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WHO CONTROLS THE SOVIET NUCLEAR ARSENAL? WHAT AMERICA CAN DO

INTRODUCTION

The breakup of the Soviet Union raises legitimate concerns about security and control over Moscow's strategic nuclear weapons. Western leaders, including George Bush and German Chancellor Helmut Kohl, however, increasingly are using these concerns to justify their support for preserving some sort of central authority in the crumbling Soviet Union. Such authority, they say, is needed to keep control over these weapons. These leaders are letting nuclear fears blind them to America's and the West's overriding interest in the breakup of the Soviet Union into sovereign states, ending the dominant military threat of the past four decades.

To be sure, Bush and other Western leaders have a responsibility to take immediate measures aimed at ensuring that the Soviet strategic nuclear arsenal remains under unified command in the hands of rational authorities. This should be achieved, however, in a way that furthers, rather than hampers, the decentralization of authority in what for now remains the "Soviet Union." This means diplomacy aimed at encouraging the non-Russian emerging republics to exercise their sovereign right to renounce the stationing of nuclear weapons on their territory. It too means supporting efforts of the Russian Republic to take control over the Soviet nuclear arsenal and to accept Soviet nuclear weapon treaty obligations. In pursuit of this policy, Bush should:

- ◆ ◆ Immediately dispatch Chairman of the Joint Chiefs of Staff Colin Powell to Moscow to discuss the safety and security of the Soviet nuclear arsenal with Soviet, Russian, and republican authorities, and to offer American technical advice on protecting the arsenal against accidental or unauthorized use.
- ◆ ◆ Quietly encourage Mikhail Gorbachev to relinquish control over Soviet strategic nuclear forces to the more stable, and democratically elected, government of Russian President Boris Yeltsin. Once this is accomplished, Russia

should be urged to assume all nuclear weapon treaty obligations of the Soviet Union.

- ◆ ◆ **Urge new nations seceding from the Soviet Union to sign the 1968 Nuclear Non-proliferation Treaty and to remove all strategic nuclear weapons from their territories, returning them to Russia or destroying them in cooperation with Russian authorities.** Attempts by Soviet successor states, except Russia, to gain control over Soviet strategic nuclear weapons could lead them into conflict with other republics or with the Soviet military and KGB troops that now control the weapons. A multiplication of nuclear weapon states, moreover, inherently poses dangers to the United States, even though Soviet successor states are likely to be America's friends, not adversaries.
- ◆ ◆ **Ask Congress to speed the deployment of strategic defenses.** The main reason for the tremendous American concern over control over the Soviet nuclear arsenal is that the U.S. has no defenses against these weapons. The inadvertent or unauthorized launch of even a single Soviet nuclear-armed ballistic missile against America would have devastating consequences. With a crash program, the U.S. could protect itself against such attacks within the next few years.

THE SOVIET STRATEGIC ARSENAL

The strategic nuclear arsenal of the Soviet Union is vast and powerful. The Soviet Union possesses over 11,000 strategic nuclear warheads mounted on intercontinental ballistic missiles (ICBMs), submarine launched ballistic missiles (SLBMs), and strategic bombers.

All of these are considered "strategic" weapons, meaning essentially that they have the range to strike American territory. Moscow also possesses up to 17,000 "tactical" nuclear weapons, including cruise and ballistic missiles, aircraft-dropped bombs, and artillery shells. These cannot reach the U.S.

While the majority of Soviet strategic weapons are deployed on Russian territory or at sea, some are in Byelorussia, Kazakhstan, and Ukraine. Even the relatively small number of weapons deployed in these republics (roughly 2,000 to 3,000 warheads) would wreak unimaginable damage on the U.S.

ICBMs. The most powerful element of the Soviet arsenal is its ICBM force. The Soviet Union possesses seven kinds of ICBMs: the single-warhead SS-11 *Sego* and SS-13 *Savage*, the four-warhead SS-17 *Spanker*, the ten-warhead SS-18 *Satan*, the six-warhead SS-19 *Stiletto*, the ten-warhead SS-24 *Scalpel*, and the single-warhead SS-25 *Sickle*.¹

¹ Figures represent the highest number of warheads with which these missiles have been tested; some weapons may be deployed with fewer warheads.

Soviet Strategic Nuclear Deployment



Source: U.S. Department of Defense, *Soviet Military Power*,
The Washington Post, August 28, 1991.

Note: Base locations are approximate.

Heritage DataChart

As of the middle of last year, the Soviet ICBM force numbered 1,398 missiles armed with 6,535 nuclear warheads.² Most are deployed in silos dug deep in the ground. The SS-24 can be deployed in fixed silos or on trains; all SS-25s are deployed on mobile launchers that can travel on roads or overland.

Of the 16 Soviet fixed-based missile fields, 12 are on Russian territory; ten of 12 mobile ICBM bases are also in Russia.³ Byelorussia has two bases with about 30 SS-25 missiles each, for a total of 60 warheads. Kazakhstan has two fields of SS-18s, each containing 50 missiles. Since SS-18s hold up to ten warheads, Kazakhstan may have up to 1,000 strategic missile warheads deployed on its territory. Ukraine has one field containing 56 SS-24 missiles and another field containing 60 SS-19 missiles, together containing close to 1,000 warheads.

Strategic Bombers. The Soviet Union possesses three kinds of strategic bombers: 160 of the 3,700-mile-range Tu-95 *Bear*, first built in 1955; 15 of the 3,940-mile-range Tu-160 *Blackjack*, first built in 1987; and 120 of the 2,150-mile-range Tu-22M *Backfire*, first built in 1974.

² The International Institute for Strategic Studies, *The Military Balance 1990-1991* (London: Brassey's, 1990), p. 34.

³ Telephone conversation with RAND Senior Defense Analyst Edward L. Warner, who has conducted extensive research on the Soviet arsenal, September 3, 1991.

As of the middle of last year, the bomber force consisted of 295 aircraft. An older model *Bear* can carry four nuclear weapons. The newer model carries up to 12 Air Launched Cruise Missiles (ALCMs). The *Backfire* can carry two bombs. The *Blackjack* carries 24 short-range attack missiles (SRAMs), which are the equivalent of highly accurate bombs, or 12 ALCMs. The Soviet bomber force can deliver about 2,000 warheads against the U.S.⁴

While most of these aircraft are in Russia, Ukraine has eight bomber bases on its territory, Byelorussia five bases, and Kazakhstan one base. The number of aircraft and weapons on these bases has not been made public.⁵

Bombers, unlike missiles, pose a relatively low threat to the U.S. of surprise or accidental attack since they take hours rather than minutes to reach their targets and can be recalled to base. Still, these weapons can devastate America, particularly those armed with ALCMs, which can be launched against targets in the U.S. while the bomber remains over 1,000 miles outside U.S. airspace. But in a crisis, preventing the unauthorized transfer of strategic bombers based outside Russia should be relatively easy. The bombers and their weapons based in the republics could be flown back to bases within Russia if ordered by authorities in Moscow.

Ballistic Missile Submarines. The Soviet Union now has three kinds of submarines that carry ballistic missiles. *Yankees*, first deployed in 1968, carry 12 or 16 missiles depending on the model. *Deltas*, first deployed in 1973, carry 12 or 16 missiles. *Typhoons*, first deployed in 1983, carry 20 missiles.

Among them, these submarines carry six different types of SLBMs: the 1,600-mile-range SS-N-6 *Serb*; the 4,000-mile-range SS-N-8 *Sawfly*; the 2,100-mile-range SS-N-17 *Snipe*; the 4,300-mile-range SS-N-18 *Stingray*; the 4,500-mile-range SS-N-20 *Sturgeon*; and the 4,500-mile-range SS-N-23 *Skiff*. As of the end of 1989, the Soviet submarine force could deliver 3,356 nuclear warheads against the U.S.⁶

All Soviet ballistic missile submarine bases are at Russian Republic ports. According to a 1985 estimate, roughly 25 percent of Soviet ballistic missile submarines are at sea at any one time.⁷

NUCLEAR SECURITY

Political instability in the Soviet Union raises legitimate questions about the safety and security of the Soviet nuclear arsenal. During the three days of August's coup, control of the arsenal likely passed to a group of panic-stricken putsch leaders. Some of them, as it was later learned, were often drunk, and in one case suicidal. During the

4 International Institute for Strategic Studies, *op. cit.* and John M. Collins, *U.S./Soviet Military Balance Statistical Trends, 1980-1989* (Washington, D.C.: Congressional Research Service, 1990), pp. 24-27.

5 Warner, *op. cit.*

6 Collins, *op. cit.*, pp. 19-23.

7 John M. Collins, *U.S.-Soviet Military Balance 1980-1985* (Washington, D.C.: Congressional Research Service, 1985), p. 100.

coup Soviet General Y.P. Maksimov, commander of the Strategic Rocket Forces, prudently ordered all SS-25 mobile missiles from their normal alert routes back to their bases as a clear sign to Washington that the arsenal was under control.⁸

As central authority weakens in the Soviet Union, concerns have been raised that emerging republics will attempt to gain control over nuclear weapons. Strategic nuclear weapons now are controlled by Soviet military and KGB security personnel. If the republics were to attempt to take control of missiles on their territory, they would have to displace armed Soviet soldiers, a mission for which they likely lack the military capacity. Even if they gained physical possession of the missiles, it is unlikely that the republics could operate them. The missiles are armed and launched through a centralized command and control system, headquartered in Moscow, using a complex code system. Over time, Byelorussian, Kazakh, or Ukrainian technicians possibly could crack the codes, but this would be a long process.

This is the worst scenario. And it assumes that these new governments would want to retain the missiles. This is far from certain. In fact, it is most likely that all but Russia will renounce nuclear weapons. Already all three of the non-Russian republics with strategic weapons on their territories—Byelorussia, Kazakhstan, and Ukraine—have announced that they do not intend to possess any nuclear weapons, tactical or strategic.

RECOMMENDATIONS FOR U.S. POLICY

While there is some risk that responsible authorities in Moscow will lose control over the Soviet arsenal, the risk is slight that this would result in an accidental or unauthorized launch of nuclear weapons against the U.S. Still, given the horrendous consequences in the event it should happen, the risks should be reduced to an absolute minimum. Russian authorities, obviously, have a key role in this. So does the U.S.

To reduce the risk of an accidental or irrational nuclear weapons launch, Bush should:

◆ ◆ **Immediately dispatch Chairman of the Joint Chiefs of Staff Colin Powell to Moscow to discuss the safety and security of the Soviet nuclear arsenal with Soviet, Russian, and republican authorities, and to offer American technical advice on protecting the arsenal against accidental or unauthorized use.**

During his visit, Powell could assess the safety of the Soviet nuclear arsenal and obtain information from Soviet President Gorbachev, Russia's Yeltsin, and military authorities about who precisely is in charge of the Soviet arsenal and how they plan to ensure a continuum of responsible civilian control. With events moving so quickly and unpredictably in Moscow, clear and open lines of communication at the highest levels are necessary between Washington and Moscow to make sure that there are no misunderstandings or misinterpretations on either side. Powell also could take the opportunity to offer U.S. technical assistance in maintaining the safety of Soviet nuclear weap-

⁸ According to a report by Craig Covault, *Aviation Week and Space Technology*, September 2, 1991.

ons, and even in protecting the physical security of nuclear warheads located in bases throughout the Soviet Union. Such assistance could include sharing technology that prevents unauthorized use of the weapons, advice on how best to protect weapons bases, missile fields and storage nuclear facilities, and help in destroying weapons that all sides agree to destroy.

◆ ◆ Quietly encourage Mikhail Gorbachev to relinquish control over Soviet strategic nuclear forces to the more stable, and democratically elected, government of Russian President Boris Yeltsin.

Yeltsin announced on September 3 his desire that Russia control all nuclear weapons on its territory. Gorbachev has yet to respond to this. Given the proven instability of Gorbachev's government, and the demonstrated strength of Yeltsin's, Bush quietly should urge Gorbachev to go along with Yeltsin's plans, and quickly and smoothly transfer nuclear authority to the Russian Republic. It is in America's interests that there be no ambiguity in the transfer, and no struggle for control that might give hard-line elements in the military, or reactionary Communist Party members, an opening to seize the opportunity for themselves.

◆ ◆ Urge new nations emerging from the Soviet Union to sign the 1968 Nuclear Non-proliferation Treaty and to remove all strategic nuclear weapons from their territories, returning them to Russia or destroying them in cooperation with Russian authorities.

The U.S. has enormous political leverage over the nations emerging from the old Soviet Union. These nations desire good relations with America and want American trade and aid. Close ties to America, meanwhile, will give these nations some counterweight to their large and powerful neighbor, Russia.

Washington should use this leverage to encourage these republics to make good on their pledges not to seek nuclear weapons. In this process Washington should take special care to ensure that they relinquish all nuclear weapons capable of reaching the U.S. While the question of control over tactical nuclear weapons also is very important, such weapons pose no direct threat to the U.S., and therefore should be treated separately by American policy makers.

At a minimum, the Administration should make it clear to all of the republics, including Russia, that the U.S. will continue to consider any strategic weapons on their territories as a potential threat to America and that these weapons for the time being will remain targets in the U.S. Single Integrated Operation Plan (SIOP), which allocates targets for U.S. strategic nuclear weapons. This is not a message that the Administration should convey with any sense of belligerence, but simply as a statement of policy.

A further step to reduce the risks of accidental or unauthorized nuclear attack would be for the Soviet Union's emerging republics, after weapons are consolidated on Russian territory, to join the some 140 nations worldwide in acceding to the 1968 Nuclear Non-Proliferation Treaty (NPT). This would bar the non-Russian republics from developing nuclear weapons and put their nuclear energy programs under international safeguards.

As for Russia, it is all but inevitable that it will remain a nuclear power. Russia, however, could assume the NPT obligations of what now is the Soviet Union, which ratified the treaty as a nuclear-weapon-possessing state in March 1970. As legal successor to the Soviet Union under the NPT, Russia would be prohibited, among other obligations, from exporting nuclear weapons. Bush should urge Gorbachev to agree to Russia assuming this treaty obligation.

It is in America's interest that the removal of strategic nuclear weapons from the non-Russian republics occur through voluntary agreements between Russia and the republics, and that no Communist holdovers from the central Soviet government or republican governments retain control over any part of the strategic arsenal. The U.S. and its allies should offer to help broker these agreements, and should discourage Russia from taking any unilateral steps to recover weapons from the sovereign territories of other republics.

While the U.S. can pressure these new nations, with the exception of Russia, to renounce strategic weapons, it should not withhold American diplomatic recognition from them if they refuse. America's overwhelming interest in the Soviet Union's demise requires prompt recognition of the new republics. Without the reassuring factor of American recognition, some new republics may want to keep their nuclear weapons as an insurance policy against being forced to re-enter a new union.

◆ ◆ Ask Congress to speed the deployment of strategic defenses.

The demise of the Soviet Union only makes more pressing the need to deploy strategic defenses. The political situation within what now is the Soviet Union is likely to remain volatile for some time. Though Washington should try to prevent republics other than Russia from keeping nuclear weapons, these American efforts could fail. The result would be a proliferation of nations with strategic nuclear weapons. These nations would join a growing number of nations now seeking to develop or buy nuclear weapons technology and strategic delivery systems, including ballistic missiles.

At the very minimum, the U.S. needs defenses as an insurance policy against accidental or unauthorized launch of a strategic missile from this expanding list of nations.

America's policy to date of leaving itself entirely naked to missile attacks has assumed that superpower arsenals would be tightly controlled by rational leaders. Such rational leaders would be deterred from attacking the U.S. by the threat of massive nuclear retaliation. Recent events marking the demise of the Soviet Union reveal that none of the old assumptions undergirding this policy—known by the experts as "mutual assured destruction"—now hold. Central Soviet authorities no longer can guarantee control over Moscow's strategic arsenal.

George Bush, along with Secretary of Defense Richard Cheney and Director of the Strategic Defense Initiative Organization (SDIO) Henry Cooper, foresaw this new situation. In this year's State of the Union Address, Bush called for a new strategic defense program, known as G-PALS, for Global Protection Against Limited Strikes. G-PALS would protect the U.S. and its allies against accidental or unauthorized strikes from the Soviet Union or elsewhere. It is just such a strike that was unprecedentedly likely during the coup.

The House of Representatives, however, voted on May 22 to kill Bush's proposal. The Senate, by contrast, voted on August 2 to proceed with a modified version of G-PALS. When House-Senate conferees meet this fall to hammer out their differences, proponents of defense will have the upper hand. They should use it to insist that the initial deployments of strategic defenses be completed by no later than 1996. The technology has been proven, while the annual cost from now through 1996 would be only about \$6 billion.

CONCLUSION

The demise of the Soviet Union is a cause for celebration in America. It also is cause for caution. The potential loss of central control over the Soviet Union's strategic arsenal is one reason for this caution.

America's response to this potential danger should be a diplomatic policy geared toward assisting the orderly transfer of nuclear control from Gorbachev's unstable government to Yeltsin's democratically stable Russian government. American policy also should assist in the consolidation of the former Soviet Union's strategic arsenal under the authority of the Russian government, and the orderly transfer of strategic weapons from the outlying republics. These responses, however, should not interfere with the overriding American interest in allowing the new nations emerging from the wreckage of the Soviet Union to exercise their rights to self determination.

Additionally, Washington should recognize that problems of nuclear and missile proliferation and political instability are not limited to the Soviet Union, and will be facts of international life for the foreseeable future. In response, the U.S. should deploy by 1996 strategic defenses to guard against the unauthorized or accidental launch of strategic weapons against America.

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Appendix

Soviet Strategic Nuclear Missiles and Bombers

Intercontinental Ballistic Missiles	First Deployed	Range (nautical miles)	Throw Weight (lbs)	Warheads	Yield per Warhead	Number Deployed
<i>SS-11 Sego</i>	1973	5,700	2,500	3	500KT	325
<i>SS-13 Savage</i>	1969	5,100	1,300	1	600KT	40
<i>SS-17 Spanker</i>	1979	5,400	6,000	4	500KT	50
<i>SS-18 Satan</i>	1979	5,900	16,700	10	500KT	308
<i>SS-19 Stiletto</i>	1979	5,400	7,500	6	550KT	300
<i>SS-24 Scalpel</i>	1987	5,500	7,000	10	500KT	90
<i>SS-25 Sickle</i>	1985	5,700	1,600	1	550KT	280
Bombers	First Deployed	Combat Radius (miles)	Max Speed (mach)	Weapon Load (lbs)	Warheads	Number Deployed
<i>Tu-95 Bear</i>	1955	3,700	0.85	25,000	4 Bombs/ 12 ALCM	160
<i>Tu-22M Backfire</i>	1974	2,150	2.0	10,000	2 Bombs	120
<i>Tu-160 Blackjack</i>	1987	3,940	2.0	30,000	24 SRAM/ 12 ALCM	15
Sea-Based Ballistic Missiles	First Deployed	Range (nautical miles)	Throw Weight (lbs)	Warheads	Yield per Warhead	Number Deployed
<i>SS-N-6 Serb</i>	1967	1,600	1,500	1-2	500KT	192
<i>SS-N-8 Sawfly</i>	1973	4,000	1,500	1	800KT	280
<i>SS-N-17 Snipe</i>	1977	2,100	2,500	1	500KT	12
<i>SS-N-18 Stingray</i>	1977	4,300	—	1-7	500KT	224
<i>SS-N-20 Sturgeon</i>	1983	4,500	—	10	100KT	120
<i>SS-N-23 Skiff</i>	1986	4,500	—	10	100KT	96

Sources: International Institute of Strategic Studies, *The Military Balance, 1990-1991*; John M. Collins, *Soviet Armed Forces Statistical Trends, 1985-1990*, Congressional Research Service, 1991.

Note: MT = Megatons, KT = Kilotons, ALCM = Air Launched Cruise Missile, SRAM = Short-Range Attack Missile.

