities grabbed by the republics may have little immediate relevance to their security needs. Kazakhstan may gain control over SS-18 fields, for example, but these missiles are targeted on the United States; Kazakhstan is not likely to have the ability to easily or quickly retarget these missiles in a manner more consistent with its own security predicament. No doubt the ability to immediately take possession of trained personnel, facilities, and even weapons and delivery systems constitutes an enormous head start for potential proliferators. But the yawning gaps and inadequacies in the nuclear short-cut provided by the Soviet nuclear inheritance should not be overlooked. This should be understood by the emerging security elites in the newly or potentially independent republics.

Second, decisionmakers in the republics should have a thorough understanding of what is required to possess a complete and coherent nuclear complex that meets both their own national security needs and international standards of responsible custodianship. Awareness of these requirements may discourage some potential proliferators, and it is preferable that those who actually do proliferate meet these standards. There is much more to this than just grabbing whatever weapons or other assets that happen to be sitting in a republic's territory. A range of nuclear production facilities would be necessary to maintain and modernize nuclear weapons. An independent command and control system, including both organizational and technical dimensions, would be necessary to transform inherited nuclear capabilities into a flexible and politically responsive and responsible force. Organizational, technological, and doctrinal arrangements would be required to deploy a survivable

and usable operational force. Procedures would need to be developed to provide for the safety and security of the nuclear arsenal. None of these attributes is readily attained and it would require a substantial investment of political, organizational, human, and financial resources to pull together a full nuclear infrastructure.<sup>89</sup> As the cases of Britain and France attest, it is possible for non-superpowers to meet these challenges in a satisfactory way. But it is neither easy nor cheap nor inevitable. Leaders of potential successor state proliferators should be made aware of both the limitations and the inadequacies of the nuclear assets that they have on their territories, and the full scope of the nuclear infrastructure that they do not have.

Third, security elites in the republics should understand that nuclear weapons are not a simple and perfect solution to their security problems. There may be a great temptation in a number of republics to assume that their otherwise severe security problems can be solved with a wave of the nuclear magic wand. It is, of course, pointless to deny the security benefits provided by a nuclear deterrent capability, given that U.S. and Western security policy has for decades been based on the presumed deterrent effects of nuclear weapons. However, nuclear weapons are, at most, a partial answer to the security problems of states. All of the nuclear weapons states have faced challenges to their perceived interests, fought wars, and coped with fears of insecurity despite their nuclear capabilities. Israel, for example, has long been assumed to possess a nuclear capability, but this has not obviated its need for strong conventional forces or prevented intense military conflicts with its neighbors; virtually no one would suggest that nuclear weapons have "solved" Israel's security problems, except insofar as they provide it with an ultimate sanction in the event that catastrophic defeat is threatened. In conditions of nuclear stalemate, as might exist between the Ukraine or

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89. An indication of the difficulty of developing a nuclear infrastructure is the scope and cost of Iraq's nuclear program, which involved many billions of dollars and a large complement of skilled personnel. See, for example, David Albright and Mark Hibbs, "Iraq's Nuclear Hide-and-Seek," *Bulletin of the Atomic Scientists*, September 1991, pp. 22-23.



Kazakhstan and Russia, there may be plenty of room for lesser conflicts to occur. A number of non-nuclear states have fought nuclear states, protected by the strong international norm against nuclear use. Taking all these factors into account, it is illusory to believe that nuclear weapons are the sharp blade that will cut completely through the Gordian knot of successor state security problems.

The security elites should also understand that nuclear weapons can themselves cause security problems: it can be dangerous to pose a nuclear threat to one's neighbors. To do so guarantees that one is on the target list of nuclear-armed adversaries, and greatly increases the incentive of non-nuclear adversaries to themselves acquire nuclear weapons. It may also create preventive or preemptive incentives to adversaries. This may be particularly germane to the Soviet successor states since their nuclear capabilities will, as noted above, be incomplete and potentially vulnerable for some time to come. Will their neighbors be willing to stand by and watch idly while they go about the business of constructing a full nuclear infrastructure? Or will they be tempted to foreclose or defer a potential nuclear threat by attempting to damage or destroy the emerging nuclear infrastructure?<sup>90</sup> These concerns could become acute if, as is widely believed to be the case, the conditions for nuclear stability are not easily replicated in non-superpower settings. Nuclear education can help successor state security elites avoid exaggerating the security benefits of nuclear weapons and underestimating their security costs.

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90. Vivid evidence of the concern that emerging nuclear programs can cause in other states is the Israeli reaction to the Iraqi nuclear program in the early 1980s, which culminated in the June 1981 air attack on Iraq's Osiraq research reactor. For a detailed account of Israeli perceptions and decisionmaking, see Shlomo Nakdimon, *First Strike: The Exclusive Story of How Israel Foiled Iraq's Attempt to Get the Bomb* (New York: Summit Books, 1987). Shai Feldman, "The Bombing of Osiraq Revisited," *International Security*, Vol. 7, No. 2 (Fall 1982), pp. 114-142, notes that in the aftermath of Osiraq, Israel explicitly articulated a preventive war doctrine in connection with potentially adversaries proliferating (p. 122).

Fourth, nuclear education can prevent the Soviet successor states from exaggerating the economic advantages of the nuclear option. It is important to disabuse them of any illusions that might derive from the misleading but oft-voiced claim that nuclear weapons are "cheap." This claim is a relative and conditional statement. It is based primarily on the fact that the United States has for many years spent only 10-20 percent of its defense budget on nuclear capabilities. Thus, it is true that compared to the U.S. defense budget, nuclear weapons are relatively cheap. But the amount of money involved is still enormous: about 50-60 billion dollars a year, including about ten billion dollars annually in the Department of Energy budget for operating the nuclear weapons production complex.<sup>91</sup> The Ukraine or Kazakhstan will not regard the U.S. nuclear capability as a proper point of reference. A more relevant comparison may be with the British and French nuclear programs. According to published information, the expenses associated with these programs run about \$2 and 5 billion per year, respectively.<sup>92</sup> If one takes \$3.5 billion as a rough indicator of the annual expense of a British/French-caliber nuclear program, the cost of the nuclear option can be put in perspective by noting that this sum exceeds, equals, or would constitute the overwhelming fraction of the national defense budgets of all but the eight or so biggest defense spenders.<sup>93</sup> Furthermore, the British and French figures may be misleadingly low because of their nuclear cooperation with the United States and their membership in NATO, which has provided joint (often U.S.) intelligence and early warning capabilities and pooled air defenses.

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91. These numbers are taken from William W. Kaufmann and John Steinbruner, *Decisions for Defense: Prospects for a New Order* (Washington, D.C.: Brookings, 1991), pp. 7-8; and *The Military Balance, 1991-1992* (London: International Institute for Strategic Studies, 1991), p. 18.

92. Stockholm International Peace Research Institute, *SIPRI Yearbook 1991: World Armaments and Disarmament* (London: Oxford University Press, 1991), p. 131; *SIPRI Yearbook 1990: World Armaments and Disarmament* (London: Oxford University Press, 1990), pp. 37-41. It is worth noting widespread skepticism that the published numbers fully reflect real costs.

93. IISS, *The Military Balance, 1991-1992*, pp. 212-215.

It is likely to be harder and more costly for a Soviet successor state to attain similar capabilities without help from the United States (let alone in the face of active U.S. discouragement). The amounts involved would probably not be unaffordable for a state the size of the Ukraine (although they would constitute a major strain on the resources of the smaller Soviet republics), but they would guarantee that it would have one of the largest defense budgets in the world. Security elites in successor states should understand that "relatively cheap" does not mean "cheap."<sup>94</sup>

In sum, a campaign of nuclear education can contribute to the effort to impede successor state proliferation in two ways. First, it can reinforce appreciation of the ostracizing effects of nuclear weapons. This is probably the strongest inducement to accept non-nuclear status, since even those with a full understanding of the difficulties of the nuclear path might otherwise conclude, that the benefits exceed the costs. Second, it can provide a fuller understanding of the problems, costs, and limitations associated with the nuclear option. In itself, this may not be sufficient to ensure effective resistance to the nuclear temptation, but it ought to discourage the false belief that the nuclear option is a quick, cheap, easy, and adequate solution to the security problems of successor states.

All told, it is not clear how much leverage the United States has on the successor state proliferation problem. One or more of the Soviet successor states might believe that its security problems are so acute as to require a nuclear capability, whatever threats and promises the United States and its Western allies make. Moreover, the past record of international acquiescence, however reluctant or grudging, proliferating states may make it difficult to credibly threaten ostracism. If China or India or Israel have not become pariahs as a result of their nuclear programs, why should the Ukraine or Kazakhstan or Byelorussia believe that the international community will succeed in treating them any differently? Nevertheless, while the United States cannot be confident that

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94. See Thomas Graham, "Winning the Nonproliferation Battle," *Arms Control Today*, September 1991, p. 11.



its policies will shape the ultimate outcome, it surely can influence the incentives of the states facing the nuclear decision. It is possible that some combination of conditional sanctions, security guarantees, and nuclear education will help to discourage successor states from exercising their nuclear option.

### **C. If one, what then?**

In the best outcome from the American point of view (apart from denuclearization), only a single nuclear power will emerge in Soviet Eurasia, whatever the result of the crisis in the former Soviet Union. In practical terms this will mean that Moscow retains some form of control over the Soviet nuclear infrastructure.<sup>95</sup>

**1. Forms of one.** It is important to recognize, however, that this single nuclear power could take a number of different forms, and that these various forms could vary in attractiveness to the republics and in implications for the United States. The ultimate disposition of the Soviet nuclear force in the "only-one" scenario could vary along two dimensions. One has to do with the physical location of the nuclear arsenal. The other has to do with the distribution of command authority.

#### **A. Physical distribution of nuclear weapons.**

**1. Russia only.** In this variant, all strategic and tactical nuclear weapons are withdrawn from all the republics other than Russia. This could be done even if some number of republics join with Russia in a new union.

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95. Also in the range of possible outcomes is a scenario in which Russia denuclearizes but one of the successor states retains control of the nuclear assets on its territory. Undoubtedly this would entail a very different sort of nuclear relationship with the U.S. than that which may exist with Moscow.

**2. The new confederation.** It seems possible that some among the republics will choose to remain part of a unitary state centered on Moscow. Nuclear weapons could be withdrawn from all republics that opted for full independence, but remain distributed across the republics that join a new union. Thus, for example, if Kazakhstan chooses union with Moscow in a confederal structure, the nuclear weapons that are deployed or stored on its territory would remain. It is plausible that both Moscow and Kazakhstan would, in this scenario, see little reason to worry about getting nuclear weapons out of Kazakhstan.

**3. In situ.** At present, strategic nuclear weapons are located in four republics, and tactical nuclear weapons in an even larger number. For the time being, this is the status quo. It could remain so for some time to come, and we cannot exclude the possibility that this would be the case throughout the former Soviet Union's transition to a new status.

**b. Distribution of command authority.**

**1. Moscow controls the nuclear arsenal.** At present, Soviet nuclear weapons seem still to be subject to the sole control of central authorities in Moscow. This could remain true whatever the eventual result with respect to the physical distribution of nuclear weapons. The likelihood of this as a long-term outcome will probably depend on the extent and nature of the disintegration of the Soviet Union. It seems very unlikely, for example, that a fully sovereign Ukraine with nuclear weapons on its soil would be willing to have those weapons under the exclusive control of Moscow.

**2. Multiple voices, central control.** A second possibility is that Moscow and the republics would work out consulta-

tive arrangements that gave the republics a voice in decisions regarding nuclear use, but left the formal command authority in Moscow's hands. This might be analogous to nuclear decisionmaking within NATO, whereby the United States pledges to consult its allies but has not relinquished exclusive control of its nuclear assets.

**3. Collective decisionmaking.** Third, multiple parties (e.g., the central authorities plus some or all of the republics) might be given a genuine role in nuclear decisionmaking. For this to entail more than nominal involvement, it would be necessary to install technologies and procedures that would give all the parties the physical capacity to participate in the authorization of nuclear releases. One such arrangement is unit veto, whereby the opposition of a single decisionmaker prevents authorization. Alternatively, some form of voting system, requiring some minimum number of votes, could be worked out. A more circumscribed, and hence probably more realistic, version of collective decisionmaking would allow each of the republics true participation in nuclear release of weapons on its own territory. This, indeed, seems to be what several republics are now clamoring for.

Taken together, these two dimensions describe a range of possible outcomes for the location and control of the Soviet nuclear force. The full range of possibilities is described in the following matrix.



## DISTRIBUTION OF COMMAND AUTHORITY

|                                      | Moscow<br>controls        | Multiple<br>voices | Collective<br>decisions |
|--------------------------------------|---------------------------|--------------------|-------------------------|
| L<br>O<br>C<br>A<br>T<br>I<br>O<br>N | Russia<br>only            |                    |                         |
|                                      | -----                     |                    |                         |
|                                      | New<br>Confed-<br>eration |                    |                         |
|                                      | -----                     |                    |                         |
|                                      | In situ                   |                    |                         |

This matrix does not incorporate variations in political outcomes, such as how much disintegration occurs or how large a new confederal union of republics might be. Such outcomes obviously matter, since they will determine the particular details of various nuclear arrangements. For example, a new confederation could consist of as few as two or as many as twelve of the republics. However, the basic principles and categories defined by the matrix are not affected by these variations. Thus, the notion that nuclear weapons should be deployed only in the territory of members of the new union can be applied however many members there may be. Similarly, all weapons could end up in Russia whether it is alone as a fully sovereign state or is a member of a union.

Nevertheless, we do not mean to ignore or downplay the political factor. We are merely trying to suggest that the parameters that define the matrix capture some of the interesting dynamics of the situation and

help to define choices and preferences. There are a number of points that need to be highlighted.

First, almost by definition, all of the nine outcomes defined by the matrix are acceptable in terms of U.S. interests, in the sense that all are forms of one nuclear power and hence are preferable proliferation. Still, some forms of one might be preferable to others from the American point of view, as discussed below.

Second, within these parameters, the United States need not be highly sensitive to the distribution of command authority. Any version of "one" is preferable to multiple nuclear powers. However, collective decisionmaking might be the preferred outcome, on the grounds that the likelihood of nuclear use would be reduced if there were, say, a multiple veto system in place. The distribution of command authority may be a more critical issue in negotiating and implementing nuclear arrangements within the former Soviet Union. Republics might insist on a move away from "Moscow rules" as the price for allowing nuclear weapons to be withdrawn from their territory. Alternatively, republics might insist on some control over the weapons on their own territory. Insofar as the republics find "Moscow rules" to be unacceptable, providing them some voice in decisionmaking may be necessary if Moscow is to retain control of the full arsenal. At least in theory, such arrangements might allow Moscow to preserve its control over nuclear weapons situated in newly and fully sovereign republics. The United States, after all, preserved control over nuclear weapons it deployed on the territory of its allies. However, in reality it seems likely that independent republics would not be keen to host nuclear deployments of Russia or the new confederation.

Third, the status quo is presently still defined by the lower left hand cell of the matrix; that is, the "in situ, Moscow controls" situation. This, is an acceptable outcome from the American point of view. Indeed, at present there is reason to be grateful that this circumstance has proven to be so durable in a context of social duress and political instability. The problem is that this arrangement is rather unstable. One aspect of this instability is pressure from the republics to move toward collective

decisionmaking, which would move reality into one of the adjacent columns in the "in situ" row; this, however, is not particularly worrying. Rather, the concerns have to do with the safety, security, and proliferation risks associated with wide geographic distribution of nuclear weapons.

This leads directly to a fourth consideration: which in the matrix of choices should the United States prefer as an alternative to the potentially unstable status quo? The best outcome would seem to be a move toward the "Russia only" solution. We have already noted some of the risks and dangers that might accompany a policy of withdrawing nuclear weapons back into Russia. But if this could be done safely and successfully, it would be the outcome most resistant to alterations in political circumstance. Any solution that leaves nuclear weapons distributed across the republics is subject to the vagaries of politics that might opt for union today but independence tomorrow, or voicing anti-nuclear rhetoric this year but exercising the nuclear option the next.

The "new confederation" option, whereby nuclear weapons are withdrawn from republics that gain full independence but remain distributed among those that remain linked to Moscow in the confines of a single confederal state, is not a bad outcome either. It addresses the most immediate successor state proliferation worries and allows control of the nuclear arsenal by a single political entity. However, because it leaves nuclear weapons dispersed across multiple republics, it is less resilient than "Russia only" to dramatic changes in political circumstances. Given the possibility that enormous instability will persist for a considerable length of time to come, this is a significant disadvantage compared with the "Russia only" outcome.

A final point is that the overarching goal of U.S. policy is to keep the range of choice within the confines of this matrix. The problems and complications will arise when one or more republics begin to prefer outcomes that spill out of the matrix, that is, when the "more than one" option begins to prevail over any form of the "only one" outcome.

## **2. What new nuclear relationship?**



What sort of strategic nuclear relationship should the United States seek to develop with this new nuclear state, whatever form it takes? Obviously, the answer will depend to a large extent on the political character of that state. If the Center again comes to be ruled by political forces fundamentally hostile to the United States, then opportunities for dramatic change will probably be foreclosed and the goals for the United States might again resemble the traditional Cold War aims: preservation of a stable deterrent relationship and maintenance of the existing arms control frameworks. This would restore the familiar problem of managing a deterrent relationship in an adversarial environment. As we have witnessed over the past half century, the issues associated with this endeavor are hardly trivial, but they require little attention here since they draw on accustomed modes of thought and behavior.

More challenging is the scenario in which relations between Moscow and Washington remain and even grow increasingly harmonious. These circumstances raise the prospect of completely refashioning the nuclear relationship between the former Cold War antagonists. Given an opportunity of this magnitude, there is a need to think comprehensively and creatively about U.S. interests and preferences and how they might be attained.<sup>96</sup>

### **3. In the short run: Collaborative management of the transition?**

A number of serious and worrying issues will arise in making the transition from the Soviet nuclear capability that was, to the Moscow-controlled nuclear capability that will be, under the one-nuclear-power scenario. Many of these near-term issues are addressed in Part II and need not be reconsidered here. There are, however, two points that deserve attention here.

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96. Particularly helpful in provoking ideas on these subjects is Charles Glaser, *Analyzing Strategic Nuclear Policy* (Princeton: Princeton University Press, 1990).

First, across nearly the whole range of near-term issues and worries (that is, with respect to safety and security and successor state proliferation), Moscow's interests will be essentially identical to Washington's. Neither will have any reason to wish that any part of the Soviet nuclear arsenal falls into other hands, whether state or sub-state, within or outside the former Soviet Union. This strong common interest could and should give rise to a considerable degree of cooperation in bridging the transition from the old nuclear relationship to the new. There should be exploration of what sorts of consultative mechanisms could give tangible expression to this cooperation. There does seem to have already been a fair degree of government-to-government and military-to-military contact on these issues. This is all to the good, and these contacts should be nourished and perhaps even institutionalized. Additionally, explicit attention should be given to the possibility that the United States could provide financial or technical assistance that would help to address some of the problems discussed in Part II and facilitate transition to desired outcomes.

Second, although Moscow will inherit most of the Soviet nuclear infrastructure, the disintegration of the Soviet Union will deprive it of various pieces of the mosaic; the extent of this will obviously depend on the extent of disintegration. This will certainly result in some gaps and frailties in Moscow's remaining capability, notably in early warning capabilities. This could easily cause worries in Moscow about the survivability of its deterrent force, that are not in the U.S. interest if they give rise to destabilizing consequences such as quick launch strategies. Hence, it will be in the U.S. interest to seek ways to reassure Moscow that its transitional strategic vulnerabilities will not be exploited.

#### **4. In the longer run: The hierarchy of U.S. preferences.**

We have noted above that Soviet denuclearization would be the ideal outcome in terms of enhancing U.S. security. If that result is unavailable, what then should the United States prefer?

##### **a. No intercontinental capability?**

The next best outcome is quite obvious: if Moscow is going to have nuclear weapons, it is best for the United States that it not have intercontinental delivery systems. This force posture would have the attraction of allowing Moscow to retain a nuclear deterrent capability vis-a-vis its regional nuclear adversaries while removing the direct nuclear threat to the United States. Thus, it might be more acceptable to Moscow while providing nearly the same benefit to the United States as denuclearization. Indeed, the dynamic of the deal might resemble that described above in connection with full Soviet denuclearization. That is, the benefit to the United States would be enormous and the price it ought to be willing to pay should be accordingly high, and might encompass concessions in the realms of both security and economics. However, a symmetrical outcome, in which the United States also forgoes intercontinental capability, seems unlikely because this would undermine the U.S. ability to offer extended deterrence guarantees to its allies (thereby enhancing the incentive of some states to proliferate) and to deter "nth-country" threats around the world.

Therefore, the issue is what package of concessions would make an asymmetrical deal (one that leaves the United States in a position to threaten Moscow although Moscow cannot threaten the United States) acceptable to Moscow. This would probably be an easier deal to cut than the denuclearization proposal. Presumably, since Moscow would retain a regional nuclear deterrent capability, the issue of security guarantees and cooperation in air and missile defenses would be less pressing. This could allow the United States to escape from direct nuclear jeopardy without paying the price of deep entanglement in the security arrangements in post-Soviet Eurasia. Similarly, Moscow could probably afford to be less worried about the proliferation problem since its possession of deterrent capabilities would reduce the imperative of a vigorous joint non-proliferation policy (although this might remain desirable in any case). Thus, the heart of an asymmetrical deal that eliminated Moscow's intercontinental capability would probably be a package that combined further deep cuts in U.S. strategic forces with large-scale economic assistance. As with the denuclearization scenario, this seems a price worth contemplating in return



for the removal from American society of the threat of thermonuclear holocaust.

There would, of course, be problems. Because Moscow would remain a nuclear power, residual nuclear threats to the United States (for example, covert bomb placements in cities or bomb-laden freighters in harbors) would still exist. Further, Moscow would still have the capability to threaten nuclear use against overseas U.S. interests, so that the nuclear dimension of the Washington-Moscow relationship would not completely disappear despite the dismantling of the intercontinental dynamic. In addition, for the United States, working toward this result could cause some complications with its European allies, who might feel that the United States was working to free itself from nuclear jeopardy at their expense. However, Europe would be no more vulnerable to nuclear attack than it is now, while U.S. extended deterrence guarantees should be far more credible if the United States were not vulnerable to nuclear attack. More difficult would be a scenario in which Moscow demanded that the United States abandon extended deterrence guarantees against it in return for eliminating its intercontinental capability. This would be a logical demand in the sense that there would be more symmetry in terms of declared intentions even if not in terms of capabilities, but it would force the United States to choose between its allies and its own security interests. But all of these complications seem minor relative to the enormous benefit of removing the large-scale nuclear threat to American society.

**b. No prompt intercontinental capability?**

It is plausible that Moscow would find unacceptable an outcome that deprived it of intercontinental capability while leaving it vulnerable to nuclear attack by the United States. If so, what short of that would be the optimal outcome from the American point of view? One outcome that would have some large advantages would be the elimination of all land and sea-based intercontinental ballistic missiles. Both sides could rely on aircraft to provide their nuclear deterrent capability, and a reasonably symmetrical result in terms of force postures could be imagined. Thus,

this scheme would avoid the enormous asymmetries associated with the "Moscow denuclearization" and the "Moscow without intercontinental capability" scenarios, and hence may be more easily negotiated.

This scheme would have several attractive consequences. First, it would eliminate the specter of the thirty-minute thermonuclear spasm. Second, it would allow decisionmakers time to communicate even after weapons were airborne. Third, it would locate all nuclear weapons on recallable delivery systems, so that decisionmakers would possess the ability to reverse a decision even after aircraft were launched. And finally, aircraft are much easier to shoot down than ballistic missiles, which means that there is a greater likelihood of coping with an accidental or unauthorized attack.

Set against these benefits is one very large concern: aircraft-based deterrent systems seem prone to instability. Even in the heyday of the U.S. strategic bomber force in the late 1950s, the United States was distributed across a distressingly small number of bases, representing only a modest target set for a disarming surprise attack. Further, aircraft and airbases are difficult to harden against nuclear attack. And deterrence can come to depend on aircraft alert and evacuation measures that raise risks of accidents in peacetime and that can exacerbate crises. Another complication is that asymmetries in air defenses would matter greatly in an aircraft-only strategic environment. Perhaps in the context of great harmony in relations between Moscow and Washington, these considerations might matter little. But on balance, it is not obvious that the problems associated with an aircraft-only strategic relationship are preferable to those of a strategic dyad or triad.

**c. No prompt land-based, or no land-based MIRVed, intercontinental capability?**

The problems raised by the air-breathing monad could be erased by focusing on the elimination of land-based ICBMs, allowing retention

of sea-based strategic forces.<sup>97</sup> This would have the virtue of getting rid of the systems long regarded as most destabilizing (ICBMs, especially of the MIRVed variety) while preserving the systems long regarded as the most survivable and stabilizing (SSBNs). On the other hand, it would provide none of the benefits that would derive from completely eliminating long-range ballistic missiles.

President Bush has already gone considerable distance in this direction in proposing, in his September 27, 1991, speech, that all MIRVed ICBMs should be eliminated by agreement between the United States and Moscow.<sup>98</sup> For Moscow, this would entail elimination of 754 of the 1394 ICBMs that it possessed in 1991, thereby reducing its total ICBM warhead count from 6680 to 640 (a warhead reduction of about 90 percent).<sup>99</sup> It would require elimination of 550 of the 1000 U.S. ICBMs, reducing the U.S. ICBM warhead count from 2450 to 450 (a warhead reduction of about 80 percent). Not only are quantitative reductions substantial, but this would remove all of the most modern land-based ballistic missiles, with the single exception of the Soviet SS-25, of which there are 300 deployed. All of the other remaining ICBMs date from the late 1960s or early 1970s. Thus, the implementation of the Bush de-MIRVing proposal would get much of the job done.

The virtues of de-MIRVing to increase strategic stability are well rehearsed and need not be revisited here. The remaining question is: what are the arguments for keeping the single-warhead ICBMs? The main justification is probably that, when added to the mix of bombers and SSBNs, they would augment the net survivability of the force and thus

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97. For a detailed analysis, see the chapter on "Does the United States Need ICBMs?," in Glaser, *Analyzing Strategic Nuclear Policy*, pp. 257-284.

98. See Michael Kranish, "Bush Proposes Steep Arms Cuts," *Boston Globe*, September 28, 1991; and "Nuclear Weapons: Going, Going," *The Economist*, October 12, 1991, p. 54.

99. IISS, *The Military Balance, 1991-1992*, pp. 219-228.



strengthen strategic stability, always advertised as the great virtue of a triad of forces. And they can serve as a hedge against future technological developments; a few hundred single warhead ICBMs could serve as a modest insurance policy against breakthroughs in detection of SSBNs, for example. In addition, there is the point that they are not destabilizing in the way that MIRVed ICBMs are, so there is no particular imperative to get rid of them.

**d. Deeper cuts? collaborative management of minimum deterrence.**

Reconstructing the nuclear relationship between Moscow and Washington would represent an opportunity to effect further substantial reductions in overall force levels. A process of reductions could end up at a level that entailed essentially the collaborative management of some mutually agreed minimum deterrent. This result would reduce or eliminate the enormous "excess capacity" on both sides.<sup>100</sup> It would shrink the cost of operating, maintaining, and modernizing the strategic forces of the two sides. And it could diminish the risk of nuclear accidents. If it were possible to preserve desired deterrent benefits at much lower levels of forces, this seems worth doing.<sup>101</sup>

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100. The notion of "excess capacity" is taken from John D. Steinbruner, "The Purpose and Effect of Deep Strategic Force Reductions," in *Reykjavik and Beyond: Deep Reductions in Strategic Nuclear Arsenals and the Future Direction of Arms Control*, Committee on International Security and Arms Control, National Academy of Sciences (Washington, D.C.: National Academy Press, 1988), p. 16. It refers to capability beyond that required even by demanding definitions of the requirements of deterrence. Carl Kaysen, Robert S. McNamara, and George W. Rathjens, "Nuclear Weapons After the Cold War," *Foreign Affairs*, Vol. 70, No. 4 (Fall 1991), p. 103, calls the Soviet and American arsenals "absurdly large."

101. See Harold A. Feiveson and Frank N. von Hippel, "Beyond START: How to Make Much Deeper Cuts," *International Security*, Vol. 15, No. 1 (Summer 1990), pp. 154-180.

The exact level to which forces should be reduced is likely to be a contentious issue, both internally and bilaterally. However, the main point in the near term is that thousands of weapons can be reduced on both sides before entering what might be regarded as the range of contention over the requirements of minimum deterrence, probably spanning the territory from several hundred to several thousand weapons.<sup>102</sup> Even after the START reductions have been implemented, the Soviet arsenal would still contain more than 8000 strategic nuclear weapons and the U.S. arsenal more than 10,000.<sup>103</sup> The room for relatively uncontentious reductions is substantial.<sup>104</sup>

Concerns about the stability of the forces will persist and even intensify as the size of the arsenals is substantially reduced. Therefore, attention to reduction in numbers must be accompanied by qualitative considerations related to the preservation of stable deterrent forces.<sup>105</sup> In practice, this could mean that deeper cuts are achieved at least in part by reducing or eliminating some of the worrying weapons categories, possibly along the lines described above. The goal is to achieve much smaller forces that are as stable as, or even more stable than, the existing strategic nuclear force postures.

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102. For example, Steinbruner, "The Purpose and Effect of Deep Strategic Force Reductions," p. 14, identifies a range from 500-2000 weapons as possible minimum deterrent requirements.

103. For analysis of post-START force postures, see *The Future of the U.S.-Soviet Nuclear Relationship*, Committee on International Security and Arms Control, National Academy of Sciences (Washington, D.C.: National Academy Press, 1991), pp. 52-54.

104. For a recent, detailed analysis of deeper cuts beyond those required by START, see David Mosher and Michael O'Hanlon, *The START Treaty and Beyond* (Washington, D.C.: Congressional Budget Office, October 1991).

105. For a careful analysis of this issue, see Michael M. May, George F. Bing, and John D. Steinbruner, "Strategic Arsenals After START: The Implications of Deep Cuts," *International Security*, Vol. 13, No. 1 (Summer 1988), pp. 90-133.

In sum, if developments in the former Soviet Union allow preservation of a bilateral nuclear relationship with Moscow, and if domestic politics in the Moscow-centered successor states keep leaders in power who have a continuing interest in harmonious relations with the United States, there may be a formative opportunity to recast the strategic nuclear relationship between the two large nuclear powers. Under these circumstances, it is worth considering what America's maximum interests would be (short of denuclearization), and whether they are attainable. Here we have considered a list of several broad options, meant to be suggestive rather than exhaustive, based on the premises that the fullest expression of U.S. interests is found in the outcome that eliminates or circumscribes Soviet intercontinental capability, while at a minimum it should be possible and desirable to create a stable deterrent system at much lower levels of forces.

#### **5. Arms control in the new nuclear relationship.**

It is apparent that arms control, in one guise or another, will remain relevant to the achievement of a number of the goals that the United States might pursue in the context of refashioning the nuclear relationship with Moscow. In several ways, however, the forms and modalities of arms control are likely to be different than in the past, particularly during the transition period.

First, arms control negotiations as conducted during the Cold War era will not be well suited to the urgencies of the transitional period. The slow, ponderous, complicated, and bureaucratic arms negotiations of the past, issuing every decade or two a massive treaty that made relatively modest changes in the strategic balance, simply cannot respond in a timely manner to the pressing issues that have arisen or may arise. Traditional strategic arms control may have a place in the longer term in shaping a bilateral nuclear relationship, but it is clearly insufficient in the short run.

Second, arms control in the near term will be heavily marked by the apparent collapse of structures of governance in the former Soviet Union. Central authority is in obvious decline. Instability is prevalent or



possible in many republics. It is less and less clear who has the ability to negotiate a deal and actually guarantee its implementation. Insofar as central control still exists but is a wasting asset, this puts a premium on moving quickly to exploit such coherent authority as still exists. If future treaty implementation is impossible without the concurrence of the relevant republics, however, this implies more complicated multilateral bargaining in the near term, until such time as the "Moscow only" outcome emerges and permits the restoration of a bilateral nuclear relationship.

Third, as a consequence of the previous points, unilateral moves, forms of dialogue short of negotiation, and reciprocation will play a much larger role in the interim. President Bush's September 27 unilateral initiative and President Gorbachev's October 5 reciprocation are clear and important illustration of this point. These forms of arms control have the advantage that they permit quick movement and discrete and focused attention on problems of greatest concern.

#### **D. Successor State Proliferation: Coping with More Than One**

Whatever U.S. preferences and policies, it is possible that there will be more than one Soviet successor state that chooses to become a nuclear power. This is a more difficult and vexing scenario. It is nevertheless necessary to think through the implications and policy calculations.

U.S. interests vis-a-vis Moscow as a nuclear power may not change much even if there is successor state proliferation. That is to say, the analysis sketched above would still apply. A second, closely related point, is that the same analysis would probably apply to other successor state proliferators. In other words, the best outcome would again be denuclearization, for which the United States might be willing to pay a substantial price. If this is impossible to attain, the next best result is nuclear forces in Soviet Eurasia that lack intercontinental capability. In all cases, the United States would prefer that the nuclear forces be subject

to coherent authority and safeguarded against unauthorized use or seizure.

But the "more-than-one" scenario involves implications and complexities that are not captured simply by replicating the Moscow-only analysis across the cases of proliferation. These other considerations must be taken into account in assessing U.S. interests and options.

1. **Who and how many?** Clearly, the implications of successor state proliferation will depend to a very great extent on how many nuclear states emerge from the former Soviet Union and which states those are. Until recently, each of the fifteen Soviet republics had at least a few nuclear weapons stationed on its territory and in theory any among them might decide to exercise the nuclear option.<sup>106</sup> However, weapons seem to have been withdrawn from some of the republics and the bulk of the arsenal is located in the four republics in which strategic weapons are deployed. Hence, even if the number of nuclear states is greater than one, it will likely be rather less than fifteen. Not to be overlooked, however, is the possibility that the process of disintegration could extend to Russia itself. This raises the prospect that more than one nuclear power could emerge from Russia alone. This degree of fragmentation and proliferation would have vast implications, both because it would rip apart the Russian nuclear complex, leaving no single coherent nuclear establishment in Soviet Eurasia, and because it would dramatically alter the relations among the successor states, since there would no longer be a first among equals. From the U.S. point of view, it will generally be true that fewer is better.

It will also matter who the proliferators are. Several factors would affect U.S. responses to various successor state proliferators. One important criterion would be the prospect of meeting standards of responsible custodianship. If the Ukraine exercises the nuclear option, for

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106. Robert S. Norris and William M. Arkin, "Where the Weapons Are," *The Bulletin of the Atomic Scientists*, November 1991, pp. 48-49, provided a precise accounting of estimated weapons deployments in the fifteen republics as of mid-1991.

example, this would be proliferation to a state that, by virtue of its size and potential wealth, would have a reasonable prospect of developing a coherent nuclear establishment, acquiring a survivable nuclear capability, and establishing a fairly stable deterrent relationship with Moscow; it can be imagined as a potential medium nuclear power along the lines of Britain and France. But for many of the other former Soviet republics, much smaller and poorer than the Ukraine, this would be a much more difficult, and in some cases probably impossible, challenge.

A second criterion would be the internal stability of the proliferating successor state or states. One basic element of this would be the presence or absence of domestic disorder. But also important would be the capacity of the government or leaders for responsible behavior and sober decisionmaking; it will matter greatly to the international community whether the highest political authorities in proliferating states bring to mind British Prime Minister John Major or more alarming figures such as Saddam Hussein or Muammar Qaddafi.

A third criterion would be the proliferating state's relations with its neighbors. Successor state proliferation will be less distressing if it occurs in more peaceful and stable regional settings. There is, unfortunately, considerable potential for Soviet successor states to have bitter and conflictual relations with both Moscow and each other.

For American policymakers, a more parochial concern will be whether the state is friendly or hostile to the United States and its interests. There would appear to be few proximate sources of friction between the United States and most of the Soviet successor states, other than the nuclear weapons issue itself. But U.S. support for or cooperation with the central authorities in Moscow could sour relations with the republics. And the act of befriending some will possibly antagonize others. Finally, in the event of hostile relations, a further critical criterion will be relevant: does the republic in question possess intercontinental capability?



In sum, the United States and the international community more generally will be discomfited by any nuclear proliferation among the Soviet successor states. But the degree of concern and the nature of the implications will depend on how the proliferators vary across these five dimensions.

#### **B. Preemption and preventive war in Soviet Eurasia?**

The variations in terms of "who and how many" produce a number of possible nuclear orders within the expanse of territory that formerly was the Soviet Union. It is evident that the implications of successor state proliferation will be a direct function of the character of the nuclear order that emerges. As indicated, if the number of nuclear states is two, the two are Russia and the Ukraine, and both end up with responsible governments and mature nuclear establishments, the result could be a stable nuclear deterrent relationship; this would be the best manifestation of an undesirable outcome.

At the other end of the spectrum, there could emerge a system of multiple nuclear powers, including several broken off from Russia, none of which possessed a coherent nuclear capability, some of which might be unstable domestically or headed by irresponsible leaders, and some of which might be in urgent contention with others. This raises images of nuclear weapons as a stake in civil strife, of war between nuclear armed powers, and even of nuclear use. There is a distinct possibility that preventive and preemptive attack temptations would be strong,<sup>107</sup> particularly insofar as it is true that the nuclear capabilities of some of the successor states are incomplete, or lack adequate warning, durable command and control, or truly survivable forces.

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107. Symptomatic of this are reports that Russian President Boris Yeltsin has discussed with the military the possibility of a "preventive nuclear strike" against the Ukraine but dismissed the idea on technical grounds. Other Soviet officials found the idea so outlandish that they speculated that Yeltsin may have been joking. Ukrainian officials, however, fail to see the humor in it. See Paul Quinn-Judge, "Yeltsin Weighed Nuclear Strike on Ukraine, Soviet Report Says," *Boston Globe*, October 25, 1991.

Thus, while the tame end of the spectrum of successor state proliferation involves the limited replication of a stable deterrent system, the disturbing end of that spectrum entails the multiplication of nuclear instability. The challenge for U.S. policy will depend on which nuclear order emerges.

### **3. Regional implications of successor state proliferation.**

When states acquire, or seek to acquire, nuclear weapons, they dramatically affect the security calculations of their neighbors and rivals. This is why proliferation worries usually involve clusters of states: North and South Korea, Taiwan and China, India and Pakistan, Israel and several Arab states, Brazil and Argentina. This would probably be true of successor state proliferation as well. What proliferation "ripple effects" might result from nuclear spread in Soviet Eurasia?

A first point is that proliferation may breed more proliferation within the Soviet empire. There are at least several obvious "proliferation couplets," pairs of states whose security policies and proliferation choices will strongly influence one another. These would include the Ukraine and Russia, the Ukraine and Byelorussia, and Armenia and Azerbaijan. Indeed, it is possible that Russia and any successor state represents a potential proliferation couplet. This is not to argue that proliferation is inevitable in any of these cases, but rather that if proliferation occurs, it is likely to have ripple effects that lead towards a larger set of proliferators. This is yet another reason to prefer that Moscow remain as the sole nuclear power in Soviet Eurasia after Soviet disintegration.

An equally important consideration is that successor state proliferation will affect the security calculations of neighboring states to the former Soviet Union. This can be illustrated in at least two regional settings. If the Ukraine or Byelorussia were to become nuclear powers, for example, this would have enormous implications for the structure of security in Central Europe. In particular, Germany and Poland, are likely to be dramatically affected, not to say alarmed, by such a development. Proliferation would not be inevitable in these cases, because there would

still be both arguments and domestic constituencies against exercising the nuclear option. But it would not be surprising if the nuclear choice became an issue in these states in the face of nuclearization of their eastern border areas. The Soviet Central Asian republics inhabit a "nuclear neighborhood," encompassing not only Russian and Chinese but also Indian and Pakistani nuclear capabilities. The Central Asian republics will not necessarily opt for full independence nor, if they do, will they necessarily wish to become nuclear weapons states. But if they do become independent, they will have to fashion their security policies in a nuclearized regional setting; if they do choose to become nuclear weapons states, they will add to complexity of a multipolar nuclear regional balance.

#### 4. Implications for the international non-proliferation regime.

Nuclear spread in the former Soviet Union is likely to have a substantial corrosive effect on the international non-proliferation regime. This is true for several reasons. First, a burst of proliferation among Soviet successor states will probably erode the non-proliferation ethos that has prevailed widely in the international community. Heretofore, the spread of nuclear weapons has been a slow and relatively isolated phenomenon. The sudden emergence of several more nuclear weapons states could change the dynamic, make the nuclear club seem less exclusive and more accessible.

Second, it may be some time before Soviet successor states (including Russia) have in place effective and enforceable export control regulations governing nuclear materials. This is a function of the instability of the situation rather than strictly a consequence of nuclear spread. But the implications for the non-proliferation regime are significant, since there may be a period in which states are able to buy unsafeguarded reactors or other nuclear facilities from a cash-starved



Soviet successor state or its ministries or entrepreneurs.<sup>108</sup> This would be a direct contravention of the NPT regime and a contrast to the generally responsible behavior of the Soviet Union in the non-proliferation area.

Third, given successor state proliferation, nuclear weapons and weapons-related materials will be more widely distributed, possibly less safely or responsibly handled, and possibly more accessible to other state or non-state actors. As noted in Part II, this could entail theft or illicit seizure or sale, or it could involve the direct transfer by new but irresponsible custodians of nuclear weapons. In the worst case, a successor state that felt itself to be a pariah by virtue of the international reaction to its acquisition of nuclear weapons could form alliances with other international outcasts, some of whom are prominent on the list of potential proliferators (e.g. Iraq or Libya). Transnational linkages or loyalties could affect the behavior of a Soviet successor state. For example, Muslim leaders in Soviet successor state proliferators could feel ties to other Islamic states and have some sympathy for the idea of an Islamic bomb. It is unclear whether this should be a serious concern, but it can be a mistake to underestimate the power of human loyalties. And finally, as noted, successor state proliferation could increase the incentive of neighboring states to acquire nuclear weapons. All told, it is apparent that successor state proliferation would probably increase both the incentives to proliferate and the accessibility to relevant nuclear materials, thereby damaging the international non-proliferation regime.

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108. Research by William Potter, Director of the Center for Russian and Soviet Studies at the Monterey Institute of International Studies, suggests that a number of worrying deals have taken place over the past two years, involving sales of various pieces of nuclear technology, including breeder reactors and enrichment facilities, to states such as Pakistan, India, Argentina, Brazil, Israel, and Cuba. See also William Potter, "Russia's Nuclear Entrepreneurs," *New York Times*, November 7, 1991, p. A29. Clear evidence of U.S. concern is found in, "Cheney Says He Fears Sale of Soviet Nuclear Expertise," *Boston Globe*, November 10, 1991, p. 11; and Eric Schmitt, "U.S. Aides Worry About Spread of Arms from Sales by the Soviets," *New York Times*, November 16, 1991, p. 5.

**5. U.S. interests and options.**

If multiple successor state nuclear proliferation occurs, what are U.S. interests and how might they be furthered?

**a. Minimizing intercontinental capability.** The paramount concern of the United States should be to minimize the direct threat to its own security. In practical terms, this means that the United States will want intercontinental nuclear capability in as few successor states as possible. Earlier we suggested the in the best case, none of the former Soviet republics, including Russia, would possess intercontinental capability. If that result is unattainable, the preferred outcome would be Moscow only, for reasons described above.

What the United States will wish to avoid is independent nuclear forces in the Ukraine, Byelorussia, and Kazakhstan that could threaten targets in the United States. This would again argue for the rapid application of the START agreement to the strategic forces in these four republics, and possibly the inclusion of these republics in the dialogue associated with START implementation. Their cooperation will be critical in determining the utility of START in addressing this problem.

If the START option fails, the United States will probably need to consider bilateral negotiations with the republics, the subject of which would be the U.S. concessions required to bring about the elimination of the republics' intercontinental capability; it is probably better to treat that capability as a temporary bargaining chip than as a permanent military asset.

The United States could also consider the threat of sanctions, along the lines discussed above in the context of discouraging successor state proliferation. At a minimum, it can safely be said that intercontinental capability will be a bone of contention in U.S. relations with the successor states. Finally, the successor states should understand that their possession of intercontinental capability will compel the United States to muster nuclear deterrent threats and options against them. It is possible that they



will conclude that it is not in their interest to guarantee that U.S. strategic forces are targeted against them.

**b. Denuclearization.** All of the arguments that commend the "Moscow denuclearization" outcome would also apply to any other successor state proliferators. Hence, an obvious response to nuclear spread in Soviet Eurasia is to attempt to strike a denuclearization bargain with the offending states, with a package of the rewards and threatened sanctions detailed above.

**c. Encourage stabilization.** If there are going to be nuclear powers among the Soviet successor states, it is best that their nuclear capabilities be as safe, secure, and stable as possible. This is one way of minimizing the risks and problems described in Parts II and III. A minimum policy would be an "educational" dialogue aimed at ensuring that successor state proliferators understand fully the requirements of a secure and stable force. A more difficult policy would be to provide financial or technical assistance to assure that the nuclear establishments in question have the desired attributes. This is a difficult choice for at least two reasons. First, it may appear to be rewarding proliferation, thereby sending the wrong signal to other potential proliferators. Second, it can entangle the United States in the nuclear preparations of other states, a fact that would undoubtedly disturb U.S. relations with those states who were threatened by the nuclear arsenal in question.

**d. Promote arms control in Soviet Eurasia.** The dangers associated with nuclear proliferation among the Soviet successor states would be greatest if their relations with one another are hostile and their military policies are competitive (even if stabilization measures as described above are taken but especially if they are not). As previously noted, there are reasons to fear that this will be the case, given the existence of disputed borders, scattered minority populations, and historical grievances. Arms control among the Soviet successor states may be a means of preventing spirals of hostility, or at least of containing their effects. Discussion of various confidence-building measures could reduce the chance that the security environment among the successor states



was purely adversarial, marked by misperception and fear. Negotiation of force limitations could inhibit or prevent costly and potentially destabilizing arms racing among the successor states. And nuclear arms control among the successor states with nuclear capability might facilitate the emergence of stable nuclear balances and encourage prudent management of nuclear arsenals. Discussions along these lines could take place, at least initially, in the context of sorting out the obligations of the successor states under existing treaty regimes: The CSCE covers CSBMs, CFE limits categories of conventional forces; while START address strategic forces. This might be a way to begin arms control discussions among the Soviet successor states. The United States is a party to each of these regimes and has an interest in seeing that they are effectively applied in the former Soviet Union, so it should urge explicit treatment of these issues by the Soviet successor states. With respect to nuclear forces, it is arguable that the United States ought to be not merely a supporter of but a participant in any nuclear negotiations that take place. But the specifics about fora and participation are secondary. The main point is that, in order to minimize the adverse effects of successor state proliferation, the United States should encourage the emergence of an arms control process among the independent states that emerge from the disintegrating Soviet Union.

**e. Contain the nuclear contagion.** Nuclear successor states should be encouraged to behave responsibly with respect to the more general non-proliferation regime. Even if they themselves have contravened the regime, it is not desirable to have them "off the reservation" contributing to still further proliferation. The illicit side of the problem (theft, sale, etc.) is addressed by stabilization measures. But the United States and the international community should insist that nuclear successor states conform to NPT norms of behavior for nuclear weapons states. They might even be invited to join the NPT regime as nuclear weapons states, although this too might create the appearance of accepting and rewarding proliferation.

This is obviously not an exhaustive list, but it does address several prominent interests and options. In the end, assessing the implications of

successor state proliferation highlights above all the importance of trying to discourage it in the first place.

## **Part IV**

### **Recommendations and Conclusions**

- A. Encouraging and Assisting Prompt Implementation of the Bush-Gorbachev Reciprocal Unilateral Proposals Regarding Non-Strategic Nuclear Weapons
- B. Extending the Bush-Gorbachev Proposals to Strategic Weapons
- C. Assuring Safety and Security During a Transitional Period
- D. Addressing Proliferation Outside the Soviet Union
- E. Exposing the New Political Structures in the Former Soviet Union to Prevailing Conceptions of Nuclear Safety and Security
- F. Adjusting U.S. Military Policy to the New Nuclear Realities in the Soviet Union

The preceding Parts I-III have analyzed the dangers to nuclear safety and stability posed by the profound political changes taking place in the Soviet Union. We have noted that there are three types of danger. First, the process of devolution of political authority that is plainly taking place in the Soviet Union creates the danger that the ultimate disposition of nuclear weapons among the new political structures will not be conducive to their safety or to international stability. Second, there is a danger of seizure, theft, sale, or use of nuclear weapons or components during the period of transition, particularly if there should occur a social disintegration of the nuclear weapons operating and custodial system -- apparently still intact at present -- that has performed these tasks for the past forty-two years. Third, there is a danger that any weakening of control over weapons or



components could result in transfers outside of the territory of the former Soviet Union, fueling nuclear proliferation worldwide.

These three dangers warrant immediate consideration of U.S. interests in the outcome of the portentous transformation in the former Soviet Union, and of the sources of U.S. influence over the course of events. Parts I-III analyzed the status of the nuclear weapons of the former Soviet Union, the political and economic changes that are overtaking them, and the existing safeguards against unauthorized or irresponsible actions. These sections also analyzed the alternative outcomes that may result, and assessed actions that could be taken to influence them in the direction of safety and stability.

In this Part IV we state the recommendations for action that, in our judgment, emerge from the preceding analysis. Most of the recommendations are addressed to the U.S. government, but others are addressed to authorities of the Soviet government, to authorities in the emerging republics, and to the world community. In order of urgency of attention, these are:

- a) encouraging and assisting prompt implementation of the Bush-Gorbachev reciprocal unilateral proposals regarding non-strategic nuclear weapons;
- b) extending the Bush-Gorbachev proposals to strategic nuclear weapons;
- c) assuring safety and security of Soviet nuclear weapons during a difficult transitional period;
- d) addressing proliferation outside the Soviet Union;
- e) exposing the new political structures in the former Soviet Union to prevailing conceptions of international stability and security;

- f) adjusting U.S. nuclear relationships and military policy to the new nuclear realities in the Soviet Union.

We emphasize that the pace and profundity of the events taking place in the former Soviet Union call for uncommon wisdom and agility by policymakers. Actions are needed now, as spelled out below. But we are also mindful that policy will need to be adjusted constantly to accommodate a chaotically changing reality. Our recommendations will thus doubtless be adjusted in the months ahead. Whichever way events turn, the U.S. security policy community will need to remain engaged in the situation to protect the interests of the United States and the rest of the world.

**A. Encouraging and Assisting Prompt Implementation of the Bush-Gorbachev Reciprocal Unilateral Proposals Regarding Non-Strategic Nuclear Weapons**

**THE NEED:** We have argued that non-strategic nuclear weapons are of concern because of their great number and variety and because they are more widely dispersed among the republics than strategic weapons. We have also pointed out that the system of procedural and technical safeguards that has prevented unauthorized seizure or use of these weapons for over forty years cannot be guaranteed as capable of providing a comparable future level of safety in the face of widespread social and economic disintegration of the kind that is distinctly possible in the Soviet Union. Thus removing these non-strategic weapons to central storage (perhaps passing through an interim process of disablement and multi-party custody, see below, this section) and ultimately destroying them is of critical importance.

Fortunately, political steps have already been taken to open the way for removal of many kinds of Soviet non-strategic nuclear weapons to Russia -- and for their ultimate destruction -- in the reciprocal unilateral proposals of Presidents Bush and Gorbachev in September 1991. Our first

recommendations therefore concentrate on ensuring prompt and thorough implementation of these proposals.

RECOMMENDATIONS:

1. Match the boldness of the Bush-Gorbachev proposals with boldness and thoroughness of implementation. On the U.S. side, this means moving beyond "encouraging by example" to establishing a vigorous multi-agency program within the U.S. government to devise methods for movement, storage, and dismantlement of nuclear weapons jointly acceptable to the United States and the Soviet Union, and to be willing to provide Soviet authorities with direct technical cooperation in applying those methods.

2. Jointly declare the locations and types of weapons covered by these proposals. Seek the agreement of central and republic authorities that Soviet weapons covered by the agreement will be stood down from active posture immediately and withdrawn to deactivation sites in the Russian Republic and prepared for eventual destruction.

3. Jointly declare a detailed timetable for implementation of the proposals, to complete implementation by March 1, 1992.

4. Where practical difficulties preclude relocation of all involved weapons to central deactivation sites by March 1, 1992, arrange for:

- a) disabling those weapons in place so they are unusable in their existing form; and
- b) the United States and authorities of the former Soviet Union to request the technical assistance of the International Atomic Energy Agency in providing extraordinary safeguards for these weapons and their nuclear materials. These safeguards would include a detailed accounting of the weapons and material being monitored and the presence of international observers outside the perimeter



security fence of facilities where the weapons are deployed or stored.

These safeguards would enhance security against unauthorized seizures and allow newly independent republics of the former Union to accede without delay to the Nuclear Non-Proliferation Treaty as non-nuclear weapons states, even if weapons are still located on their territory.

5. Extend U.S. technical cooperation with appropriate central and republic authorities to remove bottlenecks in the implementation of the Bush-Gorbachev initiatives, and to overcome problems in the transport of weapons, disabling or dismantling of weapons, or storage of special nuclear materials.

6. Declare that the United States expects the Bush-Gorbachev proposals to be implemented by the Union of Sovereign States and any successor states to the former Soviet Union.

7. Agree that efforts by parties to impede implementation of the agreements are a matter of joint concern, and that the United States will cooperate with the legitimate successor governments in defeating such efforts. Further agree that any nuclear weapons or sensitive weapon-related items that are seized or held hostage by outside parties are a matter of joint concern, and that the United States will cooperate with legitimate authorities to defeat them.

8. Extend technical cooperation to authorities charged with the recapture of nuclear weapons or sensitive weapon-related items seized by unauthorized parties.

9. Encourage Union naval authorities to follow the U.S. lead and henceforth not allow ships (other than submarines carrying SLBMs) to put to sea with nuclear weapons.

10. Invite NATO allies and other nations to join in providing the technical cooperation recommended in this and subsequent sections.

Additionally, cost-sharing agreements can be made with authorities in the former Union. Finally, work performed in the former Soviet Union pursuant to these recommendations can be conducted by U.S. firms operating in the former Soviet Union (e.g., building new storage and deactivation sites for nuclear weapons), which firms would be recipients of funds allocated for these purposes.

## **B. Extending the Bush-Gorbachev Proposals to Strategic Weapons**

**THE NEED:** The Bush-Gorbachev initiatives deal mainly with non-strategic rather than strategic nuclear weapons. Strategic weapons are obviously a special concern to the United States since they are capable of striking targets in the United States directly. The fate of strategic weapons is more complicated than the fate of non-strategic weapons. If the Bush-Gorbachev agreement is implemented promptly as outlined above, strategic weapons will soon be the only weapons located outside the Russian republic. The fate of these strategic nuclear weapons may therefore determine the nuclear status of Ukraine, Byelorussia, and Kazakhstan. These republics have greatly simplified these questions by stating their intention to be nuclear-weapons free.

We have argued that a single nuclear power should emerge from the political change occurring in the Soviet Union, that day-to-day control over the arsenal should remain undisturbed from established patterns, that republics that secede from the Union should be non-nuclear, and that removal of nuclear weapons from these newly independent states should take place as soon as possible in concert with a general nuclear builddown that would not simply transfer all the nuclear weapons of the former Soviet Union to the Russian republic. We further pointed out the absence in any republic except Russia of the technical means for full-cycle operation and maintenance of a nuclear arsenal and the consequent practical necessity of the republics to work together to maintain responsible custody of the arsenal during the period of removal and builddown.

We believe that there are a number of near-term policy steps that the United States could take in an effort to increase the likelihood that nuclear outcomes in the former Soviet Union match U.S. interests and preferences.

RECOMMENDATIONS:

1. Reaffirm long-standing U.S. non-proliferation policy as opposing any increase in the number of nuclear weapons states.

2. Reaffirm U.S. policy which supports leaving the day-to-day operational structure of central control of nuclear weapons of the former Soviet Union undisturbed, even as the structures for political decision-making may change.

3. Affirm U.S. policy that successor states to the former Soviet Union should carry out the obligations of the Strategic Arms Reduction Talks (START) and Conventional Forces in Europe (CFE) treaties.

4. Immediately open discussions aimed at taking steps to implement weapon destruction and inspections called for in the START treaty on an accelerated timetable, including such steps as can be taken before ratification is complete. In parallel, take steps to hasten ratification. Minor modifications to the treaty should be entertained if they would hasten removal of nuclear weapons from non-Russian republics.

5. Accept the stated intentions of Ukrainian, Byelorussian, and Kazakh authorities to join the Nuclear Non-Proliferation Treaty as non-weapons states, and pledge U.S. technical cooperation to assist in the prompt removal of nuclear weapons from their territory. Emphasize that this step can be accomplished as part of the implementation of the START treaty. Encourage republican authorities to state their intention to work with the existing authorities that manage custody and movement of nuclear weapons to ensure continuing safety and security during the transitional period. Such a relationship can involve close consultation but need not involve shared custody or technical means of shared control over use of



weapons. State the U.S. view that the legitimate security needs of new states emerging from the Soviet Union can be assured by the international community, that nuclear weapons will not address those legitimate needs, that the cost and complexity of proliferation would be very great in view of the near total absence of relevant facilities on their territories for operating or maintaining a nuclear arsenal, and that any emerging state that did not live up to its obligations under existing international treaties and regimes would lose the political and financial support of the international community.

6. State U.S. willingness to support the same kind of extraordinary safeguards of strategic weapons proposed above for non-strategic weapons, if such safeguards prove desirable.

7. State the U.S. intention to destroy weapons as well as delivery vehicles as part of the implementation of the Bush-Gorbachev agreements and START. Encourage Soviet authorities to follow suit, and offer U.S. technical cooperation in this process.

8. The United States will continue to have grounds for engagement with nuclear issues in Soviet Eurasia and should continue its attempts to exert positive influence no matter what path events take in the former Soviet Union. The U.S. could, for example, help devise arrangements for multi-party participation in nuclear decisionmaking, involving voting and vetoing procedures, that widen participation without loosening control. It could encourage the emergence of an arms control process among the former Soviet republics to minimize frictions and arms competitions that might arise among them. But the U.S. should also be prepared to adjust policies rapidly in reaction to outcomes that are disappointing from the U.S. point of view. It is distinctly possible that the United States will need to cope with outcomes it does not prefer but cannot prevent. Nuclear weapons may remain distributed across a number of the republics. Centralized control of the Soviet nuclear arsenal may erode or collapse. Successor state proliferation may occur. These outcomes would result in a more complex nuclear order and would pose more difficult challenges for U.S. policy. But the U.S. (as well as the broader international

community) would continue to have a large interest in seeing that such arrangements are as benign as possible and that the adverse consequences of such outcomes are minimized. The preceding Parts I-III provide the basis for such adjustments to these recommendations if they prove necessary.

### **C. Assuring Safety and Security During a Transitional Period**

**THE NEED:** While the procedures described above leading to the destruction of many types of Soviet non-strategic and strategic nuclear weapons are occurring, there will be a continuing need to assure the safety and security of weapons and components from seizure, theft, sale, and other unauthorized actions. The custodial system that has maintained safety and security of Soviet nuclear weapons for forty-two years is apparently intact at this writing. But we have argued that nuclear command and control is a social as well as a technical system, that the key safeguards against unauthorized actions built into this system are procedural rather than technical, and that not all Soviet nuclear weapons have the newest and most sophisticated coded locks and other technical safeguards. The nuclear command, control, and custodial system therefore cannot be safely presumed to be immune from systemic disintegration of the military and social systems in which it is embedded. Thus special attention must be given to the integrity of the custodial system, and to the morale of its personnel in this time of social upheaval.

#### **RECOMMENDATIONS:**

1. Carry out the steps outlined in (A) and (B) above.
2. Send U.S. technical teams to Moscow to explore mutually agreeable steps to improve safety and security, including U.S. technical cooperation in transport, storage, disablement, and dismantling of nuclear weapons and sensitive weapon-related components.

3. Provide technical cooperation to carry out the contraction and conversion to civil activities of the Soviet nuclear weapons complex.

4. Do not emphasize the retrofitting of technical devices such as Permissive Action Links or post-launch missile destruct devices onto Soviet nuclear weapons, as these steps cannot be carried out with the speed appropriate to the situation and might distract from more useful actions. Likewise, installation of cooperative warning systems is of secondary importance.

#### **D. Addressing Proliferation Outside the Soviet Union**

**THE NEED:** Economic disorder within the Soviet nuclear weapons complex -- comprising facilities and trained personnel for producing and storing special nuclear materials, and for designing and fabricating nuclear weapons and components -- creates a potential source of nuclear proliferation outside the Soviet Union unlike any ever faced by the non-proliferation regime. Nuclear materials, sensitive non-nuclear components of nuclear weapons, the talents of skilled bomb-builders, and even entire nuclear weapons might find their way onto world markets. These world markets have been demonstrated to be lavish in the prices that some nations are willing to pay for nuclear weapons technology. Hard-currency strapped Soviet enterprises and individuals will therefore be tempted by smuggling and sale. If systemic disintegration of the nuclear weapons production and custodial systems begins to take place, the world could see a diaspora of military technology not seen since the Nazi rocket scientists emigrated from Germany after World War II.

#### **RECOMMENDATIONS:**

1. Take steps (A)-(C) above.
2. Establish an intelligence liaison with appropriate authorities in the Soviet Union to share information about potential export of nuclear-weapons related materials outside of the Soviet Union.



3. Encourage legislatures in the republics to enact promptly strict export control legislation covering nuclear-weapons related technology in the republics, and encourage the establishment of strong enforcement mechanisms. Invite republic to become members of existing international control regimes as soon as they have put the necessary control mechanisms in place.

**E. Exposing the New Political Structures in the Former Soviet Union to Prevailing Conceptions of Nuclear Safety and Security**

**THE NEED:** Entirely new political figures and structures are clearly taking power in the territory of the former Soviet Union in the course of the ongoing process of liberalization and democratization. Many have no prior experience in managing security affairs, let alone in managing full-cycle production, maintenance, custodial, and command and control systems for nuclear weapons. Many will have had little exposure to prevailing conceptions of nuclear stability and nuclear safety as these have developed over half a century of superpower custodianship of nuclear weapons. It is important that these new participants in the ongoing security dialogue with other nations be exposed to the best thinking about how to solve their security dilemmas peacefully, about norms of behavior that prevail in the international community, and in particular about the limitations of nuclear weapons as guarantors of military security. It is also important that these new actors on the world stage have the experience of being dealt with fairly and respectfully by the world diplomatic community.

**RECOMMENDATIONS:**

1. Engage emerging security policymakers in the republics in a broad security dialogue not confined to nuclear weapons-related matters, and expose them to the best international thinking about how their legitimate security needs can be met with international cooperation.

2. Encourage contact between emerging security policymakers in the republics and their counterparts in the West -- both inside government and outside of government. The extra-governmental community that was instrumental in promoting understanding of security dilemmas and in devising innovative approaches to solving them during the Cold War has an obligation to turn its understanding and operating methods to the problem of Soviet nuclear devolution.

3. Continue and extend U.S.-Soviet military-to-military contacts. Be prepared to extend these to new military organizations in the republics if and when they emerge.

**F. Adjusting U.S. Military Policy to the New Nuclear Realities in the Soviet Union**

**THE NEED:** The United States is accustomed to conducting its nuclear policy in the cold war context, that is, assuming a hostile and uncooperative but internally coherent Soviet Union. This context for strategic policymaking is now clearly called into question. The United States should recognize that the new situation raises opportunities as well as dangers. We believe that the United States should be prepared to think and act boldly in making adjustments to the dramatic change in the nuclear threat. Though we have not analyzed the full spectrum of adjustments to U.S. nuclear posture, deployments, and doctrine that might be warranted in view of the changes occurring in the Soviet Union, we make the following general recommendations.

**RECOMMENDATIONS:**

1. **Offensive Nuclear Forces.** The United States should be prepared to make more dramatic adjustments in its nuclear posture with the objective of promoting desirable nuclear outcomes in the former Soviet Union. This requires that unilateral moves and arms control proposals and agreements be evaluated not only in the context of traditional strategic concerns with stability, but in the light of the new and continuously

changing political situation in the former Soviet Union and with an emphasis on their possible effects on the custody and control of the Soviet nuclear arsenal. We believe that a number of further steps beyond START, such as elimination of land-based ballistic missiles, de-MIRVing, and prompt movement toward deeper cuts, merit careful consideration because they might both reduce worries about nuclear spread in Soviet Eurasia and contribute to a desirable strategic nuclear relationship with the nuclear successor state.

2. Strategic Defense. The prospect of small-scale accidental or unauthorized launch by elements of the nuclear forces of the former Soviet Union has caused heightened U.S. interest in ballistic missile defenses. Our analysis bears on this point in two respects. First, unauthorized launch of ICBMs or SLBMs is only a small part of the overall problem of command and control of the Soviet nuclear arsenal during this period of political turmoil. Second, a purely unilateral initiative by the United States to develop and deploy robust strategic defenses at this time might affect the willingness of authorities of the former Soviet Union to ratify and implement the draft START agreement, which, as emphasized above, is an important policy tool for influencing the destiny of strategic weapons in the republics. Any U.S. initiative on strategic defenses should therefore be made through thorough consultation, and in the context of the START process.

3. The Alert Status of U.S. Nuclear Forces. In Presidents Bush and Gorbachev's reciprocal unilateral proposals of late September and early October, which dealt mainly with non-strategic nuclear weapons, steps were also proposed and subsequently taken to relax the alert postures of strategic bombers and ICBMs. Underlying these moves was the apparent judgment, which we share, that the traditional uses of high alert rates -- for enhancing force survivability and for political signalling in crisis -- were no longer justified in the new political setting. In particular, benefits of high alert rates were outweighed by the risks that high alert postures would contribute to the risk of accidental or unauthorized actions with nuclear weapons, and that changing alert rates in response to changing political fortunes could trigger anxiety and thus increase the



chances of nuclear war. In this connection, we recommend that U.S. nuclear force commanders seek additional relaxations of operational practices, where consistent with stability, and encourage their Soviet counterparts to reciprocate.

# Withdrawal/Redaction Sheet

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| Document No.<br>and Type | Subject/Title of Document              | Date     | Restriction                    | Class. |
|--------------------------|----------------------------------------|----------|--------------------------------|--------|
| 04. List                 | Re: Deputies Committee Meeting (1 pp.) | 11/25/91 | (b)(3) [50 U.S.C. 403g, Sec.6] |        |

**Collection:**

**Record Group:** Bush Presidential Records

**Office:** Scowcroft, Brent, Collection

**Series:** Administrative Files

**Subseries:**

**WHORM Cat.:**

**File Location:** Appointments Completed, January to December 1991 [1]

|                               |                |                             |           |
|-------------------------------|----------------|-----------------------------|-----------|
| <b>Date Closed:</b>           | 9/20/2010      | <b>OA/ID Number:</b>        | 85035-001 |
| <b>FOIA/SYS Case #:</b>       | 2009-0275-S[2] | <b>Appeal Case #:</b>       |           |
| <b>Re-review Case #:</b>      |                | <b>Appeal Disposition:</b>  |           |
| <b>P-2/P-5 Review Case #:</b> |                | <b>Disposition Date:</b>    |           |
| <b>AR Case #:</b>             |                | <b>MR Case #:</b>           |           |
| <b>AR Disposition:</b>        |                | <b>MR Disposition:</b>      |           |
| <b>AR Disposition Date:</b>   |                | <b>MR Disposition Date:</b> |           |

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**Presidential Records Act - [44 U.S.C. 2204(a)]**

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- P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
- P-3 Release would violate a Federal statute [(a)(3) of the PRA]
- P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
- P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA]
- P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

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DEPUTIES COMMITTEE MEETING  
NOVEMBER 25, 1991  
1:00 - 2:00 PM  
SITUATION ROOM

OVP

Lincoln Bloomfield

STATE

Lawrence Eagleburger  
Dona Hrinak  
Princeton Lyman

DEFENSE

Carl Ford  
James Harding

JCS

David Jeremiah  
John Jumper

CIA

(b)(3) [50 U.S.C. 403g, Sec. 6]

OMB

Bob Howard

JUSTICE

Daniel Levin  
Joseph Rees

TRANSPORTATION

Secretary Samuel Skinner  
William Kime  
Arthur Rothkopf

USIA

Eugene Kopp  
Stanley Zuckerman

NSC

Bill Pryce  
Nancy Dyke



NATIONAL SECURITY COUNCIL

22-Nov-1991 15:54 EDT

UNCLASSIFIED

MEMORANDUM FOR:

Florence E. Gantt

( GANTT )

FROM:

Norma D. Schillaci  
(SCHILLACI)

SUBJECT:

Clearance List for the General's 2:00 Mtg

I have cleared the following people for General Scowcroft's November 25, 2:00 pm meeting:

Neil van Heerden

Michael Farr, Special Assistant to van Heerden

Ambassador Harry Schwarz

CC: Wilma G. Hall

( HALL )

CC: Dona F. Proctor

( PROCTOR )

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| Document No.<br>and Type | Subject/Title of Document                                                                                                                                                 | Date     | Restriction | Class. |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------|--------|
| 05a. Memo                | Mark Johnson to Brent Scowcroft<br>Re: Appointment Request for Neil van Heerden, Director<br>General, South African Department of Foreign Affairs:<br>November 25 (1 pp.) | 11/19/91 | (b)(1)      | S      |

**Collection:**

**Record Group:** Bush Presidential Records  
**Office:** Scowcroft, Brent, Collection  
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**Subseries:**  
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| <b>Re-review Case #:</b>               | <b>Appeal Disposition:</b>     |
| <b>P-2/P-5 Review Case #:</b>          | <b>Disposition Date:</b>       |
| <b>AR Case #:</b>                      | <b>MR Case #:</b>              |
| <b>AR Disposition:</b>                 | <b>MR Disposition:</b>         |
| <b>AR Disposition Date:</b>            | <b>MR Disposition Date:</b>    |

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|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------|--------|
| 05b. Memo                | W. Robert Pearson to Brent Scowcroft<br>Re: Meeting with Neil van Heerden, Director General, South<br>African Department of Foreign Affairs (1 pp.) | 11/16/91 | (b)(1)      | C      |

**Collection:**

**Record Group:** Bush Presidential Records  
**Office:** Scowcroft, Brent, Collection  
**Series:** Administrative Files  
**Subseries:**  
**WHORM Cat.:**  
**File Location:** Appointments Completed, January to December 1991 [1]

|                               |                |                             |           |
|-------------------------------|----------------|-----------------------------|-----------|
| <b>Date Closed:</b>           | 9/20/2010      | <b>OA/ID Number:</b>        | 85035-001 |
| <b>FOIA/SYS Case #:</b>       | 2009-0275-S[2] | <b>Appeal Case #:</b>       |           |
| <b>Re-review Case #:</b>      |                | <b>Appeal Disposition:</b>  |           |
| <b>P-2/P-5 Review Case #:</b> |                | <b>Disposition Date:</b>    |           |
| <b>AR Case #:</b>             |                | <b>MR Case #:</b>           |           |
| <b>AR Disposition:</b>        |                | <b>MR Disposition:</b>      |           |
| <b>AR Disposition Date:</b>   |                | <b>MR Disposition Date:</b> |           |

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|--------------------------|---------------------------|---------|-------------|--------|
| 05c. Report              | Re: Biography (1 pp.)     | 9/14/90 | (b)(1)      | S      |

**Collection:**

**Record Group:** Bush Presidential Records  
**Office:** Scowcroft, Brent, Collection  
**Series:** Administrative Files  
**Subseries:**  
**WHORM Cat.:**  
**File Location:** Appointments Completed, January to December 1991 [1]

|                                        |                                |
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| <b>Date Closed:</b> 9/20/2010          | <b>OA/ID Number:</b> 85035-001 |
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**Presidential Records Act - [44 U.S.C. 2204(a)]**

P-1 National Security Classified Information [(a)(1) of the PRA]  
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]  
P-3 Release would violate a Federal statute [(a)(3) of the PRA]  
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]  
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA]  
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

**Freedom of Information Act - [5 U.S.C. 552(b)]**

(b)(1) National security classified information [(b)(1) of the FOIA]  
(b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]  
(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]  
(b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]  
(b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]  
(b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]  
(b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]  
(b)(9) Release would disclose geological or geophysical information

NATIONAL SECURITY COUNCIL

18-Nov-1991 16:23 EDT

UNCLASSIFIED

MEMORANDUM FOR:

Florence E. Gantt  
Wilma G. Hall  
Robin A. MacLean  
Dona F. Proctor

( GANTT )  
( HALL )  
( MACLEAN )  
( PROCTOR )

FROM: Earl A. Wayne  
(WAYNE)

SUBJECT: Rocard Appointment

Unfortunately Rocard cannot get here Thursday at 2:30. He is speaking at a lunch in New York. Is there any time on Friday to see the General and forgetting about a call on the President? Sorry for the trouble. Thanks,  
Tony

CC: Carol L. Scannell

( SCANNELL )

*Friday 11/22*  
*11:30 = w/BS*  
*11:45 = poss*  
*Q'2 drop by*

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

8293

NATIONAL SECURITY COUNCIL

WASHINGTON, D.C. 20506

November 12, 1991

ACTION

MEMORANDUM FOR BRENT SCOWCROFT

THROUGH: DAVID C. GOMPERT *[Signature]*

FROM: TONY WAYNE *[Signature]*

SUBJECT: Meeting with Michel Rocard

Former French Prime Minister Michel Rocard will be in the U.S November 19 to 23 to deliver a series of lectures at the Council on Foreign Relations. He would like to see you and the President during his stay.

Rocard and Jacques Delors are the leading candidates to represent the Socialists in the next Presidential race. Either one is now seen as beating anybody the Right puts forward. Ambassador Curley strongly recommends that you and the President see Rocard. He notes that the last time Rocard was in town for a private visit the President called him.

Rocard plans to be in Washington on Friday November ~~22~~, but could also come on the morning of the 20th, if that is more convenient. We recommend that you receive Rocard and if possible that the President drop by your meeting briefly. A Presidential Schedule Proposal is attached, if needed.

RECOMMENDATION

That you agree to meet with Rocard.

Approve B

Disapprove \_\_\_\_\_

That you try to arrange a Presidential drop by during your meeting with Rocard.

Approve B

Disapprove \_\_\_\_\_

Attachment

Tab I Memo to the President

**DECLASSIFIED**

PER NSC WAIVER, August 6, 2010

By CAP NARA, Date 9/20/10

~~CONFIDENTIAL~~

Declassify on: OADR

~~CONFIDENTIAL~~



THE WHITE HOUSE

WASHINGTON

SCHEDULE PROPOSAL

TO: KATHERINE SUPER, Deputy Assistant to the President for Appointments and Scheduling

FROM: BRENT SCOWCROFT

REQUEST: Meeting with Former French Prime Minister Michel Rocard

PURPOSE: To discuss European and US-French developments.

BACKGROUND: Rocard and Jacques Delors are the leading candidates to succeed President Mitterrand against any candidate the Right puts forward. A pragmatic socialist, Rocard has a positive view of the transatlantic relationship. He resigned as Prime Minister earlier this year and is in the U.S. to deliver a series of lectures to the Council on Foreign Relations. I suggest that the President drop by briefly during my meeting with Rocard.

PREVIOUS PARTICIPATION: The President called Rocard during Rocard's private visit to Washington eighteen months ago.

DATE & TIME: November 23, 1991 or morning November 20.  
DURATION: 10 minutes.

LOCATION: My office

PARTICIPANTS: The President  
Michel Rocard  
General Scowcroft  
Ambassador Andreani  
NSC staff

OUTLINE OF EVENTS: Meeting

RECOMMENDED BY: NSC

MEDIA COVERAGE: None, White House Photo

REMARKS REQUIRED: To be provided by NSC;

9:30 am, November 13, 1991

General:

*P called him  
11/14/91*

General Haig has FAX'd the attached to Muriel asking that she pass it to you.

General Haig returns to Washington tomorrow morning at 10:30 am and has requested an appointment with you **and the President** tomorrow.

\_\_\_\_\_ Okay to schedule appt w/BS

\_\_\_\_\_ Florence should try to get time on the President's calendar for Haig

\_\_\_\_\_ Let's hold; I will talk with Haig by phone

Wilma

POC: Muriel 429-9788

Page 01

WORLDWIDE ASSOCIATES, INC.  
OFFICE OF ALEXANDER M. HAIG, JR.  
WASHINGTON, D.C.

TOTAL NUMBER OF PAGES (INCLUDING LEAD SHEET) 3

TO: General Brent Scowcroft  
Assistant to the President for  
National Security Affairs  
~~The White House~~  
Washington, D.C. 20500  
Fax: 456-2493

FROM: Alexander M. Haig, Jr.

DATE: November 13, 1991

TRANSMITTED FROM RAPICOM 1200 AT (202/833-5296)  
IF YOU DID NOT RECEIVE ALL PAGES, PLEASE CALL 202/429-9788

REMARKS: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**ALEXANDER M. HAIG, JR**  
**BEIJING, CHINA**

**PERSONAL**

TO: DICK SOLOMON **DELIVER IMMEDIATELY**  
Assistant Secretary  
c/o Embassy-Seoul  
Fax: 82-2-738-8845/Tel: 82-2-732-2601

From: Al Haig

Date: 13 Nov 91

Subject: Beijing Observations/Per Your Request

During three full days of meetings with China's leaders, my effort from the outset was to impress the need to make Baker visit a success and show some progress in the three baskets.

Arms issue, my first basket, is very solvable if only with reiteration of previous PRC pledges. My second basket, trade, indicates need for flexibility on both sides, especially on time needed for essential reform. (IPR can go down to 5 years). Chinese are aware that pressure from the U.S. has at least aided their ability to cope with GATT issue and are aware time is important vis-a-vis Taiwan. They seem uncertain about USG support for GATT reentry and Secretary should make this clear. I believe simultaneity will be acceptable per APEC.

My third basket, human rights, is the most complicated and sensitive from China's point of view. The presence of Human rights expert on Secretary's team was an unwelcome surprise as has been some of the preliminary press play from your delegation.

I have strongly recommended to all Chinese leaders that creativity and not emotion be applied to this basket. Nevertheless, prearrival press play has been counterproductive from my point of view.

In sum, I am confident hosts very much wish to help President Bush with his domestic dilemma and are prepared to play for the long haul if they sense some will for give on our part. One senior leader stated to me "we are confident of President Bush's intentions, but are less certain of State".

I encountered no stereotype rhetoric or posturing. I believe Most serious problem is their perception of double cross on sanctions which cost the military some \$300,000,000.

FAX:86-1-5004921; TEL:86-1-5003094; TLX:22922 UTIBJ

1

of red ink. They believed President's letter following Tiananmen promised early lifting of restriction at least on existing contractual arrangements. They probably will not raise this, but it is under the surface and has alienated the military which may be our most important and even decisive influence for future reform. Good luck!

HAIG

CC: Ambassador Stapleton Roy  
General Scowcroft (via Muriel-202-833-5296)

FAX:86-1-5004921; TEL:86-1-5003094; TLX:22922 UTIBJ

2

00 0 960222000100

01

1991-11-13 16:40 FROM:UTIBJ TO:HAIG 09:44 21-11-1991

Mon  
11-18  
@ 2 PM

APNSA Has Seen  
November 14, 1991

General --

Senator Baker would like to come see you for a few minutes (and promises to take only a few minutes) on Monday, November 18 to talk about something "professional." I will put him on the calendar for "a few minutes."

Florence

DOB - 11-15-25

Lura Nell 202-508-3400  
or her Residence  
703-960-8455

w/ Cran  
Montgomery



3:38 p.m., November 14, 1991

General:

APNSA Has Seen

Ambassador Jim Woolsey called --

Would like to meet with you for 10 minutes on Saturday.

Woolsey is going to be talking with Sergei Rogoz who wants to talk about a quick fix on some changes in the strategic arms treaty business.

Wilma

POC: Law Firm Ofc 828-2026

NATIONAL SECURITY COUNCIL

12-Nov-1991 16:06 EDT

CONFIDENTIAL

MEMORANDUM FOR:

Florence E. Gantt ( GANTT )  
Wilma G. Hall ( HALL )  
Dona F. Proctor ( PROCTOR )

FROM: R. Nicholas Burns  
(BURNS)

SUBJECT: Meeting with Alexander Yakovlev

Please pass to General Scowcroft for his November 13 meeting at 6:00 p.m.  
with Alexander Yakovlev

Yakovlev requested this appointment in order to discuss the new  
U.S.-Soviet Group on the Future Security Agenda and other issues. We have  
heard that he may be carrying a letter from Gorbachev to the President to  
give to you. You may wish to raise the following issues with him:

1) Meeting on the Future Security Agenda:

--Dennis Ross and Yakovlev discussed this on November 12. They have  
agreed on a first set of meetings November 20-21 in Washington.  
Yakovlev did not raise the level of our group as he had before and,  
according to Dennis, now appears comfortable with our composition.

--Dennis said we would prefer a more balanced Soviet group which would include  
additional republic figures. Yakovlev said it would not be possible to  
change his group for the meeting next week but he would consider it  
for future meetings.

2) Current political scene: You might ask about Gorbachev's view of the  
process underway to construct new union political and economic agreements.  
Yakovlev's views on CFE and START ratification would be particularly  
interesting.

3) Baltics: Yakovlev heads the center's negotiating team with Latvia  
on troop withdrawal and normalization of economic relations.

4) Chechen-Ingushetia: Yakovlev spoke at length about this with  
Dennis. We have cautioned the Russian government about the use of  
force to solve internal ethnic problems. Gorbachev's apparent disagreement  
with Yeltsin on the use of army troops to quell the uprising was  
critical. Yakovlev's views would therefore be of interest.

CC: David C. Gompert

( GOMPERT )

## REQUEST FOR APPOINTMENTS

To: Officer-in-charge  
Workers and Visitor Entrance System  
Room 065, OEOP

Please admit the following appointments on November 13, 19 91

for Brent Scowcroft of NSC;  
(name of person to be visited) (agency)

| <u>NAME</u>         | <u>DATE OF BIRTH</u> | <u>SOCIAL SECURITY NUMBER</u>         |
|---------------------|----------------------|---------------------------------------|
| James GARRISON      | 1-7-53               | American                              |
| Alexander YAKOVLEV  | 12-2-23              | SOVIET                                |
| Nikolai KASALOPPOFF | 4-23-40              | SOVIET                                |
| Alexander MALGIN    | 11-28-59             | SOVIET DRIVER - WILL STAY<br>WITH CAR |

ALL OF THE ABOVE WILL BE ARRIVING BY CAR AT THE SOUTHWEST GATE

*Florence,  
Garrison will wait in Lobby.  
Amy*

### MEETING LOCATION

Building WW Requested by Nancy Maxfield  
Room No. \_\_\_\_\_ Room No. 368 Telephone 3912  
Time of Meeting 6pm Date of request Nov 13, 91

Additions and/or changes made by telephone should be limited to five (5) names or less.

**WAVES Center: SIG/OEOB — 395-6046 or WHITE HOUSE — 456-6742**



NATIONAL SECURITY COUNCIL

12-Nov-1991 16:44 EDT

CONFIDENTIAL

MEMORANDUM FOR:

Florence E. Gantt  
Wilma G. Hall  
Dona F. Proctor

( GANTT )  
( HALL )  
( PROCTOR )

FROM: R. Nicholas Burns  
(BURNS)

SUBJECT: Meeting with Jim Collins

Please pass to General Scowcroft for his November 13 meeting at 4:30 p.m.  
with Embassy Moscow DCM Jim Collins

Our DCM in Moscow, Jim Collins, asked to see you to give you his views on events in the USSR. He does not want to take too much of your time but wanted you to have his perspective on Gorbachev's future, our new relationship with Yeltsin's government and the Kozyrev visit next week, and the need for us to develop a policy on the Ukraine.

You might mention the following in addition to the discussion of the substantive issues:

--Thank him for his efforts as Charge d'affaires during the coup attempt and its aftermath when he did, by all accounts, a superior job in a difficult setting.

--Inquire about his recovery from his recent hospitalization--he suffered a collapsed lung in late September and spent nearly two weeks in the Kremlin hospital. One of the reasons for his trip home is to consult with doctors here on his condition.

--Express again our thanks to the Embassy staff for an excellent performance in trying circumstances.

CC: David C. Gompert

( GOMPERT )

DECLASSIFIED  
PER NSC WAIVER, 1500 2021-02  
By SS NARA, Date 3/6/24

NATIONAL SECURITY COUNCIL

08-Nov-1991 08:14 EDT

~~CONFIDENTIAL~~

MEMORANDUM FOR:

Florence E. Gantt  
Wilma G. Hall  
Dona F. Proctor

( GANTT )  
( HALL )  
( PROCTOR )

FROM: R. Nicholas Burns  
(BURNS)

SUBJECT: Appointments

DECLASSIFIED  
PER NSC WAIVER, 1500 2021-02  
By SS NARA, Date 3/6/24

Florence: If you get an opportunity, please run the following appointment requests by General Scowcroft--all for next week:

- ① --Gorbachev advisor Alexander Yakovlev would like to meet with the General on November 12 between noon-3:30 p.m. Ed had mentioned this to you once before and we will need to let him know. *OK* ✓ *No* *5 PM 11/13 Wed*
- ② --Our DCM in Moscow, Jim Collins, will be in Washington all next week and would like to brief the General on the situation there. Ed and I think that a fifteen minute appointment would be worthwhile to up-date the General on trends there. *I'll schedule him* *4:30 11/13 Wed*
- ③ --Melvin Conant, a friend of the General, wrote to say that their mutual friend, Malcolm Mackintosh, will also be in town Nov. 11-14 and would like to meet with him on the USSR. We do not know either gentleman and therefore cannot recommend either way. *OK Briefly* No *4:15 11/13 Wed*
- ④ Finally, I would appreciate it if you would find out whether or not the General has spoken to Eagleburger about my extending for a third year. State is pressing me for a decision on another job and I would like to tell them I'm staying here if the call has been made and Eagleburger was positive.

Thanks very much. Enjoy the Hague. Nick

CC: Edward A. Hewett

( HEWETT )

*Did you talk w/ LSE  
Any thing to tell Nick?  
LSE has to check.*

*Passed  
to Burns  
11/12*

**NATIONAL SECURITY COUNCIL**

November 12, 1991

Note for Florence Gantt

Attached is the incoming letter from  
Melvin Conant regarding Malcolm Mackintosh  
who will see General Scowcroft at 4:15  
p.m., November 13.

Nick Burns NB



8169

1300 L Street, N.W., Suite 1200  
Washington, D.C. 20005 USA  
Telephone: (202) 289-8970  
Fax: (202) 289-4866

## Conant and Associates, Ltd.

*stuff  
cy back  
up*

November 4, 1991

### Board of Directors

Melvin A. Conant, President  
Christa G. Conant, Vice President  
Mary L. Barcella  
Charles K. Ebinger  
Hermann F. Eilts  
Murray J. Gart  
J.D. Hughes  
Edward N. Krapels  
Abdul Aziz Said

Lt. General Brent Scowcroft  
National Security Advisor to the President  
The White House  
Washington, DC 20500

Dear General Scowcroft:

### Senior Associates

L. Gray Cowan  
A. W. Jessup  
Vincent Labouret  
Sir Albert Thomas Lamb,  
KBE, CMG, DFC  
Malcolm Mackintosh  
F.J. Norman  
Humberto Penaloza  
Ian Skeet  
Jonathan P. Stern

Our mutual friend Malcolm Mackintosh telephoned to say he will be in Washington November 11-14 and hopes very much for an opportunity to discuss recent events and trends in the "Soviet Union" and the Russian Republic.

His schedule has him free:

November 11, morning and afternoon  
November 12, morning  
November 13, all day  
November 14, all day

If any of these times are likely to be convenient for you, please advise me and I shall reach him and tell him so.

My phone number (weekdays) is (202) 289-8970.

With Best Wishes,

  
Melvin A. Conant  
President

NATIONAL SECURITY COUNCIL

05-Nov-1991 10:01 EDT

CONFIDENTIAL

MEMORANDUM FOR: SEE BELOW

FROM: Timothy E. Deal  
(DEAL)

SUBJECT: Soviet Debt

Please pass to the General ASAP (it's for the Soviet debt meeting with the President).

This supplements information in the memorandum to the President concerning the alternative methods to close the \$1 billion financial gap under Option 2.

You are correct that a new supplemental appropriation would require either: (a) a declaration of a dire emergency, which would undoubtedly create a domestic firestorm and become a vehicle for Congressional mischief; or (b) sequestration of an equivalent amount of funds (the \$200-500 million in the Treasury memo) from the Foreign Affairs (150) account. Sequestration or the use of the Economic Support Fund (ESF) for the Soviet Union would cut across other Administration policy objectives (e.g. Cambodia peacekeeping) although, as you noted previously, some drawdown on ESF funds originally destined for the Philippines may be possible.

Distribution:

|                        |             |
|------------------------|-------------|
| FOR: Florence E. Gantt | ( GANTT )   |
| FOR: Wilma G. Hall     | ( HALL )    |
| FOR: Robin A. Uhl      | ( UHL )     |
| FOR: Dona F. Proctor   | ( PROCTOR ) |
| CC: R. Nicholas Burns  | ( BURNS )   |
| CC: Edward A. Hewett   | ( HEWETT )  |

DECLASSIFIED  
PER NSC WAIVER, 1500 2021-02  
By SS NARA, Date 3/6/24

NATIONAL SECURITY COUNCIL

05-Nov-1991 10:42 EDT

UNCLASSIFIED

MEMORANDUM FOR:

|                   |             |
|-------------------|-------------|
| Florence E. Gantt | ( GANTT )   |
| Wilma G. Hall     | ( HALL )    |
| Robin A. Uhl      | ( UHL )     |
| Dona F. Proctor   | ( PROCTOR ) |

FROM: Edward A. Hewett  
(HEWETT)

SUBJECT: Please pass to the General for the 2:00 meeting

Your notes of the meeting with Gorbachev in Madrid say \$2.5 billion in standby, plus \$1 billion from the Saudis and Koreans, plus \$370 million = \$3.87, which is close enough to the \$4 billion. The real mystery is where the \$370 million came from.

Ed



NATIONAL SECURITY COUNCIL

05-Nov-1991 10:42 EDT

UNCLASSIFIED

MEMORANDUM FOR:

|                   |             |
|-------------------|-------------|
| Florence E. Gantt | ( GANTT )   |
| Wilma G. Hall     | ( HALL )    |
| Robin A. Uhl      | ( UHL )     |
| Dona F. Proctor   | ( PROCTOR ) |

FROM: Edward A. Hewett  
(HEWETT)

SUBJECT: Please pass to the General for the 2:00 meeting

Your notes of the meeting with Gorbachev in Madrid say \$2.5 billion in standby, plus \$1 billion from the Saudis and Koreans, plus \$370 million = \$3.87, which is close enough to the \$4 billion. The real mystery is where the \$370 million came from.

Ed

11:30 AM, TUES, NOV 5

NATIONAL SECURITY COUNCIL

29-Oct-1991 16:51 EDT

UNCLASSIFIED

MEMORANDUM FOR:

Robert B. Morley

( MORLEY )

FROM:

Wilma G. Hall  
(HALL)

SUBJECT:

Amb Negroponte

Bob, let's try 11:30 a.m.

As of right now that should work out okay. Will move the appt from 2:45 pm to accommodate Amb Negroponte. As I mentioned, General Scowcroft departs very early next morning with the President.

CC: Dona F. Proctor

( PROCTOR )

NATIONAL SECURITY COUNCIL

29-Oct-1991 16:25 EDT

UNCLASSIFIED

MEMORANDUM FOR:

Wilma G. Hall

( HALL )

FROM:

Robert B. Morley  
(MORLEY)

SUBJECT:

Appointment for Ambassador Negroponte

CC: William T. Pryce

( PRYCE )

Ambassador Negroponte is seeking an appointment with General Scowcroft, but I am told cannot come at 2:45 on November 5th. Can he have a brief (15-20 minute) appointment with the General between 11:00 and 12:00 noon, or any time after 4:00 p.m. Whatever is possible. Thanks.



NATIONAL SECURITY COUNCIL

07-Nov-1991 11:53 EDT

*Passed  
to Kitchen's  
ofc.  
11/12*

UNCLASSIFIED

MEMORANDUM FOR:

Wilma G. Hall

( HALL )

FROM:

Patricia A. Rawson  
(RAWSON)

SUBJECT:

Calendar Item

The General has agreed to interview Bill Working's recommended replacement for Dave Kitchen (package #7923). We would like to try to do this the middle of next week. Mike Waguespack is located in Chicago and will be making a special trip here to meet with the General. It is important that this interview take place soonest.

Thanks.

CC: Florence E. Gantt

( GANTT )

*General -*

*Shall I schedule this  
interview for middle of  
the week?*

*Okay*

*Other*

*Do we really need  
to have him make a  
trip just to be interviewed?  
Let's forget the interview.*

*B*

September 10, 1991

General --

Jerry Bremer has called in requesting a meeting with you to give you an assessment on Kissinger's recent trip to China. He asked to come in on Friday, September 13; Saturday, September 14 or Monday, September 16. His secretary did not indicate that Kissinger wanted to come see you -- just Jerry.

FYI: Attached is a copy of a report submitted by Stape Roy on Kissinger's recent visit to China.

Time permitting, scheduled for Friday X

9/13 10 pm.

Saturday \_\_\_\_\_

Monday \_\_\_\_\_

Other \_\_\_\_\_

Penny Rose  
212-759-7919

DOB  
9/30/41

Florence

NATIONAL SECURITY COUNCIL

10-Sep-1991 09:57 EDT

~~CONFIDENTIAL~~

MEMORANDUM FOR: SEE BELOW

FROM: James R. Keith  
(KEITH)

DECLASSIFIED  
PER NSC WAIVER, 1500 2021-02  
By SS NARA, Date 3/6/84

SUBJECT: Report on Kissinger's Trip to China

For General Scowcroft:

At the conclusion of his talks in Beijing, Dr. Kissinger briefed Ambassador Roy, as reported in the attached telegram from Beijing. Premier Li Peng probed Kissinger for information on the recent US Customs raids on Chinese trading firms engaged in illegal textile shipments. Li was interested in whether the President approved the action, suggesting concern in Beijing that the President's commitment to the bilateral relationship has diminished. The Chinese were also concerned that Jim Lilley's recent forward-leaning comments about Taiwan might suggest Administration consideration of a change in the framework for US-China relations, considering Jim's long association with the President.

Dr. Kissinger found the Chinese defensive, uncertain about global trends, watchful of Japan, and deeply troubled by what they perceived to be a pattern of hostile US attitudes and actions.

Dr. Kissinger and his colleagues rebutted the suggestion that the US had any interest in changing the framework of our relations and emphasized the continuing importance of US-China relations. The group met with President Yang, Premier Li, General Secretary Jiang, Foreign Minister Qian, Minister for Foreign Economic and Trade Relations Li, and former FM Huang Hua. Dr. Kissinger also met privately with President Yang.

Distribution:

|                        |             |
|------------------------|-------------|
| FOR: Florence E. Gantt | ( GANTT )   |
| FOR: Wilma G. Hall     | ( HALL )    |
| FOR: Dona F. Proctor   | ( PROCTOR ) |
| FOR: Robin A. Uhl      | ( UHL )     |
| CC: Douglas H. Paal    | ( PAAL )    |
| CC: Cynthia M. Hindle  | ( HINDLE )  |



NATIONAL SECURITY COUNCIL

10-Sep-1991 07:11 EDT

MEMORANDUM FOR:

FROM:

(WHSR\_ROUTER@WHSR)

SUBJECT:

KISSINGER BRIEFING TO AMBASSADOR ON VISIT

<DIST>

PRT: KEITH

SIT: PAAL RAGLE VAX

<PREC>

IMMEDIATE

<CLAS>

~~CONFIDENTIAL~~

<OSRI>

RUEHBJ

<DTG>

100719Z SEP 91

DECLASSIFIED

PER DOS WAIVER, November 6, 2015

By SS NARA, Date 3/6/24

<ORIG>

FM AMEMBASSY BEIJING

<TO>

TO RUEHC/SECSTATE WASHDC IMMEDIATE 6703  
INFO RUMJSA/AMCONSUL SHANGHAI IMMEDIATE 4505  
RUEHKO/AMEMBASSY TOKYO 6532  
RUEHIN/AIT TAIPEI 5869  
RUEHHK/AMCONSUL HONG KONG 7986  
RUEHSH/AMCONSUL SHENYANG 1388  
RUEHGZ/AMCONSUL GUANGZHOU 4780  
ZEN/AMCONSUL CHENGDU

<SUBJ>

KISSINGER BRIEFING TO AMBASSADOR ON VISIT  
HIGHLIGHTS

<TEXT>

BT

~~CONFIDENTIAL~~ SECTION 01 OF 02 BEIJING 028677

EXDIS

E.O. 12356: DECL: OADR

TAGS: PREL, CH

SUBJECT: KISSINGER BRIEFING TO AMBASSADOR ON VISIT  
HIGHLIGHTS

1. ~~CONFIDENTIAL~~/EXDIS - ENTIRE TEXT

2. THE CHINESE PULLED OUT ALL THE STOPS FOR THE US-CHINA ASSOCIATION DELEGATION LED BY FORMER SECRETARY OF STATE HENRY KISSINGER, WHO WAS MAKING HIS 19TH VISIT TO CHINA. IMPRESSED BY THE BIPARTISAN NATURE OF THE DELEGATION, ITS PRESTIGIOUS COMPOSITION, AND THE COMMITMENT OF ITS MEMBERS TO IMPROVING SINO-US RELATIONS, CHINA'S TOP LEADERS WERE UNSTINTING OF THEIR TIME IN MEETING AND HOSTING THE GROUP. FOREIGN MINISTER QIAN QICHEN, PREMIER LI PENG, AND PARTY GENERAL SECRETARY JIANG ZEMIN MET WITH AND HOSTED DINNERS FOR THE DELEGATION ON SUCCESSIVE EVENINGS. IN ADDITION, THE GROUP MET PRC PRESIDENT YANG SHANGKUN (DR. KISSINGER ALSO HAD A PRIVATE MEETING WITH YANG), FORMER FOREIGN MINISTER AND NOW SENIOR ADVISER HUANG HUA, AND MINISTER FOR FOREIGN ECONOMIC RELATIONS AND TRADE LI LANQING. THE EMBASSY PROVIDED A TWO HOUR BRIEFING FOR THE DELEGATION SHORTLY AFTER ITS ARRIVAL, AND THE AMBASSADOR WAS INCLUDED IN ALL THE DINNERS.

3. AT THE CONCLUSION OF THE BEIJING TALKS, DR. KISSINGER PROVIDED THE AMBASSADOR WITH SOME OF HIS IMPRESSIONS. HE SAID HE HAD FOUND THE CHINESE DEFENSIVE, UNCERTAIN ABOUT GLOBAL TRENDS, WORRIED ABOUT THE SOVIET UNION, WATCHFUL OF JAPAN, AND DEEPLY TROUBLED BY U.S. BEHAVIOR. CHINESE LEADERS WERE UNANIMOUS IN EMPHASIZING THEIR DESIRE FOR IMPROVED RELATIONS WITH THE UNITED STATES, BUT THEY WERE DISTURBED BY WHAT THEY SAW AS A PERVASIVE AND GROWING PATTERN OF HOSTILE U.S. ATTITUDES AND ACTIONS, UNCERTAIN AS TO THE COMMITMENT OF THE UNITED STATES TO IMPROVING RELATIONS, AND CONCERNED THAT NOTHING THEY COULD DO WOULD SATISFY THE UNITED STATES AND THAT ANY CONCESSIONS ON THEIR PART WOULD SIMPLY RESULT IN ESCALATING DEMANDS. IN RESPONSE, THE GROUP EMPHASIZED THE CONTINUING STRATEGIC IMPORTANCE OF SINO-U.S. RELATIONS IN THE EMERGING WORLD SITUATION, THE NEED TO PREVENT FURTHER DAMAGE, AND THE MANY COMMON INTERESTS THAT PROVIDED A SOLID BASIS ON WHICH TO REBUILD THE RELATIONSHIP.

4. FOLLOWING ARE SOME OF THE HIGHLIGHTS OF THE TALKS AS GLEANED FROM CONVERSATIONS WITH VARIOUS DELEGATION MEMBERS:

-- THE CHINESE WERE DEEPLY UPSET BY THE U.S. CUSTOMS RAID ON VARIOUS CHINESE TRADING COMPANIES THAT THE CHINESE HAD EARLIER PROTESTED BOTH HERE AND IN WASHINGTON. PREMIER LI PENG RAISED THE MATTER IN HIS MEETING WITH THE GROUP AND PROBED FOR INFORMATION ON THE LEVEL WITHIN THE U.S. GOVERNMENT AT WHICH SUCH A MASSIVE, UNPRECEDENTED, AND (IN CHINESE EYES) HOSTILE ACTION WOULD HAVE BEEN APPROVED. IMPLICIT IN THE CHINESE COMMENTS WAS AN UNDERLYING CONCERN THAT PRESIDENT BUSH MAY NO LONGER BE AS COMMITTED AS BEFORE



TO PRESERVING A FRIENDLY U.S.-CHINA RELATIONSHIP.

-- THE SAME CONCERN WAS EVIDENT IN CHINESE COMMENTS ON STATEMENTS BY FORMER AMBASSADOR LILLEY WITH REGARD TO TAIWAN. BECAUSE OF AMBASSADOR LILLEY'S LONG ASSOCIATION WITH PRESIDENT BUSH, THE CHINESE WORRIED THAT THE REMARKS ATTRIBUTED TO LILLEY MIGHT REFLECT AN INCLINATION WITHIN THE ADMINISTRATION, PERHAPS EVEN AT THE HIGHEST LEVEL, TO TINKER WITH THE FRAMEWORK OF U.S. POLICY TOWARD CHINA (I.E. THE THREE COMMUNIQUE). DR. KISSINGER AND OTHER MEMBERS OF THE GROUP FIRMLY REBUTTED THIS SUGGESTION.

-- ON GATT, THE CHINESE SOUGHT TO IMPLY THAT THE U.S. WAS DRAGGING ITS FEET ON PRC MEMBERSHIP AND THAT CHINA HAD PROVIDED ALL REQUESTED INFORMATION BUT THE U.S. KEPT ASKING FOR MORE. (NOTE: WE BRIEFED THE DELEGATION ON OUR UNDERSTANDING OF THE CURRENT STATE OF PLAY AND THE DEGREE OF CHINESE RESPONSIVENESS TO REQUESTS FOR INFORMATION.)

-- THE GROUP GAINED THE IMPRESSION THAT THE CHINESE ARE STILL HAVING DIFFICULTY APPRECIATING THE IMPORTANCE OF HUMAN RIGHTS TO THE UNITED STATES AS A FACTOR IMPEDING THE RELATIONSHIP. THUS, PRESIDENT YANG SHANGKUN BEMUSE THE GROUP AT ONE POINT BY SUGGESTING THAT IN VIEW OF OUR DIFFERENT APPROACHES TO HUMAN RIGHTS, WE SHOULD SET ASIDE THE ISSUE FOR 15 OR 20 YEARS UNTIL CHINA COULD TAKE THE STEPS NECESSARY TO MOVE CLOSER TO OUR

BT

#8677

BT

~~C O N F I D E N T I A L~~ SECTION 02 OF 02 BEIJING 028677  
EXDIS

E.O. 12356: DECL: OADR

TAGS: PREL, CH

SUBJECT: KISSINGER BRIEFING TO AMBASSADOR ON VISIT  
HIGHLIGHTS

STANDARDS. THE STARK UNREALITY OF THIS PROPOSITION SPURRED DR. KISSINGER TO MAKE CLEAR TO YANG THE NONVIABILITY OF SUCH AN APPROACH.

5. LEADERSHIP IMPRESSIONS. MEMBERS OF THE GROUP WHO HAD MET PREMIER LI PENG BEFORE INDICATED THAT HE ROSE IN THEIR ESTIMATION WITH EACH SUCCESSIVE MEETING. THIS WAS BECAUSE HE DISPLAYED A FIRM GRASP OF THE ISSUES, WHICH OVER TIME OFFSET HIS SEEMINGLY DOUR AND PEDESTRIAN MANNER. GENERAL SECRETARY JIANG ZEMIN, ON THE OTHER HAND, CAME ACROSS AS CONVIVIAL BUT LACKING IN SERIOUSNESS, AN IMPRESSION ENHANCED BY HIS RENDITION OF SONGS FROM THE POST-WWII MOVIE "THE GREAT WALTZ" DURING THE DINNER HE HOSTED. JIANG GAMESLY CONDUCTED MOST OF THE DINNER CONVERSATION IN RUSTY BUT SERVICEABLE ENGLISH.

6. SOVIET DEVELOPMENTS. THE MEETINGS AND DINNER TABLE DISCUSSIONS PROVIDED NUMEROUS OPPORTUNITIES TO REVIEW SOVIET DEVELOPMENTS WITH SENIOR CHINESE LEADERS, ESPECIALLY FOREIGN MINISTER QIAN QICHEN AND PREMIER LI



PENG. HOWEVER, DELEGATION MEMBERS DID NOT SINGLE OUT ANY CHINESE COMMENTS AS OFFERING NEW INSIGHTS INTO THE PRC ASSESSMENT OF DEVELOPMENTS IN THE USSR AND THEIR LIKELY RESPONSE.

ROY

BT

#8677

<SECT>

SECTION: 01 OF 02

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SECTION: 02 OF 02

<SSN>

8677

<TOR>

910910065631 MSG000305794591

Thurs. 10/31  
3:00 P.M.

October 25, 1991

General --

Ted Warner of RAND has called requesting an appointment with you on Monday, October 28. He said he is a friend of yours from an earlier time. He has just returned from Moscow with a Dartmouth group (he says you have been associated with this group before). He said they met with high officials (I believe he said FoMin and Yeltsin) and they have a proposal which he would like to discuss with you. I explained that it was a very busy time -- you would be leaving for the Madrid Conference in the evening, etc., etc.

Heavy schedule, suggest he meet with Staff \_\_\_\_\_

If he wants to do after Madrid Conference I'll see him \_\_\_\_\_ ✓

I'll see him Monday for a few minutes \_\_\_\_\_

Other \_\_\_\_\_

Edward L. Warner, III  
12-4-40

703-860-4471  
Reston Residence

Florence

*Jues*

October 22, 1991

*Come  
m)  
m)  
10/22*

General --

I just got a call from the Soviet Embassy --

Ambassador Komplektov would like to come in and see the President. He has just received a message from Gorbachev about economic issues -- he said it was an important message and would like to meet with President Bush.

Sergey, the Ambassador's assistant, then said if that is not possible perhaps he could meet with the General.

He then called again to underscore that Komplektov wanted to see the President.

Please advise.

Florence

737-7915  
628-1359  
Sergey



General -

Please advise

Thurs.  
Oct 24  
11:00 AM  
OK

NATIONAL SECURITY COUNCIL

21-Oct-1991 10:10 EDT

UNCLASSIFIED

MEMORANDUM FOR:

Florence E. Gantt  
Wilma G. Hall  
Robin A. Uhl  
Dona F. Proctor

( GANTT )  
( HALL )  
( UHL )  
( PROCTOR )

FROM: Earl A. Wayne  
(WAYNE)

SUBJECT: Former French PM Barre Requests a Meeting

Could you please check the following with the General? Former French Prime Minister Raymond Barre will be in the US to deliver a speech on October 25. The French DCM here called to say that Barre would like to see the General and is available anytime October 24, late afternoon October 23 or early morning October 25. Barre, a respected economist, was PM under Giscard D'Estaing and remains a senior member of the French opposition. Please let me know and I will be happy to do the arranging or the regretting. Cheers,

Tony

CC: David C. Gompert

( GOMPERT )

Wes ~~James~~  
10/23  
4:00

NATIONAL SECURITY COUNCIL

21-Oct-1991 09:16 EDT

UNCLASSIFIED

MEMORANDUM FOR: SEE BELOW

FROM: Edmund J. Hull  
(HULL)

SUBJECT: Shoal request to Meet with APNSA

Shoval's office called to ask if General Scowcroft would receive Ambassador Shoal upon his return so that the Ambassador could transmit Israel's (positive) response to the President's invitation to a Middle East peace conference. I see no problem. Richard may want to raise with the General right after the meeting with Baker.

Distribution:

|                        |             |
|------------------------|-------------|
| FOR: Florence E. Gantt | ( GANTT )   |
| FOR: Wilma G. Hall     | ( HALL )    |
| FOR: Robin A. Uhl      | ( UHL )     |
| FOR: Dona F. Proctor   | ( PROCTOR ) |
| CC: Bruce O. Riedel    | ( RIEDEL )  |
| CC: Donna P. Mmoh      | ( MMOH )    |
| CC: Kathy Leahy        | ( LEAHY )   |

# Withdrawal/Redaction Sheet

## (George Bush Library)

| Document No.<br>and Type | Subject/Title of Document                                       | Date     | Restriction | Class. |
|--------------------------|-----------------------------------------------------------------|----------|-------------|--------|
| 12. Memo                 | Re: Meeting with Czech Officials with General Scowcroft (1 pp.) | 10/21/91 | (b)(1)      | TS     |

**Collection:**

**Record Group:** Bush Presidential Records  
**Office:** Scowcroft, Brent, Collection  
**Series:** Administrative Files  
**Subseries:**  
**WHORM Cat.:**  
**File Location:** Appointments Completed, January to December 1991 [1]

|                               |                |                             |           |
|-------------------------------|----------------|-----------------------------|-----------|
| <b>Date Closed:</b>           | 9/20/2010      | <b>OA/ID Number:</b>        | 85035-001 |
| <b>FOIA/SYS Case #:</b>       | 2009-0275-S[2] | <b>Appeal Case #:</b>       |           |
| <b>Re-review Case #:</b>      |                | <b>Appeal Disposition:</b>  |           |
| <b>P-2/P-5 Review Case #:</b> |                | <b>Disposition Date:</b>    |           |
| <b>AR Case #:</b>             |                | <b>MR Case #:</b>           |           |
| <b>AR Disposition:</b>        |                | <b>MR Disposition:</b>      |           |
| <b>AR Disposition Date:</b>   |                | <b>MR Disposition Date:</b> |           |

### RESTRICTION CODES

**Presidential Records Act - [44 U.S.C. 2204(a)]**

P-1 National Security Classified Information [(a)(1) of the PRA]  
 P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]  
 P-3 Release would violate a Federal statute [(a)(3) of the PRA]  
 P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]  
 P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA]  
 P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

**Freedom of Information Act - [5 U.S.C. 552(b)]**

(b)(1) National security classified information [(b)(1) of the FOIA]  
 (b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]  
 (b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]  
 (b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]  
 (b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]  
 (b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]  
 (b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]  
 (b)(9) Release would disclose geological or geophysical information