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RUSSIA'S NUCLEAR WEAPONS DILEMMA: A COOPERATIVE APPROACH TO INTERNATIONAL SECURITY IN THE 1990S

BY

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Abstract

Although the threat of an East/West confrontation has diminished, additional concerns have been raised by new and unforeseen dangers to European and global security because of the specter of uncontrolled proliferation of nuclear weapons as a consequence of the dissolution of the Soviet Union. Both the Russian Federation and the West want to mitigate the potential dangers arising from rapidly disintegrating control of a nuclear arsenal scattered throughout the former Soviet republics. These concerns have sparked a wide range of Western responses, most notably the U.S. decision to assist Russia with the construction of a nuclear weapons storage facility near the Siberian city of Tomsk 7. By assessing the threat of nuclear proliferation and the United State's interaction with the Russian Federation in resolving this nuclear dilemma, one can gain some measure of confidence about Moscow's reliability as a partner in nuclear arms control, disarmament, and in staunching proliferation. This paper concludes by comparing the emergent framework of international cooperation between Russia and the United States to the traditional *Realpolitik* balance of power policies that characterized the Cold War. The conclusion notes that the international community has started to adopt a more global view toward problem solving, but that obstacles still exist that can either slow such progress or cause a return to more traditional attitudes as seen during the Cold War. Because of this uncertainty, we must continue to press forward with new ideas and discard Cold War prejudices.

The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

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> Lack of safe storage facilities is the main obstacle facing Russia in its efforts to dismantle the nuclear arsenal of the former Soviet Union. Negotiations are underway between U.S. and Russian officials to determine the extent to which the United States should be involved...the plutonium from Russian weapons must be "locked up" in a secure storage facility while permanent options are considered. The plutonium presents more danger from either accidents or terrorist diversion now....[1]
>
> (General William Burns, 27 July 1992)

I
Introduction

The stability of the nuclear non-proliferation regime will remain doubtful as long as the Russian Federation and the United States are unable to facilitate a resolution to the dismantlement and subsequent secure storage of the former Soviet Union's nuclear arsenal. Both Russian and U.S. officials have sought a joint solution to the potential dangers arising from a nuclear arsenal scattered throughout the former Soviet republics. The initial objective aimed at the return of all nuclear weapons onto the territory of the Russian Federation. Despite the successful return of all the tactical nuclear weapons to Russia, doubts remain about the likelihood that Ukraine, Belarus, and Kazakhstan will return their remaining nuclear weapons. Additional concerns have also been raised by unforeseen dangers to global security because of the threat of uncontrolled proliferation

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[1] "Russia Turns to Washington for Weapons Waste Disposal," *World Environment Report* 18, no. 16 (4 August 1992): 1-2.

of nuclear weapons technology and material. Added to these nuclear concerns, recent events in Russia indicate that the more conservative forces in the Russian parliament do not share Boris Yeltsin's willingness to cooperate with the West. The United States must formulate policy in an increasingly unstable political environment. Precisely because of this uncertainty, we must endeavor to integrate our collaborative efforts so regime shifts do not weaken existing agreements. This paper serves as an empirical case study of the cooperative effort between Russia and the United States since the Soviet Union's dissolution; moreover, the conclusion allows the reader to gauge whether Moscow can be a reliable partner with the West in the 1990s.

II
Core Issues for Analysis

Since the aborted coup in the Soviet Union in August of 1991, few topics have received more attention than control and accountability of nuclear weapons in the former Soviet republics. Post-Cold War control of strategic and non-strategic nuclear weapons cast arms control and East/West relations within an unfamiliar framework—a unified state replaced by the Commonwealth of Independent States (CIS). At the forefront of much of the discussion remain the thousands of nuclear weapons which Russia cannot safeguard or dispose of in an expeditious and economically feasible manner. In March of 1992, during a recent U.S. fact-finding mission by Senators Nunn, Lugar, Warner, and Binghaman, Russian parliamentary officials and scientific experts emphasized that the lack of a facility dedicated for further long-term storage is a major bottleneck limiting efforts to control the spread of nuclear weapons.[2] In response, there have been both positive and negative aspects to the emergent policies of Russia and the West, as each side cooperates in the effort to mitigate the repercussions evolving from the disintegrating control of the former Soviet Union's nuclear weapons. In the overall discussion of U.S./Russian cooperation, three issues are of central importance. First, there must be an assessment of Russia's nuclear weapons, particularly those considered non-strategic, and whether or not they pose a threat to stability within the non-proliferation regime. Second, the current efforts at jointly solving this problem must be examined in order to understand the apparent and real problems facing the Russian

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[2] Sam Nunn et al., "Trip Report: A Visit to the Commonwealth of Independent States," undated, 17.

Federation and United States as they attempt to resolve the storage dilemma. Finally, this cooperative endeavor should offer some insight into Russia's evolving reliability as a partner with the West in the areas of arms control, disarmament, and international security.

1. Framing the Argument

For over thirty years, the United States and Soviet Union engaged in a dialogue to control nuclear proliferation and reduce the threat of a nuclear conflict. Negotiations and measures focused almost solely on strategic weapons systems. With the Cold War a matter of history, the United States is at a critical juncture in defining its nuclear arms control policy with the Russian Federation, the surrounding Soviet successor states, and Western Europe: where to place the bulk of its efforts—a decision that will either seek further cuts in strategic nuclear arms or place more emphasis on non-strategic nuclear weapons and their threat to future proliferation. Planned reductions in strategic nuclear weapons have exceeded the expectations of arms control negotiators. Moreover, the actual threat of military use by either superpower is at the lowest level since the start of the Cold War. In spite of these positive movements in strategic nuclear weapons, our analysis will show that the disintegrating control of Russia's nuclear arsenal has raised a new set of concerns. In many respects, the potential for nuclear proliferation and subsequent use by developing or undeclared nuclear states is greater than before the Cold War—yet the West has been slow to establish an effective policy to cope with the multiple dimensions of this problem.

The Bush administration responded to this disintegration of nuclear control with a series of seemingly discrete and uncoordinated measures: a decision to reduce non-strategic nuclear weapons in Europe to elicit Soviet and, later, CIS concurrence; an aid

fund to employ former Soviet scientists out of fear of their engagement elsewhere with unfriendly nations; and, more recently, $400 million for help with the dismantlement of existing systems when it became obvious that Russia lacked the resources to carry out this task. The most promising step was the $400 million made available for nuclear weapons dismantling in the Nuclear Threat Reduction Act of 1991, commonly known as the Nunn-Lugar amendment.[3] As part of its overall policy, the United States has decided to pursue aggressively a course which includes monetary support for Russia's nuclear stability. Such a policy marks a radical departure from the status quo of Cold War international relations: assistance generally went to those states which opposed the former Soviet Union. Although it is too early to effectively evaluate the Clinton administration's nuclear policy, it appears that staunching proliferation will receive at least equal priority. For example, Ashton B. Carter, Director of the Harvard Project on Cooperative Denuclearization, has been named the first undersecretary for strategic security and counterproliferation, and funding for further Nunn-Lugar implementation recently increased to $800 million.

Two theoretical arguments exist to explain why both Russia and the United States have decided to pursue a more cooperative international policy. Realists like Kenneth Waltz would argue that this cooperation does not mark a significant departure from the *Realpolitik* norms and rules which characterized the Cold War balance of power relationship. However, there is growing evidence that a more global approach to solving problems is evolving. These approaches include a mix of techno-economic assistance, political assurances, and possible coercive threats and reprisals. If this is the

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[3] Dunbar Lockwood, "Bush Clears Way for Weapons Dismantlement, Security Aid," *Arms Control Today* 22, no. 4 (May 1992): 16, 21.

future, then the joint effort to build a storage site in Siberia may well highlight the prospective course of international relations. The flexibility of the United States and Russia in looking beyond old Cold War patterns will guide much of their success or failure. With these two ideas (*Realpolitik* versus global cooperation) for later comparison, the decision to assist the former Soviet Union becomes more obvious on one hand, and a radical departure for those who still think in terms of the Cold War. Ultimately, Western cooperation should facilitate at least four positive results related to Russia and its capability to cope with an increasingly troublesome nuclear arsenal.

Timing. The greater Western (U.S.) involvement, the faster the storage problem will be solved. Russia and the United States, through cooperation, can minimize the period when dismantled weapons or fissile material have no permanent storage facility, less security, and potentially inadequate accountability procedures.

Spillover. Association with the United States introduces the Russians to a different and potentially better construction and infrastructure management system. The U.S. Army Corps of Engineers is working closely with the Russian Federation for the design and construction of the storage facility. Russia has long tried to ameliorate the problems in its own infrastructure management system, often with less than desirable results.

Trust. Assistance by the West can help alleviate tensions which still exist among the conservative elements of both Russia and the United States. Despite the radical changes in Russia and reduced tensions with the end of the Cold War, many U.S. policy makers still fear a resurgence of a more aggressive Russian foreign policy in Europe. Likewise, strong opposition to Boris Yeltsin's pro-Western policies is apparent throughout the Russian parliament.

Future Direction. Previous experiences with either foreign or domestic policy in Russia are difficult to apply. This involvement should help the West better understand Russia's transition to democracy and its future foreign policy objectives. One cannot fully assess Russia's reliability as a partner with the West without first undertaking projects that can be used to gauge the capacity to work more closely in the future.

The framework established thus far outlines the general set of issues which Russia and the West face: an assessment of the threat of nuclear proliferation; the

obstacles and benefits to a joint solution of the storage problem; and a better understanding of Russia's future foreign policy orientation. Moreover, the four expected results above can be used to assess, in more concrete terms, the value of such a cooperative approach. Timing will correspond to the discussion of the nuclear weapons issue in the former Soviet Union. Our analysis of the construction industry in Russia will match the discussion of spillover through cooperation. Finally, trust and future direction combine with our assessment of Russia's reliability using a case study of attempts to solve the storage dilemma. Our current attempts to foresee events in Russia lack precision because available models were often based on past experiences with the authoritarian Soviet state. The organization of this case study will allow the reader to compare these new approaches against existing patterns of global cooperation. The end result will add to our understanding of post-Soviet relations in the 1990s. Last, before starting the more detailed analysis of the three sections that will follow, it is also important to outline some key assumptions.

2. Some Necessary Assumptions

The issue of nuclear proliferation is complex and four areas need clarification before discussing each major issue separately. Each supposition allows one to later make some judgment about the cooperative efforts as they currently exist. These premises may not include every detail; but, in a rapidly changing political environment, they do help define some essential constraints one can use to assess the value of cooperation in the post-coup environment. The assumptions include: 1) an assessment of who will ultimately possess the nuclear weapons; 2) whether the three former republics with nuclear weapons are likely to retain them; 3) how much urgency predicates swift resolution of dismantlement; and, 4) the preconditions that encourage a

bilateral dialogue between Russia and the United States. Each point requires further explanation.

First, leaving the weapons in the newly independent states that comprised the former republics is not a realistic option. Russia is the only former republic that has facilities for dismantlement of nuclear weapons.[4] Consequently, the assumption that negotiations for a storage site should not extend beyond the Russian Federation is important. The Russian military has completed the process of returning all the tactical nuclear weapons (non-strategic) to Russia. With all the tactical nuclear weapons returned, Russia has moved one step closer as the likely inheritor of all the former Soviet Union's nuclear weapons.

Second, this does not ignore that Ukraine, Kazakhstan, and Belarus still possess strategic nuclear weapons. Kazakhstan and Belarus have maintained a strong commitment eventually to remove the weapons on their territory. Kazakhstan ratified START-1 in July of 1992, joining Russia and the United States. Along the same lines, Belarus claims it has no intention of controlling its strategic nuclear weapons and has permitted withdrawal of the weapons to proceed.[5] The obstinate player is Ukraine and, accordingly, warrants further explanation.

Ukraine comprises 52 million people and a land mass greater than France. In the post-Soviet hierarchy of successor states, Ukraine clearly stands second behind Russia. The problem emerges from the fact that Ukraine desires at least equal if not preeminent

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[4] John D. Morrocco, "Soviet Military Breakdown Worries U.S. as Control Over Nuclear Arms Splinters," *Aviation Week & Space Technology*, 16/23 December 1991, 21.

[5] "Obstacles Loom for Implementation of START-2," *Radio Free Europe/Radio Liberty Research Bulletin* 10, no. 3 (1993): 1, 3.

status with Russia.[6] This has led to a foreign policy which forces Ukraine to challenge Russia at almost every juncture. Such a fractious attitude causes great alarm in the West but tends to strengthen the position of Ukraine's president, Leonid Kravchuk. One can summarize Kravchuk's successes to date in one way; he has managed to distance Ukraine from all things Russian.[7] In fact, this policy probably doomed the CIS from the beginning.

The priorities of Ukraine appear to be threefold: establishment of a competent and large military, to proceed with economic reform independent from Russian influence, and to strengthen its regional power under a Ukrainian government. Military reform is justified by the perceived threat of a larger Russian military. With a planned force of 400,000, Ukraine will have the second largest military in the region. Old border disputes and historical hegemony seem enough to warrant such a force for the Ukrainian people.[8] Economic reform will proceed parallel to Russia. The Ukrainians, however, fear any influence by Russia with its potentially larger and more dominant economy. The foreign policy response has been to court Western investors by offering incentives which at least match those of Russia.[9] Finally, the current government is comprised of many former communist party members. The leaders portray themselves as representing the mandate of the vote for independence, yet much of their support is soft. Most Ukrainians voted for independence from Russia, not necessarily in favor of

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[6] Adrian Karatnycky, "The Ukrainian Factor," *Foreign Affairs* 71, no. 3 (1992): 102.

[7] Roman Solchanyk, "Kravchuk Defines Ukrainian-CIS Relations, *Radio Free Europe/Radio Liberty Research Report*, 13 March 1992, 7 (hereafter *RFE/RL Research Report*).

[8] Kathleen Mihalisko, "Defense and Security Planning in Ukraine," *Radio Free Europe/Radio Liberty Research Institute Report on the USSR* 3, no. 49 (1991): 16 (hereafter *Report on the USSR*).

[9] Vitaly Korotich, "The Ukraine Rising," *Foreign Policy* 85 (1991-92): 81.

Kravchuk's government.[10] Deeds must now prove that the electorate chose a government capable of economic reform, and not just capable of removing the vestiges of Russian hegemony.

Although Ukraine has recently adopted positions which shed doubt on the likelihood that the remaining nuclear weapons under its control will be returned, these positions do not seem credible in light of possible pressures by the West if it remains obstinate. Inasmuch as the material from the warheads retains its current value, $100 million for a metric ton of uranium; the Ukrainian government sees an obvious benefit in supervising destruction of the weapons and selling of the fissile material.[11] Thus, the West may allow Ukraine to supervise destruction of the warheads, but retention as part of a nuclear arsenal is not probable or encouraged. Western pressure and policy is not to offer further aid based upon a position of noncompliance with existing treaties or agreements.[12] It is more likely that the weapons will find use as bargaining chips but that they will eventually return to Russia.[13]

The third point concerns the speed with which nuclear weapons can be dismantled and stored. The chief nuclear engineer in the Russian Defense Ministry calculates the removal and destruction within Russia, without Western assistance, will take a minimum of nine years. One could argue that this is not an unreasonable amount

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[10] Bohdan Nahaylo, "The Birth of an Independent Ukraine," *Report on the USSR* 3, no. 50 (1991): 3-4.

[11] Yuriy Kostenko, "Ukraine's Nuclear Weapons: Good or Evil," *Golos Ukrainy*, 29 August, 1 September 1992. Trans. in *Foreign Broadcast Information Service-USR-92-119*, 79 (hereafter *FBIS*).

[12] Graham Allison, Ashton B. Carter, and Philip Zelikow, "The Soviet Arsenal and the Mistaken Calculus of Caution," *Washington Post*, 29 March 1992, C3.

[13] Robert L. Galluci, "Disposing of Nuclear Weapons in the Former Soviet Union," *U.S. Department of State Dispatch*, 10 August 1992, 632-634.

of time. We should let the Russians fix their own problem. However, this figure offers the most optimistic of assumptions, including the full cooperation of the former republics and an increasingly belligerent Russian parliament.[14] Neither the Russians nor the United States want to risk the potential consequences of a protracted process from dismantlement to storage.

Finally, the extent to which Russia and the United States can cooperate will largely determine success or failure. The CIS has not accomplished its predicted role of unifying the military or of maintaining close economic cooperation. Although the other former republics are important, this is primarily an issue that the Russian Federation must solve with the West. Russia is the *de facto* leader of the CIS and has assumed the treaty obligations of the former Soviet Union. Similarly, as the implicit leader of NATO, the United States has accepted much of the responsibility for assisting Russia with its nuclear dilemma. When considering these assumptions and lingering doubts, one can see how this issue has aroused international concern and action. We can now build on this background and the previously outlined framework to look at each of the three main sections more closely.

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[14] Eric Schmitt, "Soviet Atom Move is Ahead of Schedule," *New York Times*, 28 February 1992, A4, and Petr Belov, "Nonparity Parity," *Literaturnaya Gazeta*, no. 38 (1992): 10. Trans. in *FBIS*, 25 September 1992, 61-62. Belov's article addresses a prevalent belief that disarmament is proceeding too quickly.

III
Nuclear Weapons in the Former Soviet Union

There is a tendency to view strategic nuclear weapons as a greater threat to the West because they can reach across continental boundaries. A detailed report by the Harvard Center for Science and International Affairs states, "control of Soviet strategic nuclear weapons is of the most immediate concern to Americans..."[15] The report says little about non-strategic (tactical) nuclear munitions. The authors place unwarranted confidence in the Bush-Gorbachev proposals of October 1991 regarding unilateral withdrawal and destruction of non-strategic nuclear weapons.[16] Moreover, Ukraine underscored the proposal's shortcomings when it temporarily halted the return of its tactical nuclear weapons until it received assurances from Russia that the weapons would be destroyed.[17] Since these initial steps, the United States and Russia have experienced large-scale political change—Bill Clinton replacing George Bush, Boris Yeltsin replacing Mikhail Gorbachev, and the collapse of the Soviet Union as a unified state. The basic composition of nuclear weapons, however, has not changed. These turbulent events and large nuclear arsenal have created many doubts about proliferation throughout the former Soviet republics.

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[15] Kurt M. Campbell et al., *Soviet Nuclear Fission: Control of the Nuclear Arsenal in a Disintegrating Soviet Union* (Cambridge, Mass.: Center for Science and International Affairs, 1991), 16.

[16] Ibid., 197. See also Robert S. Norris' article, "The Soviet Nuclear Archipelago," *Arms Control Today* 22, no. 1 (January/February 1992): 31, which concludes that the threat from strategic nuclear weapons is overstated.

[17] Serge Schmemann, "Ukraine Halting A-Arms Shift to Russia," *New York Times*, 13 March 1992, A2.

One can imagine several scenarios wherein the disintegration of the Soviet Union leads either to limited use of nuclear weapons or to proliferation beyond Russia. A project by the RAND corporation titled, "The Day After...in the USSR", explores different policy dilemmas in a hypothetical future within the CIS. Without strong central leadership, the project predicts increased tensions among the republics. Moreover, each republic threatens to use its weapons of mass destruction during a conflict. Another scenario foresees proliferation through transfer of technology and/or fissile material.[18] Regions such as the Middle East, South Asia, and North-East Asia are all eager to improve their latent weapons capabilities. Both scenarios focus on tactical nuclear weapons as the future source of increased instability. These projections have left policy makers groping for solutions to problems not envisaged during the Cold War.

With the Clinton team still formulating its nuclear arms control policy, our examination is limited to those actions taken during the preceding administration. The United States government appeared divided over the long-term implications of this change in the world's nuclear arsenal and international order. The former Secretary of Defense, Dick Cheney, and the Chairman of the Joint Chiefs of Staff, Colin Powell, were pessimistic. They agree with findings similar to the RAND corporation study and see the break-up of the Soviet Union leading to further proliferation. In their view, the pursuit of these weapons will not cease, and other countries will seek out material

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[18] Marc Dean Milot, Roger Molander, and Peter Wilson, "The Day After...in the USSR," RAND Corporation, Handout Update #1, 8 January 1992, 3-8. See also Joseph A. Yager, "Prospects for Nuclear Weapons Proliferation in a Changing Europe," *Center for National Security Negotiations (CNSN) Paper* 4, no. 1 (1992).

and/or technology to develop their national nuclear programs.[19] President Bush and his National Security Advisor, Brent Scowcroft, apparently believed that proliferation could be contained within existing frameworks and the structure of the CIS.[20] There is little empirical evidence in history to support the more optimistic view. Besides the five declared nuclear powers, India, Pakistan, Israel, and North Korea are already considered undeclared nuclear powers.[21] It is more appropriate for the United States and the rest of the West to recognize potential sources of proliferation, and adjust to the lamentable circumstance accordingly, while attempting to abate its most risky and damaging implications for international security.

While for sheer destructive potential, strategic nuclear weapons pose a more frightening menace, the gross numbers, diversity, and wide distribution of non-strategic nuclear weapons throughout the former Soviet Union has created a greater long-term security and policy challenge. Before the coup in August of 1991, non-strategic nuclear weapons systems were thought to be located in every republic. It would seem presumptuous to believe after 74 years of Soviet corruption and shoddy oversight that the process of nuclear weapons removal and destruction by the Russian Federation will proceed without impediment. By outlining the dimensions of the dismantlement problem, this will highlight the enormous task facing Russia.

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[19] Many trends support such a view. For example, Egypt, Iran, Israel, and Brazil have established sophisticated military production capabilities. Susan Willett, "Controlling the Arms Trade; Supply and Demand Dynamics," *Faraday Discussion Paper No. 18*, November 1991, 9.

[20] William M. Arkin, Damian Durrant, and Hans Kristensen, "Nuclear Weapons Headed for the Trash," *The Bulletin of the Atomic Scientists*, December 1991, 19.

[21] Jonathan Dean and Kurt Gottfried, *A Program for World Nuclear Security* (Cambridge, Mass.: Union of Concerned Scientists, February 1992), 13.

1. Dimensions of the Problem

Exact data on the number of nuclear warheads are difficult to obtain from available documents, with various sources reporting different tallies. Totals were compared in the *Nuclear Weapons Databook, Stockholm International Peace Research Institute (SIPRI) 1992 Yearbook, Arms Control Reporter, Arms Control Today, Bulletin of the Atomic Scientists* and unclassified figures used by the U.S. Department of Defense. Unlike a tally of former Soviet divisions, baseline figures for nuclear weapons are difficult to establish. In its preface the *Nuclear Weapons Databook* indicates the paucity of reliable information as follows: "Within the U.S. intelligence community there is often no empirical "truth" about the composition and characteristics of Soviet [nuclear] forces...much of the information about Soviet nuclear weapons (even at high levels of security classification) is speculative."[22] By merging data from several sources, the table on the following page illustrates the categories of warheads and their locations in early 1992. Removal to temporary storage facilities in Russia has scattered nuclear weapons in areas that are either now or in the near future subject to political unrest.[23] When comparing the number of strategic nuclear weapons against the tactical systems, as a long-term policy issue for the United States and Russia, one can see that the broad diffusion of non-strategic nuclear weapons provides the more probable threat of proliferation within the international security regime.

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[22] Thomas B. Cochran et al., *Nuclear Weapons Databook, Volume 4, Soviet Nuclear Weapons* (New York: Harper & Row, 1989), XV.

[23] Ashton B. Carter and Owen Coté, "Transport, Storage, and Dismantlement of Nuclear Weapons, in *Cooperative Denuclearization: From Pledges to Deeds*, eds. Graham Allison et al. (Cambridge, Mass.: Center for Science and International Affairs, 1993), 97.

Table 1[24]

Nuclear Warheads at the Start of 1992

Republic	Strategic Offensive	Strategic Defensive	Land-Based Non-Strategic	Naval Non-Strategic	Total*
Russia	9,650	1,450	4,325	2,750	19,000
Ukraine	1,300	125	1,980	500	4,000
Kazakhstan	1,150	125	525	-	1,800
Belarus	100	125	845	150	1,250
Georgia	-	75	245	-	320
Azerbaijan	-	75	220	-	295
Armenia	-	75	120	-	195
Turkmenia	-	75	50	-	125
Uzbekistan	-	75	30	-	105
Moldova	-	50	40	-	90
Kirgizia	-	75	-	-	75
Tajikastan	-	75	-	-	75
Lithuania	-	125	200	-	325
Latvia	-	125	60	-	185
Estonia	-	125	145	-	270
Total	12,200	2,800	8,800	3,400	27,000

* Totals do not add due to rounding.

From the preceding table, the Russian Federation and its successor states had approximately 15,000 strategic nuclear warheads with all offensive intercontinental missiles located in either Russia, Ukraine, Belarus, and Kazakhstan. The strategic defensive missiles are either anti-ballistic missiles (ABMs) or surface-to-air missiles (SAMs).[25] Satellite technology makes land-based strategic systems more accountable,

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[24] The figures are combined from the July/August and November issues of *The Bulletin of the Atomic Scientists*, "Estimated Soviet Nuclear Stockpile (July 1991)," July/August 1991, 48, and "Where the Weapons Are," November 1991, 49.

[25] "Estimated Soviet Nuclear Stockpile (July 1991)," *The Bulletin of the Atomic Scientists*, July/August 1991, 48.

and control is still quite secure.[26] This is not a crude attempt at oversimplification but an analogy which places strategic nuclear weapons in the sphere of haystacks. Like a haystack, strategic nuclear weapons are more difficult to misplace. In this author's view the non-strategic nuclear weapons have the potential of serving as many misplaced needles through uncontrolled proliferation. Non-strategic stockpiles include 12,200 warheads divided among missiles, fighters/bombers, ships, and artillery—within these four main groups are 31 different delivery and/or weapons systems.[27]

A review of statements from the Russian Federation and the other newly independent Soviet successor states indicates a large number of conflicting accounts about the security of the smaller land-based weapon systems. These statements can be placed into four categories: loss of political and military control; security during movement for dismantlement; inadequate storage and accountability; and nuclear technology transfer. Political or military control raises the question of who really owns the various nuclear capable weapons, if that can be reasonably ascertained in the shifting fortunes of the Russian Federation. Movement for dismantlement can lead to proliferation. Optimistic goals, as stated by political leaders, for the removal and destruction of nuclear weapons do not receive uniform credibility among the military planners and academicians within Russia. Stated simply—the more quickly weapons are removed from the former republics, the more likely adequate safeguards and accountability will diminish. Finally, the area of nuclear technology transfer presents itself as a nightmare involving competent former Soviet scientists seeking employment with the highest bidder, or the sale of fissile material and the components themselves.

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[26] Robert S. Norris, "The Soviet Nuclear Archipelago," 24-25.

[27] "Estimated Soviet Nuclear Stockpile (July 1991)," 48.

The four categories, when viewed as an integral whole, support the finding that the greatest threat comes from the non-strategic nuclear weapons.[28] Among the four categories, lack of adequate and secure storage of the fissile material has presented the most troubling problem for the Russian Federation. Before exploring the problems associated with storage and security, a review of some underlying trends in world-wide arms sales will illustrate the potential for events in the Russian Federation to add to the proliferation of weapons of mass destruction.

2. Proliferation in the 1990s

Recently, the proliferation of nuclear weapons has received wider interest among civilian and government circles. While speaking in Bonn, Germany in 1992, then U.S. Secretary of Defense, Dick Cheney, predicted that as many as 15 to 20 nations would possess the capability to launch ballistic missiles by the end of the 1990s.[29] This point only underscores the tendency for regional powers to grasp for technology within the international arms arena. One can see a relevant tension between the desire to export arms and expressed desire for arms control. Politicians can publicly demand restraint; however, arms sales remain a lucrative market for many countries. The major arms exporters coincidentally occupy the five permanent seats on the UN Security Council and account for 88 percent of all arms transfers.[30] Within the former Soviet Union, and particularly Russia, the arms industry has been an important source of hard currency. In 1989, the Soviet Union exported $19.6 billion in military hardware. This figure

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[28] Thomas A. Wuchte, "Non-Strategic Nuclear Weapons in the Former Soviet Union: A Cause for Alarm?" *Military Review*, forthcoming.

[29] "Break-up May Aid Proliferation," *Jane's Defence Weekly*, 25 January 1992, 105.

[30] Susan Willett, "Controlling the Arms Trade; Supply and Demand Dynamics," 13.

accounted for 43 percent of the world's total.[31] Moreover, the military-industrial complex within Russia has not readily adapted to recent changes in the economic structure of the country. Large defense-oriented industries find the process of privatization eliminating many previously profitable arrangements. This creates strong pressure against any further decrease in the lucrative trade in arms sales.

For example, the town of Izhevsk, Russia, typifies the growing desire to use arms exports as a means that averts economic hardship. Prior to the failed Putsch, 70 percent of Izhevsk's economy consisted of arms production. With the collapse of the economy and much of the military-industrial complex, output is now reduced to virtually nothing. Although dismissed by some as preposterous, one of Boris Yeltsin's aides, Mikhail D. Malei, proposed the establishment of an entire autonomous region devoted to arms sales.[32] The fundamental issue, even if not legislated in this instance, remains the hard currency through arms sales needed by all the former Soviet republics.

If one wants to look for a profitable avenue, nuclear weapons or their associated components offer a potentially high return by volume. The United States recently bought $110 million of uranium in 1991 (a total of 12 million pounds).[33] The United States, as a purchaser of weapons grade plutonium or uranium, does not cause great concern among Western governments. In sharp contrast to such an acceptable arms deal, and despite all the positive factors about East-West cooperation, arms sales from Russia during 1992 frequently went to countries on the U.S. government's list of

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[31] *World Military Expenditures and Arms Transfers (WMEAT)* (Washington, D.C.: U.S. Arms Control and Disarmament Agency, 1991), 14.

[32] Celestine Bohlen, "Arms Factory Can Make Bricks, But, Russia Asks, Is That Smart?" *New York Times*, 24 February 1992, A1/A6.

[33] Stephen Budiansky et al., "The Nuclear Epidemic," *U.S. News & World Report*, 16 March 1992, 44.

undesirable recipients—the major purchases from Russia went to China, Iran, and Syria.[34] All of these examples indicate strong pressures that may encourage a willingness to contribute to proliferation.

Western intelligence sources have recognized this contradiction between the desire to dismantle and store the weapons, and pressure to maintain a strong arms industry. There is sufficient evidence that a failure to properly safeguard and store the dismantled weapons will allow the further spread of nuclear material.[35] Any nation which desires a nuclear capability will seize the opportunity for either fissile material or a warhead itself. The threat of proliferation increases as the Russian defense industry seeks economic survival through the sale of its expertise or material. Because of the increased likelihood for proliferation, efforts have focused on minimizing the apparent and real dangers to international security, particularly in regards to the inadequate capability for storage and security of dismantled nuclear weapons. With this background, we can now examine some of the motivation behind a quick resolution to the storage facility dilemma.

3. Urgency in Solving the Storage Dilemma

The diversity of the non-strategic nuclear weapons requires additional storage capacity and better accountability following the process of dismantlement. Removing all the tactical nuclear weapons from the other republics has not totally eliminated their potential threat. The apparent unwillingness of Russia or the United States to extend

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[34] Steven Erlanger, "Russia Sells War Machines to Pay High Costs of Peace," *New York Times*, 3 February 1993, A1/A7.

[35] John Simpson and Darryl Howlett, "Nuclear Non-Proliferation: The Way Forward," *Survival* 33, no. 6 (November/December 1991): 485-487.

treaty verification beyond strategic nuclear weapons could backfire in the long term.[36] Hasty removal now may resurface as a tactical nuclear weapon outside the existing nuclear powers later. Verification of specific warhead and weapon destruction, plus conventional weapons, is covered by START, the INF Treaty and proposed CFE agreements. The U.S. Defense Department, however, published a fact sheet in September of 1991 which stated: "With regard to the SNF [short-range nuclear forces] and naval systems, we do not envision any formal verification regime, although we are willing to discuss possible confidence building measures with the Soviets."[37] Such a lack of verification has already started to create apparent problems in the ability to staunch proliferation.

For example, the German government reported in March of 1992 that two or three tactical nuclear weapons were unaccounted for in the former republic of Kazakhstan. Both U.S. and Russian officials denied the report, but it surfaced again in an article in *U.S. News & World Report*.[38] Additionally, the problem of loss of control does not only apply to the actual weapon. Loss or sale of fissile material must receive equal weight. There are numerous reports circulating about the illegal sale of nuclear material by the expanding Russian nuclear Mafia. Heavy water, enriched uranium, and plutonium can be sold for millions in dollars or other hard currency.[39] This has already

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[36] The United States and Russia have not taken any measures to establish a verification regime for tactical nuclear weapons. See Christopher Paine and Thomas B. Cochran, "So Little Time, So Many Weapons, So Much to Do," *The Bulletin of the Atomic Scientists*, January/February 1992, 14.

[37] Ibid., 14.

[38] Philip J. Hilts, "Tally of Ex-Soviets' A-Arms Stirs Worry," *New York Times*, 16 March 1992, A3, and "Three Little Nukes," *U.S. News & World Report*, 23 March 1992, 26.

[39] "Nuclear Material Reportedly Offered for Sale," *Der Spiegel*, 9 March 1992, 176-178. Trans. in *FBIS*, 10 March 1992, 1-3.

occurred with the fissile material. Over two kilograms of enriched uranium were seized by German authorities in October of 1992 near Munich.[40] Without an adequate storage facility, Western and Russian officials fear that the potential for further proliferation will only increase.

Representatives from the Russian Ministry of Atomic Energy (MINATOM) have recommended bilateral safeguards in order to prevent transfer of the fissile material and/or warhead components. Once dismantled, the material would be tagged, stored, and then subject to procedures which incorporate verification and strict accountability.[41] Published reports, however, indicate Russia has no centrally located and secure storage facility for the thousands of weapons it expects to dismantle. A Moscow news story from January of 1992 mentions a statement by Vitaly Shlykov, Deputy Chairman of the Russian Defense Committee, concerning the removal and storage of nuclear warheads. Shlykov expressed concern about security for the removed warheads because Russia does not have a facility to store dismantled warheads.[42] By mid-1992, the concerns expressed by Russian representatives were translated into a request for economic assistance. Above all else, adequate storage and safeguards ensure a successful process of dismantlement.

Because of the economic decline within Russia and the difficult political climate, the Russian Federation has turned to the United States for assistance in the building of a storage facility. This admission of the need for assistance from the Russians marks a

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[40] Craig R. Whitney, "Illicit Atom-Material Trade Worries Germans," *New York Times*, 20 October 1992, A7.

[41] Christopher Paine and Thomas B. Cochran, "So Little Time, So Many Weapons, So Much to Do," 14.

[42] "Unsecured Warehouses Store Nuclear Weapons," *Kuranty*, 15 January 1992, 2. Trans. in *FBIS*, 24 January 1992, 6.

sharp departure from previous examples of cooperation with the West. The U.S. government received Russia's proposal to build a facility using funds from the Nunn-Lugar amendment. Of all the actions to date, the commitment of $400 million in the Nuclear Threat Reduction Act has offered a concrete example of the emerging style of Russian and Western cooperation. Instead of hiding the problem or minimizing its seriousness, Russia has left little doubt about the need for substantial Western assistance. This tends to support the belief that the Russian Federation wants to openly participate in the international community—helping where it can or looking for assistance when needed. Likewise, the United States recognizes the importance of working with the Russian Federation as opposed to a continuation of Cold War reluctance in aiding a former adversary.

This paper has so far described the framework for analysis, outlined some of the dimensions of the problem and, last, the importance of reducing the time when nuclear weapons lack adequate storage facilities. From the preceding analysis, one can see that the disintegration of the former Soviet Union has increased the risk of nuclear proliferation. Second, the most worrisome threat comes from non-strategic nuclear weapons. Next, despite the recalcitrant actions of Ukraine, Russia must ultimately dismantle and store the weapons or fissile material. Finally, this apparent dilemma concerning storage capabilities has led the Russians to seek U.S. assistance and cooperation in solving the storage problem—and correspondingly the United States has proved willing to support such an initiative. We can now shift the focus to a discussion of the various limitations that surround this decision. These limitations are relevant when discussing the second expected result—spillover of ideas and techniques through collaborative projects. By examining the proposed construction, one will better understand some of the significant challenges that face a more cooperative atmosphere

between Russia and the United States. Without such an examination, one cannot fully assess Russia's future reliability as a partner with the West.

IV
Storage of the Nuclear Weapons

As part of its arms control policy, the United States has decided to pursue a path that includes monetary assistance for the construction of a nuclear storage facility near Tomsk 7. Even though there are a great number of challenges that a project of this magnitude will face, cooperation between the two parties as they attempt to check one of the most damaging implications of the Soviet Union's break-up should lead to a sharing of management techniques, construction methods, and improvement in each side's security concerns—results which represent spillover. For example, the entire process should act as a transparent system of confidence building and verification, especially since the United States will gain access to the closed city of Tomsk 7. More specifically, the $400 million in the Nunn-Lugar amendment has been expressly set aside for the purpose of assisting the Russians with dismantlement and storage of the 20,000 nuclear warheads which are in the process of being retired. Through the use of this money, the United States and Russia have started to negotiate the joint design of a storage facility for the warheads and their fissile material.

The Department of Defense controls the $400 million and made the U.S. Army Corps of Engineers responsible for the project. Initially, the U.S. Army Corps of Engineers wanted to overlay Western construction methods on the project. However, the Russian construction industry follows a completely different set of management techniques. Early euphoria for a seemingly quick solution has been tempered by the

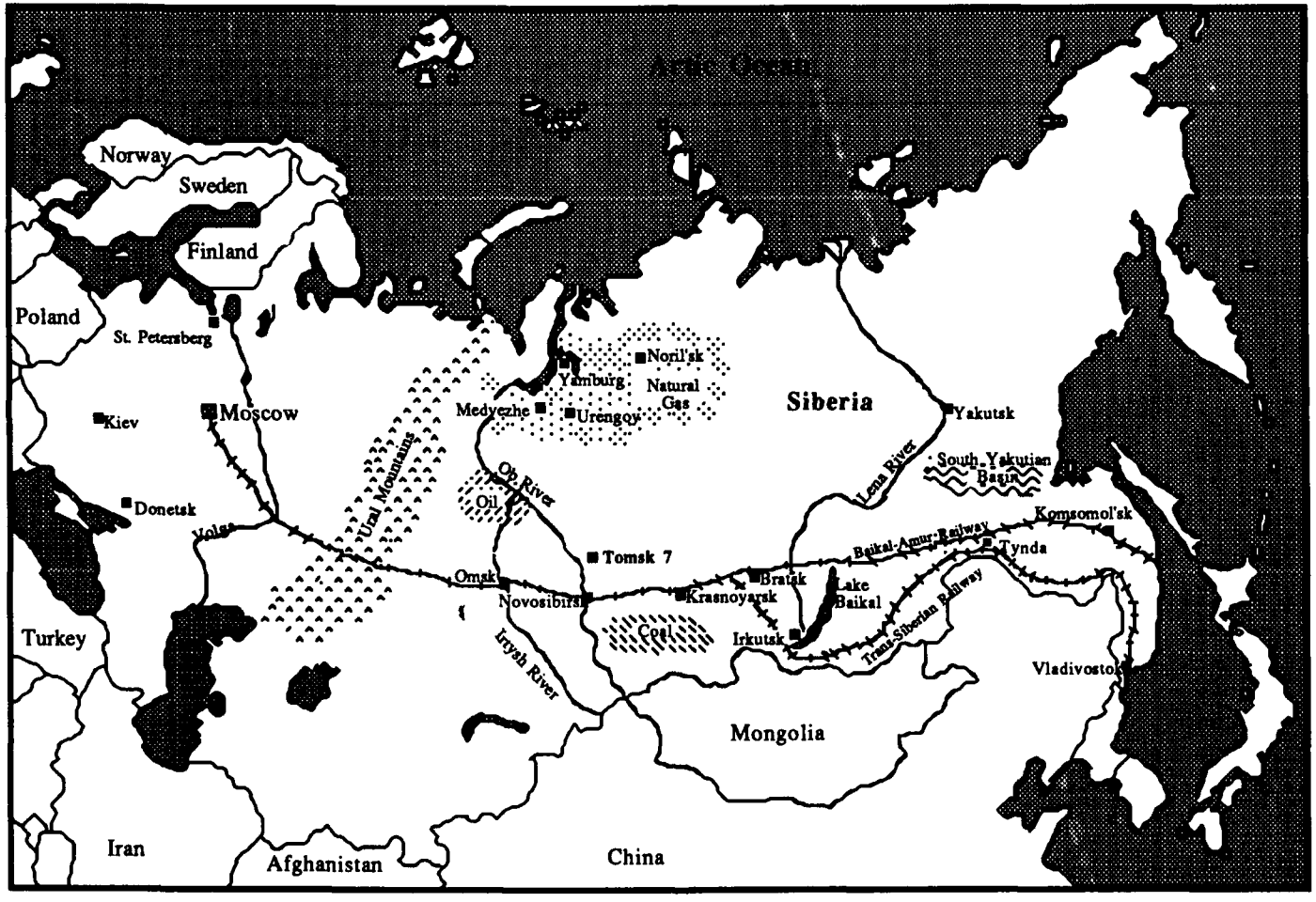

Figure 1. Former Soviet Union.

reality of working in a construction industry still dominated by communist practices. A closer examination of the project indicates that many of the positive results are accompanied by apparent and unforeseen problems. This analysis will help outline the difficulties facing cooperation between Russia and the United States, and what efforts need to be taken to overcome existing obstacles.

Although two years have elapsed since the unsuccessful coup, there has been no significant change in the structure of the Soviet construction industry. The construction system in Siberia (the primary area examined in this paper) followed two primary paths—the use of large monopolies to handle construction, and the reliance on *stroi* (military construction) battalions for cheap labor. Moreover, in the former socialist economic system, costs were either ignored or passed on to the subsequent governmental plan. Both the budgetary and management systems have proved to be ineffective. Siberia provides a classic example of the difficulty Russia faces in moving to a market-oriented economy while attempting to reform existing structures.

In spite of the desire to work with the United States, the Russian Federation is skeptical of the U.S. Army Corps of Engineers. Russian military construction battalions have been integral to the development of Siberia. Although credited with much work over the last several decades, Russia's construction battalions do not reflect the same civil-military relationship that the U.S. Army Corps of Engineers will bring to this project. The majority of their work has been characterized as slipshod.[43] This legacy from the past makes the involvement of the U.S. Army Corps of Engineers more difficult. What seems a simple decision to many—the allocation of $400 million and the

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[43] Leslie Dienes, "Economic and Strategic Position of the Soviet Far East: Development and Prospect," in *The Soviet Far East: Geographical Perspectives on Development*, ed. Allan Rodgers (New York: Routledge, Chapman and Hall, Inc., 1990), 281.

building of a storage facility—has caused both the Russians and the U.S. Army Corps of Engineers to examine past practices and construction procedures. Because of this Russian skepticism, the U.S. Army Corps of Engineers has had to carefully explain itself, the procedures used by the United States, and modify some of its established practices for a project of this scale to take place in Siberia. To understand these fundamental differences between our two systems, we will first explore military construction battalions and their past role in Russia's construction industry.

1. Infrastructure, the Military, and the Post-Soviet Economy

Development in Siberia has followed the communist planning principles of central decision making, adherence to planned goals at any cost, and a weak relationship between investment cost and budget constraints. These three factors allowed development to proceed at a breathless pace, often with little regard for the subsequent results. A Western investor works under a hard budget constraint. Simply, if the monetary investment is not balanced with a budget, the project does not proceed. Communism operated under soft constraints for 70-plus years. In this socialist economic system, the costs were either ignored or hidden in the state budget. Demand was infinite because one could always rely on the state to provide the additional investment to prevent financial failure. Since success came from fulfillment of the planned goals, profit had little or no meaning. Greater output resulted in perceived superior performance.[44] Also, because labor represented an inexpensive and available

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[44] Janos Kornai, "Resource-Constrained Versus Demand-Constrained Systems," *Econometrica* 47, no. 4 (July 1979): 801-809. Much of the economic analysis and comparison is further explained in *The Road to a Free Economy*, also by Janos Kornai. His analysis shows that socialist economies could have never operated successfully with the economic models used by central planners.

investment source, the economy constantly demanded more workers for further extensive growth.

But growth could not occur on an expanding scale. By the early 1970s, population trends saw a decrease in the growth of the labor force. By 1980, the number of people in the work force grew at less than 1 percent per year, as compared with a rate over 4 percent in the 1960s. The constant demand for labor was not being met. Many economists attribute this dwindling of the worker force to a hoarding of the available labor supply.[45] Because any addition to the labor force had no cost as long as the budget supported the new employee, and it always did, the demands for increased production placed a premium on labor from whatever the source. As noted in a recent *Pravda* article, "no minister or party functionary has any qualms about sending desperate telegrams to the government: <unless you give us soldiers, the plan is lost>."[46] It becomes easy to see why the construction troops received little pressure from the Politburo to remove themselves from the civilian economy.

Much of the labor demand for *stroi* battalions was driven by the resource potential of Siberia. As a result of its size alone, the former Soviet Union contained a large share of the world's mineral wealth. The ability to exploit these resources in Siberia may largely determine the future success of the reforms that are trying to reshape the economic structure of the former Soviet Union.[47] In particular, the resources of coal, oil, and natural gas offer an abundant bounty for Russian and Western

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[45] Elizabeth Teague, "Tackling the Problem of Unemployment," *Report on the USSR* 3, no. 45 (1991): 2.

[46] Yevgeny Sorokin, "Not in the Ranks and Not in the Battle," *Pravda*, 26 April 1989, 3. Trans. in *CDSP* 41, no. 17 (1989): 28.

[47] Leslie Brown, "The Siberian City of Tomsk is Open for Business...at Last," *Business America* 112, no. 11 (1992): 2.

entrepreneurs. Siberian coal production equals more than 50 percent of Russia's energy consumption; oil provides 7 to 8 million barrels per day and hard currency; and, finally, natural gas should reach an annual output of 750 billion cubic meters by the year 2000.[48]

From the previous examples, one can see that the energy and mineral resources of Siberia exceed those of most any country in the world. Since the early 1920s, harsh climatic conditions have challenged the exploitation of the area's resources. Further improvements in infrastructure will ensure the viability of the area. The pursuit of this resource capital, however, must now rely on a labor force subject to a free-market atmosphere. The past use of *stroi* battalions does not encourage such a change. Moreover, proposed legislation to eliminate the *stroi* battalions has still not taken effect. The USSR Supreme Soviet submitted legislation in June of 1990 to end the assignment of conscripts to military construction battalions. By the start of 1992, this legislation should have taken effect and ended military involvement in the civilian construction industry.[49] No change has occurred. In addition, the last 70 years have worked to entrench the *stroi* battalions in the construction industry. The legislative leadership must now decide if such expansion can occur without the military's involvement through *stroi* battalions. The U.S. Army Corps of Engineers, as a civil-military organization, has had to disassociate itself from the concept of *stroi* battalions. One will see that the two organizations do not share many common traits.

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[48] Theodore Shabad, "Economic Resources, " in *Siberia: Problems and Prospects for Regional Development*, ed. Alan Wood (New York: Croom Helm, 1987), 66-70.

[49] "Farewell, Construction Battalions!" *Izvestia*, 12 June 1990, 3. Trans. in *The Current Digest of the Soviet Press*, 42, no. 24 (1990): 30 (hereafter referred to as *CDSP*).

2. *Stroibaty*

How extensive was the participation of *stroi* battalions in the former Soviet Union? Best estimates show a great amount of work done by these troops since the end of World War II. For example, since the end of World War II, *stroi* battalions constructed 27,000 kilometers of railroad track and 13,000 other facilities like the Moscow Olympic Stadium.[50] Although exact figures are difficult to obtain, the construction units have totaled between 100,000 and 400,000 conscripts on active duty at any given time. A recent statement from the military acknowledged 330,000 soldiers working on construction projects.[51]

Given the geographic, political, and economic situation, it is clear why the *stroi* battalions became so imbedded in the construction industry of the former Soviet Union. *Stroi* battalions are a product of the decisions made by the CPSU in the 1920s, not in their formation, but in the way the country saw its subsequent development and quest for the resources of Siberia. To this day the infrastructure inadequately supports the transportation, housing, and exploration needs of these abundant resources. In addition, because it possessed no currency convertible in the West, these minerals and energy resources assumed a desirability for the Soviets beyond the economic considerations a Western investor would consider realistic. The net effect of all these forces encouraged the persistent use of construction troops for the expansion east.

Conscription in the Soviet military included the soldiers who filled the construction battalions. Further, as part of its conscription policy, the former Soviet

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[50] Timothy J. Colton, *Commissars, Commanders and Civilian Authority* (Cambridge, Mass.: Harvard University Press, 1979), 248.

[51] V.I. Prishchep, "Debaty o Stroibatakh," *Voyenno-Istoricheskiy Zhurnal* 2 (1991): 34-35.

military leaders filled the *stroi* battalions with a greater proportion of the ethnic minorities.[52] The negative impact of this policy grew with *glasnost* and *perestroika*. Members of the construction units accounted for the majority of crimes, discipline problems, and desertions in the military.[53] Compounding these conscription problems was a system that placed little emphasis on the care and provision of the soldiers. Much of the harsh treatment can be attributed to the widespread practice of *dedovshchina*. This practice entails a complex unofficial hierarchy among conscripts, particularly between first and second year soldiers. Although the existence of a system of hazing has long been officially denied, the practice lives on and means continual abuse of soldiers in a unit.[54] All of these factors point to a facet of the military which performs a formidable service without any corresponding respect within the armed forces.

But why not continue using the construction troops in the civilian economy? Three strong reasons stand out. First, the soldiers do not have the commensurate training or skills to handle large complex construction projects. Conscription terms of two years do not allow for an adequately trained force within the *stroi* battalions. Analysts believe a period of five years is needed for such technical skills.[55] Second, the Russian president, Boris Yeltsin, recently decreed that military service would shift to a combination of voluntary and contract service. Salaries for a professional army, however, would make the cost of training skilled military construction personnel

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[52] Ellen Jones, *Red Army and Society* (Boston: Allen & Unwin, Inc., 1985), 167.

[53] Yevgeny Sorokin, "Not in the Ranks and Not in the Battle," 29.

[54] Sergei Zamascikov, "Insiders' Views of the Soviet Army," *Problems of Communism* 37, no. 3-4 (May-August 1988): 114.

[55] William E. Odom, "The Soviet Military in Transition," *Problems of Communism* 39, no. 3 (May-June 1990): 60.

prohibitive.[56] Finally, the privatization of civilian enterprises within the Russian Federation will not occur while free labor is provided by the *stroi* battalions. All of these factors point to a need for integrating the *stroi* battalions into the evolving military, and the elimination of their involvement in civilian construction projects. The military requires a construction capability, but it should primarily be used for military-related projects—similar to the base camps built during Desert Storm or for the UN relief operation in Somalia.

After several decades, the first impetus for a fundamental change in the reliance on *stroi* battalions began with Mikhail Gorbachev. In a major policy speech in Vladivostock, Gorbachev acknowledged the need for infrastructure improvement, but urged that improvement should be the result of a modern construction industry.[57] As Russia moves to free-market economy, politicians and economists have the opportunity to establish a new structure for large construction projects. The transition from a government planned and operated construction system will challenge many existing bureaucracies. Boris Yeltsin recently issued a decree that will abolish the Russian Ministry of Construction.[58] This decree accompanied other earlier anti-monopoly

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[56] "Yeltsin Orders Formation of Russian Forces," *Xinhua General News Service*, 7 May 1992, 1. See also the article "Grachov, Rutskoi on Rebuilding Russian Army," *Izvestia*, 1 June 1992, 1-3. Trans. in *CDSP* 44, no. 22, (1992): 12. Both Pavel Grachov, Russia's Defense Minister, and Alexander Rutskoi, Russian Vice President, note that economic constraints make a volunteer force excessively expensive at present.

[57] Leslie Dienes, "Economic and Strategic Position of the Soviet Far East: Development and Prospect," 284.

[58] "Yeltsin's Decree on the Restructuring of the Government," *ITARTASS News Agency*, 2 October 1992, 1.

resolutions introduced by the Russian parliament.[59] Both steps signal an end to the existing construction system.

Moreover, the West must recognize that one cannot attempt new collaborative ventures with Russia without first considering the effect of the past seven decades of communist rule. Because *stroi* battalions often supplied inexpensive but shoddy labor, the Russians were understandably doubtful about the U.S. Army Corps of Engineers. Initially, Russian representatives viewed the Corps of Engineers as another military-led construction organization—containing the same inherent problems associated with *stroi* battalions. Any joint construction effort must work through the misconceptions both sides bring to a collaborative project.

3. Overcoming the Past

In an effort to win the trust of the Russian government, a series of meetings and exchanges have occurred. The U.S. Army Corps of Engineers introduced Russian construction representatives to the system used by the United States for large-scale infrastructure management. Similarly, representatives from the Russian Federation hosted visits to the Tomsk Oblast and the Russian design headquarters for hardened underground structures.[60] These exchanges have served to increase the confidence of both Russia and the United States. Introducing the concept of the U.S. Army Corps of Engineers has proven successful; a more difficult task has involved the integration of Russian civilian contractors around Tomsk 7 with Western contracting procedures.

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[59] "Resolution of the Russian Federation Supreme Soviet on Regulating the Forming and Activity of Associations, Concerns, Corporations and Amalgamations of Enterprises in the Russian Territory," Kremlin International News Broadcast, 25 October 1992.

[60] John Trout, telephone interview with the Special Projects' Office at the Omaha, Nebraska headquarters of the U.S. Army Corps of Engineers, 16 November 1992.

Tomsk 7 has its own construction firm waiting for the expected bounty of Western currency needed for construction of a storage facility capable of housing thousands of nuclear weapons. The firm, *Khimstroi*, employs over 10,000 people around the Siberian city of Tomsk 7. The director of the department scheduled for construction of the facility found it difficult to understand the practice of competitive bidding as explained during a meeting in August of 1992.[61] As the sole contractor in the area, the director could not comprehend how another firm outside Tomsk 7 could receive the contract to build the storage site. The U.S. Army Corps of Engineers, however, intends to follow competitive bidding procedures. In support, a recent Russian law requires that the Russian State Committee for State Property Management approve any foreign contract for competitive bidding.[62] Such a law, though, appears inappropriate to the director of *Khimstroi* when used in the context of the construction industry around Tomsk 7. The management of this large *Kombinat*, which reports directly to the Deputy Minister of the Russian Federation Ministry of Atomic Energy (MINATOM) is located near Tomsk 7.[63] *Khimstroi* is a classic Soviet monopoly and resistant to change. The figure on the following page outlines *Khimstroi's* general organizational structure.

Although the scope of this paper cannot include a detailed analysis of Soviet construction management, one must understand that the past and the present are not easily separated. Construction management in the former Soviet Union followed four

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[61] Yuli M. Gelman, interview conducted at the Omaha office of the U.S. Army Corps of Engineers, Omaha, Nebraska, 4 August 1992.

[62] "Basic Principles of Privatization Offer Incentives, Impose Restrictions on Foreigners," *Soviet Business Law Report* 2, no. 14 (1992): 2.

[63] Victor N. Michailov, "Conversion of the Nuclear Complex, Nuclear Disarmament, and the Safety of Nuclear Tests at Novaya Zemlya," *Swedish National Defense Publication: Lectures and Contributions*, 15 July 1992, 10.

dominant theories for the past several decades: political economy, an empirical school, a planning school, and last a cybernetic school. Political economy shaped the management style to fit the Marxist-Leninist socialist concept of the state. The empirical school, as the name implies, analyzes data and uses it to shape the objective outcomes in

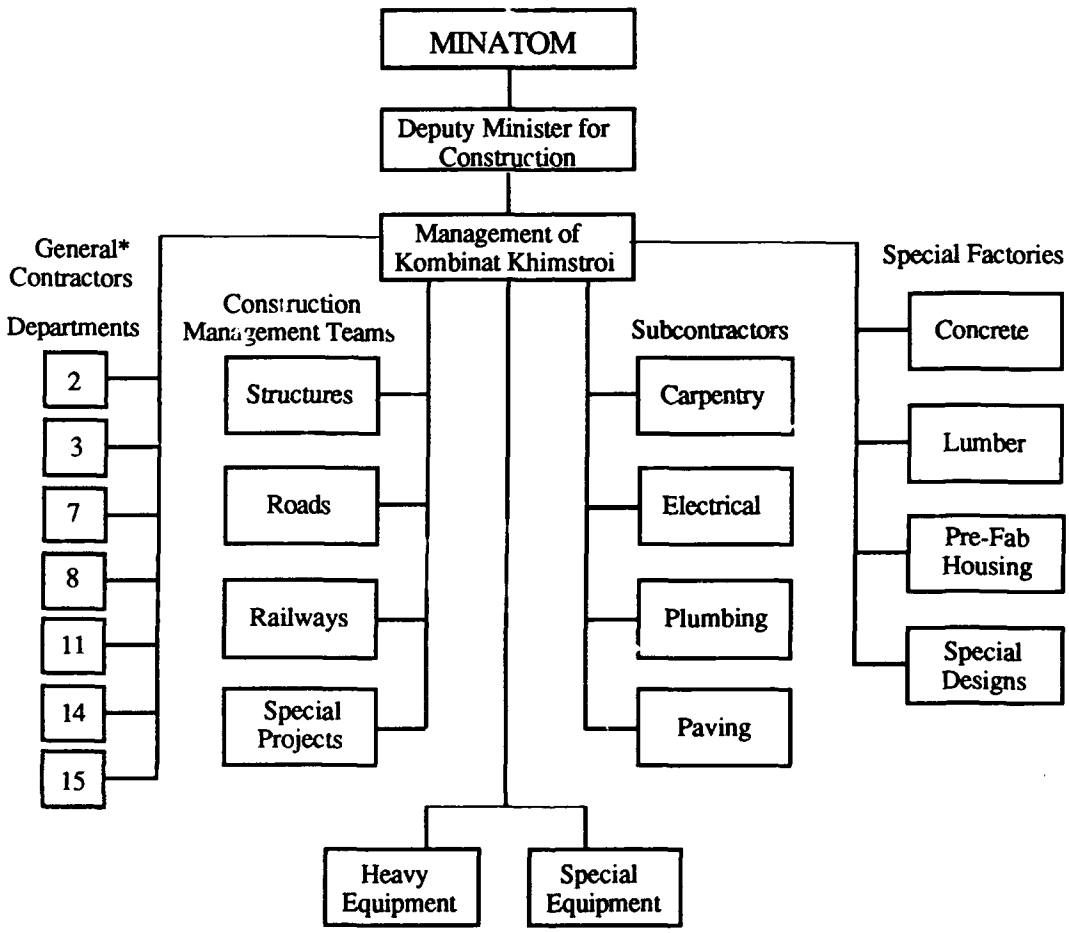

Figure 2. Organization of Khimstroi.

* Department 7 is the general contractor responsible for the construction of the storage facility.

the factory or a similar setting. A hallmark of the former Soviet system was the planning school. In the perfectly ordered society, all management could be planned at any and all levels. Finally, the cybernetic school elevates control through planning to an even higher form. Random management problems can be studied and then controlled.[64] What is essential to our understanding, none of the four theories incorporates Western style macroeconomics. These four styles guided infrastructure development in the former Soviet Union.

One must consider a firm like *Khimstroi* within the context of Russia and its outdated infrastructure and management style. Under communism, major infrastructure development advocated no single governmental organization like the U.S. Army Corps of Engineers. Each major industrial institution pursued resources for its own development. Often construction firms stole material or labor for their own personal use, or were at odds with one another. The building of a nuclear weapons storage facility has helped highlight the difficulties facing the Russians as they move to a real working economy and attempt to break with the mammoth monopolies present for many decades. The existing bureaucratic structure and former party *apparatchiki* have either resisted or reluctantly agreed to many of the reforms. Moreover, the changes are slow to reach the lower-level parts of the bureaucracy.[65] The official from *Khimstroi* who could not accept the idea of competitive bidding probably did not even know about the changes in the system of state planning. Even though *Khimstroi* remains under the control of MINATOM, one of the more powerful remaining Russian ministries, it

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[64] James C. Thompson and Richard F. Vidmer, *Administrative Science & Politics in the USSR & the United States: Soviet Responses to American Management Techniques 1917-Present* (South Hadley, Mass.: Addison-Wesley Publishing Company, 1979), 140-149.

[65] "Trade Controls With the West," *Business International: Doing Business in East Europe*, 1 July 1992, 1.

must also follow the legislative changes. The legislative changes have outpaced the flow of information to areas like Tomsk 7—2,000 miles from Moscow. It is not surprising that competitive bidding seems alien to the firm *Khimstroi*. As the only firm within hundreds of miles, it is likely that *Khimstroi* will ultimately receive the contract. The process of competitive bidding, however, will first be followed. Instead of insisting on total control, the Russians have attempted to integrate U.S. contracting procedures.

This project has also met one last unexpected complication. During the negotiations over the construction of the storage facility, the U.S. Army Corps of Engineers initially approached the Russian officials from the perspective of handling the project through Western contractors. Russians, especially the remnants of the former communist bureaucracy, tend to look on foreign ideas negatively. After many decades of propaganda espousing the ideal Soviet way, Western methods and intrusion have become an embarrassing reminder that communism did not work. It became clear, especially when the Russian officials announced their plans, that Russia wanted to maintain overall responsibility. The Russian Federation has tended to be more receptive to financial assistance in terms of joint projects or stock companies. The Russians have the technology, people and know-how, but they lack the experience of working with Western business methods.[66] Western patience is vital as the Russians develop their own international business acumen. Also, this should create future commercial opportunities for both U.S. and Russian firms. By sharing technology, management techniques, and general construction methods, each side can profit. U.S. involvement in the construction of a storage facility near Tomsk 7, above all else, must strive to

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[66] V.E. Minkov and M. Stolov, *Brief Description of the FSU Construction Management System with Particular Regard to the Construction of Storage Facilities*, Argonne National Laboratory, Special Projects Office Report 92/4, April 1992, 2-3.

integrate the Russian Federation with Western construction and infrastructure management—but on an equal basis.

4. Prospects for the Construction Industry

With *glasnost*, democratization, and a movement to a strictly market-oriented economy, the utilization of *stroi* battalions should diminish and eventually cease. Moreover, the break-up of large monopolies is vital to the future of the Russian Federation. One possibility would be the development of something similar to the U.S. Army Corps of Engineers. At present, because of the years of central planning and tendency toward large monopolies, such a structure cannot immediately overlap on the Russian economy. There is no shortage of expertise throughout the former Soviet Union, but further development of a private construction industry will have to precede any analogous U.S. Army Corps of Engineers' structure.[67] For now, the government must continue to dismantle the remnants of the State Committee for Construction (*GOSSTROI*) and encourage private construction firms. The Russian Federation has made many of the tentative steps required for such a transformation.

Part of this weaning process will include separation of the *stroi* battalions from the civilian economy as a source of labor. Successful separation of the *stroi* battalions can either strengthen or hinder the establishment of a free-market system. Less involvement will lead to a civilian construction force, but a lingering presence will hinder any free-market system. For Example, in January of 1991, the *stroi* battalion's railroad troops were still under a special decree of the president of the USSR. Railroad troops were included in the same category as the border troops of the Committee for State Security

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[67] Sergey Ozhegov, Moscow Institute of Architecture, interview at the University of Illinois, Urbana, Illinois, 21 February 1992.

(KGB) and the internal troops of the Ministry of Internal Affairs (MVD).[68] With other more pressing military demands, Boris Yeltsin has not substantially changed this designation. In fact, the railroad troops have only been redesignated and attached to the Ministry of Railways.[69] However, with the events from the August coup still unraveling, there exists an opportunity for structural change in the armed forces. The withdrawal of the former Soviet military from Eastern Europe has left a large number of returning soldiers without housing for themselves or their families.[70] Military leaders prefer to reserve the use of these soldiers for their own housing construction. Both the military and civilian leadership have recognized that conditions within the construction battalions must change. Any change will ultimately improve the military's morale and push the construction industry toward greater privatization.

Nevertheless, this will not occur easily. As noted earlier, the 70 years of communist leadership created a macroeconomic view that distorted financial planning. Stalin's insistence on pushing industry eastward not only required forced labor, but led to the steady use of *stroi* battalions and construction monopolies. Since Gorbachev introduced *perestroika*, the expansion east of the Urals has come under scrutiny. Although money for investment did not cease, a more critical review of the expected gains from the resources of Siberia found less enthusiasm within the government.[71] Furthermore, the political focus has turned inward as Boris Yeltsin and his government

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[68] "Decree of the President of the USSR," *Izvestia*, 12 January 1991, 2. Trans. in *CDSP* 43, no. 2 (1991): 30-31.

[69] "Yeltsin's Decree on the Restructuring of the Government," 4.

[70] Yevgeny Sorokin, "Not in the Ranks and Not in the Battle," 29.

[71] Elisa B. Miller and Allan Rodgers, "Conclusions and Recent Developments," in *The Soviet Far East: Geographical Perspectives on Development*, 304-305.

tackle the problem of privatization. With the arrested development in expansion policy, the evolving economic structure can remove *stroi* battalions as a source of labor and start to break-up the existing monopolies. Throughout the analysis of the construction industry, we have seen that legislation is slowly transforming a state-controlled economy into a free-market environment.

With these changes, privatization of the construction industry and its labor force should eventually take place. Large firms such as *Khimstroi* will not be able to compete in an open market. Large projects will still exist in a country as large as Russia, but now private construction firms will have to start taking more of the responsibility for underwriting the success or failure of a project. The Russian government can no longer subsidize failing monopolies. The economic system which habitually operated under soft budget constraints cannot continue if Russia is to move to a free-market system. By definition, a free market does not include excessive government subsidies. The decrees by Boris Yeltsin and other corresponding laws passed by the Russian parliament are the first step. A cursory review, though, indicates that better enforcement is the next stage.

The years 1991 and 1992 were marked by a seemingly endless string of presidential decrees and new legislation by the Russian parliament. In no particular order, Russia has introduced numerous changes: The Law on Foreign Investment; The Law on Enterprises and Entrepreneurial Activities; The Statute on Joint Stock Companies; The Law on Taxation of Profits of Enterprises and Organizations; The Resolution Accelerating Privatization; and, finally, foreign currency regulations and bankruptcy laws are just a few examples.[72] These laws and decrees have been a

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[72] For a more detailed discussion of these various laws, see *The Russian Privatization Program: A Guide for Foreign Investors* (Moscow: The State Committee of the Russian Federation for the Management of State Property, 20 August 1992), 17-26.

response to the demands of the West for some kind of shock therapy to fundamentally change the stagnant economy which 70-plus years of communism created. The task is to move from issuing decrees or writing legislation, and to establish the framework for improving investor confidence. Even the Russians are hesitant to invest or collect profits in rubles. Large-scale infrastructure requires enormous amounts of working capital. At best, the legal framework has been established. The tough decisions will involve putting an end to large monopolies by letting them go bankrupt, or by helping them become smaller and potentially profitable enterprises. Concurrently, the construction industry must learn to rely on its own labor force—using *stroi* battalions will only hamper the creation of a solid private construction industry.

Ultimately, large-scale construction and infrastructure management within Russia will acquire a new framework. With a legacy that includes military involvement and construction monopolies, a model similar to the U.S. Army Corps of Engineers may work best. The Corps of Engineers traces its history back to 1775. Unlike the Russians, the military's involvement has tended to produce a stronger construction industry within the United States. During the last fifty years, the Corps has shed its military labor force and placed only officers at the management level. At present, the Corps' civil works program has 28,000 civilians compared to 350 officers. Major areas of concern include waterway development, flood control, the space program, and management of the nation's wetlands.[73] Our infrastructure is well served by the U.S. Army's Corps of Engineers. Any military organization; like the U.S. Army Corps of Engineers, but under the civilian control of the Russian government, will enhance efforts to move to a more

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[73] *Essayons (Let Us Try)*, Public Affairs Office, U.S. Army Corps of Engineers (Washington, D.C.: Government Printing Office, 1991), 13.

Western system of democratic control. The decision to implement such a recommendation, however, rests with the Russian parliament and its new structure.

The discussion of the construction of a nuclear weapons storage facility indicates a pattern of progress mixed with obstacles. Thus far, the overall effort has been successful. The Russian Federation and United States are currently working on the final design of the storage facility. Construction should start in late 1993.[74] The obstacles have tended to reflect historical distinctions regarding the military, as well as procedural differences because of the lingering communist economy. At present, each obstacle has been resolved through a basic understanding that cooperation will best solve the storage problem. The spillover of ideas appears positive. More problems will certainly arise; however, we can now use the previous discussions and apply them to the final part of this argument—whether our international system is changing?

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[74] John Trout, 16 November 1992.

V
Russia: A Reliable Partner?

The completion of this joint project should reduce the storage problems faced by the Russian Federation. If one accepts proliferation as a potential threat to world stability, then the entire effort will help provide a modicum of improvement within the realm of international security. Returning to the third part of this argument, one must finally consider whether this whole effort marks a change in not only relations between the United States and Russia, but within the existing rules and norms which make up the international order. Many political scientists seem to view the pursuit of international cooperation as an elusive "brass ring" which cannot really exist. This attitude bodes ill for the future. These scholars have adopted the classic balance of power approach concerning international relations: nation states generally are compelled to preserve their security if they are to survive and succeed.[75] There is a smaller but growing view of international relations analysts which supports the premise that peace, or a decreasing desire to engage in conflict, has continued to improve our chances for survival over the last several decades.

This last section will integrate two rather separate discussions—the issue of nuclear weapons within Russia and the overview of Russia's construction system as inherited from the Soviet Union. One could see that the need to solve the storage dilemma impacted on both U.S. and Russian views of appropriate timing for an acceptable solution. Additionally, our thorough discussion of the construction industry

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[75] Frank Tannenbaum, *The Balance of Power in Society* (New York: The MacMillan Company, 1969), 91-92.

demonstrated some obvious effects through the spillover of ideas. By combining the two areas, and examining the positive and negatives consequences, a number of results receive more than speculative appraisals. In fact, we are able to assess Russia's reliability as a partner with the West. Because old methods no longer apply without a Soviet state as the dependent variable, often disparate themes must be compared in order to understand the emergent political processes at work throughout the former Soviet Union.

The last two results that one must consider involve trust between the East and West, and what new direction the Russian Federation may or may not adopt as new democratic structures evolve. Each of the sub-elements of this case study offers a glimpse into the foreign policy style of Russia. Many have hoped that the post-Cold War period would usher in a new and more accommodating Russia, and that this would push the world toward greater global cooperation. This is an intriguing notion and the author believes we can at least provide an assessment using the framework established earlier.

1. The Future of International Relations

Two recent works, one by John A. Mueller, *Retreat from Doomsday*, and the other by John L. Gaddis, *The Long Peace: Inquiries Into the History of the Cold War*, describe the two contrasting hypotheses for the relative stability between the two great powers since World War II. Mueller's book explains this change as an evolution toward greater stability in the world. Mueller describes a steady process among nations which makes conflict irrational. Peace is a learned response or, in contrast, we can unlearn war. Mueller describes today's economic cooperation altering the stakes for any future war. Our economies are so intertwined that neither side would benefit from armed

aggression.[76] In contrast, Gaddis accounts for stability during the Cold War through a number of classic balance of power premises. In his opinion, the Cold War produced bipolar stability by means of the nuclear deterrent. Furthermore, the United States and Soviet Union were able to maintain spheres of influence which allowed their hegemonic pressures to grow within their two great alliances: NATO and the Warsaw Pact. The Cold War, for Gaddis and many others, had desirable, if not always intended effects (e.g., control of regional rivals). Nuclear weapons were not necessarily inconsistent with peace.[77] One can look at the current cooperation between the Russian Federation and the United States and assess whether or not this represents a step forward in international relations.

If progress is occurring, collaborative efforts should be the norm as nations seek to minimize conflict because it is no longer rational. One could, however, attribute this new cooperation to selfish desires and attempts to enlarge or build upon fragile existing balance of power structures. Realists like Kenneth Waltz would argue against the significance of cooperation to solve the nuclear storage problem. Waltz acknowledges that states have changed in many ways, but believes the quality of international relations has remained much the same. Nation states may seek reasonable and worthy ends, but they cannot figure out how to reach them.[78] The many scholars who support

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[76] John A. Mueller, *Retreat from Doomsday* (New York: Basic Books, Inc., 1989), 3-13 and 220-263.

[77] John L. Gaddis, *The Long Peace: Inquiries Into the History of the Cold War* (New York: Oxford University Press, 1987), 140-146; 212-214; and 237-245. See also Roger E. Kanet and Edward A. Kolodziej, eds., *The Cold War as Cooperation* (Baltimore: John Hopkins University Press, 1991).

[78] Kenneth N. Waltz, *Theory of International Politics* (Reading Mass.: Addison-Wesley Publishing Company, 1979), 110.

such a position would not see the current efforts as a radical departure from established methods of international relations.

The results, thus far, of this joint effort to solve Russia's nuclear dilemma and reduce the risk of nuclear proliferation do not support the pessimistic future that Gaddis, Waltz, or other realists want to portray. The collapse of the Cold War cannot be fully understood as a function of military balance of power or nuclear deterrence.[79] The Russians have chosen cooperation in order to solve the potentially catastrophic implications of uncontrolled nuclear proliferation. Despite many obstacles, both sides appear committed to whatever level of cooperation necessary for a successful resolution. A commitment to such a degree of cooperation tends to discredit arguments for an international order that cannot evolve. The question then becomes one of the relative degree to which Russian foreign policy is in fact changing.

2. A Foreign Policy in Transition

Events since the late 1980s, particularly the collapse of Eastern Europe, have confronted foreign policy analysts with a difficult task—predicting the future of the region from Berlin to Vladivostock. Instead of clear and insightful analysis, many social scientists find a recently completed article overtaken by another profound change in the myriad of ethnic, nationalistic, and security changes sweeping across the entire area. The following excerpt illustrates the inherent difficulties in assessing foreign policy orientation in the region.

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[79] See Edward A. Kolodziej's article, "What is Security and Security Studies?" *Arms Control* 13, no. 1 (April 1992) which concludes that the Cold War ended for several reasons that go beyond deterrence theory or the balance of power between East and West.

> Notwithstanding allegations to the contrary from incautious foreigners, the USSR is not on the brink of collapse; the Soviet system, in the most important respects, works well enough for life to totter on. In some very particular respects, in the areas that the state designates as highest priority, the Soviet system works much better than does the United States...[80]
>
> (Colin Gray, National Institute for Public Policy, 1989)

Admittedly, the excerpt above was written in late 1989 and did not anticipate the effect of the failed coup. The quotation, however, emphasizes the difficulty one confronts in assessing a foreign policy not only in transition but, more recently, in turmoil. From 1987 to 1989, the general question was to what degree is the Soviet Union changing. By late 1989 until the coup attempt, scholars tried to explain the now self-evident changes and describe the evolving foreign policy of a disintegrating nation-state. Most recently, the post-coup period has shown a Russian Federation without real foreign policy focus and, what little focus remains on the international scene, obviated by increasingly difficult problems within its own borders or with the surrounding successor states. The fluid foreign policy process in the Russian Federation has challenged many previously held ideas.

The West found it very difficult to accept that change had occurred in the former Soviet Union. **New thinking** in Soviet foreign policy was often seen as a clever ploy to relax the West in order to attain not a *perestroika* but a *peredyshka* (breathing space) from Western competition.[81] Although Mikhail Gorbachev was extremely popular with the West, the Soviet Union as a whole remained the subject of pervasive doubt. Foreign policy idealists, however, believed that Gorbachev finally started to transform the Soviet Union into a new and more accommodating member of the world body; with evidence

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[80] Colin S. Gray, "The Soviet Threat in the 1990s," *Global Affairs* 5, no. 2 (Spring 1990): 30.

[81] James A. Baker, III, "Points of Mutual Advantage: Perestroika and American Foreign Policy," *Vital Speeches of the Day* 56, no. 3 (1989): 68.

the large-scale replacement of many aging Politburo officials and the restructuring of the defense industry and foreign ministry.[82] Consequently, by late 1989, the West began to posit ideas more related to a fundamental change in a Soviet foreign policy, and that these changes would be difficult to undo. With the collapse of the East European security bloc, the West eventually had no choice but to pronounce that a new Soviet foreign policy had emerged.

The end of the Cold War left the European state system without meaningful direction from its former adversary. With the loss of communist domination in Eastern Europe, the focus of the international community shifted; frantically trying to explain Soviet foreign policy without Eastern Europe. As its most costly asset, one can understands why Gorbachev jettisoned the burden of Eastern Europe.[83] The world-wide decline in Soviet legitimacy gradually saw the remaining outposts of communism lose their valued support. By 1990 and the Persian Gulf crisis, the Soviet Union sought any role that would preserve some involvement as a member of a bipolar superpower arrangement. Indeed, the Gulf War briefly demonstrated one possible path for Soviet foreign policy: a mediator among old allies, cooperative toward the West, and willing to work through the auspices of the United Nations.[84] Despite these encouraging signs, the failed coup completely destroyed the opportunity for a loose confederation with power

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[82] Jan S. Adams, "Institutional Change and Soviet National Security Policy," ed. George Hudson, *Soviet National Security Policy Under Perestroika* (Boston: Allen & Unwin, Inc., 1990), 156-161.

[83] Robbin F. Laird, "The Evolution of Soviet Foreign Policy and the Future," in *Soviet Foreign Policy: Classic and Contemporary Issues*, eds. Frederic J. Fleron, Jr., Erik P. Hoffmann, and Robbin F. Laird (New York: Aldine de Gruyter, Inc., 1990), 840.

[84] Robert Levgold, "The Gulf Crisis," *The Harriman Institute Forum* 3, no. 10 (October 1990): 7.

still retained by a Soviet central authority.[85] This haunts Russia today as it watches the former Soviet empire disintegrate.

The Cold War, in many respects, served to codify many of the rules and norms of superpower cooperation. Gorbachev's **new thinking** was believed to have had the ability to replace an increasingly discredited communist regime with a more acceptable pluralistic government. Instead, the power flowed away from the center and into the fifteen former republics. This has required the West and Russia to establish new patterns of bilateral relations. Few accurately predicted such an outcome. In the post-Soviet period, Russia has concentrated its foreign policy objectives closer to its pre-revolutionary borders. Nevertheless, it is in the interest of the West to recognize those areas with broader implications for international security. U.S. and Russian foreign policy objectives should overlap as each side searches for increased stability within the region which the former Soviet Union occupied—with the current cooperation vis-a-vis nuclear weapons a possible litmus test.

3. Assessing Cooperation—the Example of Nuclear Weapons

In the introduction, this paper indicated some of the other Western actions taken in response to the dissolution of the former Soviet Union. These measures have, in large, represented reactions to each of the potential risk areas noted earlier—loss of political and military control; security during movement for dismantlement; inadequate storage and accountability; and nuclear technology transfer. Admittedly, a solely reactive policy will remain incomplete. Each of the decisions also reflects elements which contain long-term objectives. With this in mind, it is worthwhile to look at these efforts along with

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[85] Suzanne Crow, "The Twilight of All-Union Diplomacy," *RFE/RL Research Report*, 3 January 1992, 27.

the storage problem and see how they also support global cooperation as the new international practicality.

A smaller part of the money from the Nunn-Lugar amendment has been allocated for an International Science and Technology Center in Moscow. In addition to $25 million from the United States, the U.S. State Department expects to receive similar amounts from the EC, Japan, and Russia. Kiev, Ukraine will receive a smaller amount for a parallel extension of the center called the Ukrainian Science Center. The money will not directly hire scientists but support international projects using former Soviet expertise. The projects are expected to generate a steady source of income for the many ex-Soviet scientists now unemployed. After two years a review will occur for additional funding.[86] In a similar proposal, the U.S. federal government will pay 116 Russian scientists $90,000 for research work that employs their talents as nuclear experts. Although their salaries may not be comparable to that of a Western scientist, this should help stem the flow of scientists looking for work outside Russia.[87] Both initiatives have solid intentions and indicate a greater interest on the part of the West in cooperating with Russia.

Directly related to the problems associated with dismantlement, several forms of assistance were offered in conjunction with the Russian/American Summit in June of 1992. These supplemental accords were buried by the more newsworthy cuts in strategic nuclear arms. Nevertheless, as examples of cooperation, they are significant. Each agreement, three total, is between the Russian Ministry of Atomic Energy

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[86] Edward J. Dowdy, Science Advisor to Ambassador Robert L. Galluci, Lecture given at the University of Illinois, Urbana, Illinois, 23 April 1992.

[87] William J. Broad, "U.S. Plans to Hire Russian Scientists in Fusion Research," *New York Times*, 6 March 1992, A1/A6.

(MINATOM) and the U.S. Department of Defense. The agreements encompass containers for the fissile material, providing of kevlar blankets for protection during shipment, and a provision to provide emergency nuclear response equipment and training.[88] The agreements included three major stipulations: the United States would design and manufacture the containers for the fissile material removed from the warheads; protective armored blankets would ensure the safe shipment of the warheads to various locations in Russia; and, last, Western contractors would train and supply the equipment for emergency response to a nuclear mishap—all at no cost.

At present, the initial $400 million from Nunn-Lugar will primarily assist Russia in the building of the storage facility. The money and facility will not solve all the problems associated with dismantlement and storage, but it provides a strong foundation for eradicating the threat to proliferation posed by the dissolution of the Soviet Union. The United States appears to have adopted a view that measures must encompass a more long-term perspective. In late 1992, the Senate Foreign Relations Committee approved an increase in funding for the further implementation of initiatives started by the Nunn-Lugar amendment.[89] As a signal for the Russian Federation, this indicates our desire to assist in the joint resolution of the problem. Because of the cooperation thus far, the four expected results initially outlined are occurring or will occur in the near term. U.S. and Russian cooperation have accomplished the following.

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[88] See the text of the agreements signed by Russia and the United States, *Agreement Between the United States of America and the Russian Federation Concerning the Safe and Secure Transportation, Storage and Destruction of Weapons and the Prevention of Weapons Proliferation*, 17 June 1992.

[89] "GAO Raises Questions In Evaluation of Nunn-Lugar Implementation," *Nuclear Waste News* 12, no. 31 (1992): 3.

Timing. The Russian Federation expects to complete the design of the storage facility in 1993 and start the construction by late 1994. This is a vast improvement. Western assistance will decrease the amount of time when the warheads remain in temporary storage sites. Moreover, with a completed storage facility, the process of dismantling the nuclear weapons will probably take less than the nine years discussed earlier. Arms control reductions cannot be considered complete until the weapons are actually retired from potential military use.

Spillover. Initial skepticism about the U.S. Army Corps of Engineers has been replaced by admiration. The Russians are looking at the possibility of aligning their infrastructure system along similar lines. As the project progresses, other benefits should arise. Despite many changes in its economic system, our analysis shows that the transition to a market economy is moving slowly at best. The United States, through a mix of economic and technical assistance introduces the Russian Federation to the complexities of a free-market economy.

Trust. Although initially skeptical, both the West and Russia are cooperating more fully in the realm of international security. Access to the closed city of Tomsk 7 sends a clear signal to Western conservatives. Previously, such access would have been improbable, if not impossible. Cooperation strengthens existing relationships and helps forge new ones. If the current government loses its constitutional mandate, long-term stability with the West can only be assured if existing protocols are difficult to undo. This point bears particular importance—agreement on the issue of arms reductions and Western aid within Russia is far from unanimous—and neither the West nor Russia's present governments want to see disarmament lose its current momentum.[90] The greater Western involvement, the less likely previously agreed upon decisions will lose their importance.

Future Direction. International cooperation, especially through the UN or similar organizations, appears the preferred choice for the Russian Federation. Instead of trying to resolve its own security problems, Russia wants to integrate with existing Western structures. This appears as a positive indication of Russia's emerging foreign policy style. One must balance this trend with a modicum of guarded caution. Whereas Boris Yeltsin remains pro-Western, the Russian parliament does not share similar views. At best, one should not frame the current political climate as permanent. Instead, we must use this progress as a positive sign and nurture the existing goodwill.

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[90] The implications of a failure to improve upon established trust, particularly in regards to the opposing view of nuclear weapons cuts, is discussed at length in an article by Sergey Kazenov, "Cuts Without Trust?" *Pravda*, 8 April 1993, 5. Trans. in *FBIS*, 15 April 1993, 5-7.

These four points indicate that the cooperative effort between the United States and Russian Federation, despite many obstacles, has produced a positive result. Moreover, the degree and commitment to jointly solving Russia's nuclear predicament appears to have allayed many fears that linger following the end of the Cold War. There is greater transparency about the dimensions of the nuclear dilemma within Russia. By allowing greater access, the storage facility is receiving needed Western assistance. Last, cooperation has allowed the West a more clear picture into Russia's foreign policy aspirations in the 1990s.

VI
Conclusion

In December of 1992, the Russian parliament met to discuss the progress of reform within Russia since the break-up of the Soviet Union. This historic event was not necessarily encouraged by Boris Yeltsin for fear that it may undermine his efforts and broad powers. On the other hand, the forces which oppose democratic reform and the loss of prestige associated with the collapse of the Soviet empire wanted an opportunity to address their concerns. One cannot separate Russia's economic reforms, domestic policy, and foreign policy at this juncture. Also, the foreign policy of Russia has been subjected to much criticism by many factions competing for power. Over and above these internal political forces, Ukraine remains a leading antagonist thwarting attempts by Russia to establish preeminence in foreign affairs following the dissolution of the Soviet Union. This paper has looked mainly at Russia and its role in establishing control of the nuclear dilemma. We can offer some assessment about the future based on the analysis conducted earlier.

The Russian Federation remains the *de facto* successor to the foreign policy of the former Soviet Union. However, much of the West, almost all the former Soviet republics, and those countries previously dominated by Russia are hesitant to fully welcome an assertive Russia into the community of nations. Few doubt the finality of the communist regime, but doubts still linger about the path Russia may or may not

take as it pursues democracy.[91] The apparent potential for a relapse into a more authoritarian state is characterized by the right and left struggle in Russian politics. The right represents nationalism and a return to a more pro-Russian perspective of the world. Rapid rapprochement with the West does not bode well for these forces.[92] They do not have a sufficient majority at this time, though further economic decay will strengthen their arguments.

Since the failed coup, the left no longer equates to a communist or socialist orientation. Russia's new left is led by the pro-reform voices and the so-called liberal democrats in the Russian White House. Economic reform is seen through a foreign policy that accommodates Western ideals and policies—evident in the willingness to permit access to Tomsk 7 and detailed Western assistance in the construction of the storage facility. The less conflictive the relationship between Russia and the West, the more to be gained.[93] For now, monetary support rests on Germany and the United States, and to a lesser extent other leading industrial countries.[94] The other European powers are seen as legitimizing factors for eventual integration into the EC. The direction that Russia's foreign policy should follow, however, remains a divisive issue.

The possible foreign policy paths of the future can be best described by the terms **Atlanticists** and **Eurasianists** as they apply to Russia. Atlanticists recognize that a pro-Western stance will lead to greater integration into the European Community and

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[91] Suzanne Crow, "Russia's Relations with Members of the Commonwealth," *RFE/RL Research Report*, 8 May 1992, 9.

[92] Walter Laqueur, "Foreign Policy Concepts of the Russian Right," *New Times*, no. 38 (1992): 12-13.

[93] Andrei Kozyrev, "Russia: A Chance for Survival," *Foreign Affairs* 71, no. 2 (1992): 9.

[94] Vladislav Zubok, "Tyranny of the Weak: Russia's New Foreign Policy," *World Policy Journal* 9, no. 2 (1992): 203-205.

support for economic reform. They see a future alliance which reflects power in the northern industrial nations and a lack of such power in the southern or less developed world.[95] In contrast, Eurasians advocate less Western integration and promote the heritage of Russia as a bridge between two worlds—Europe and Asia. For Eurasians, the Slavic alliance has failed and Russia would be best served by a shift toward cooperation with Central Asian countries.[96] Amidst the two camps, Yeltsin stands with the Atlanticists.

Long-term priorities for the foreign policy of Russia are not clearly defined by the Russian Foreign Ministry or by Yeltsin himself. At best they have been reactive to the Soviet Union's break-up. This is not a condemnation, albeit many want to criticize the lack of a clear policy; rather, a recognition that long-term policy takes time to develop and implement. Our analysis has shown that the initial priority has gone to establishing or maintaining good relations with the Western economic powers. Furthermore, domestic economic reform often altered foreign policy priorities, and limited the internal capability to resolve an emergent problem. Nevertheless, relations between Russia's bordering states (referred to as the near abroad) must remain cordial to prevent any more degradation of the remaining cooperative structures.[97] A failure to do so could complicate efforts that would leave Russia as the sole proprietor of nuclear weapons.

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[95] Alexander Rahr, " 'Atlanticists' versus 'Eurasianists' in Russian Foreign Policy," *RFE/RL Research Report*, 29 May 1992, 18-19.

[96] Ibid., 19-21.

[97] Andrei Kozyrev, "Transformation of Kafkaesque Metamorphosis. Russia's Democratic Foreign Policy and Priorities," *Nezavisimia Gazeta*, 20 August 1992, 1. Trans. in *FBIS*, 27 August 1992, 24-25.

For now, the West's task remains a daunting one. Eliminating nuclear weapons must continue as a process whereby Russia and the West nurture and build upon existing agreements. As the Russian Federation establishes its own foreign policy, the initial indicators are that it prefers cooperation with the West. Russia's willingness to participate in international forums supports the view that society is moving into an era marked by greater global cooperation. However, if treated like a weaker vassal under Western domination, Russia will likely resist further collaborative efforts. Russia is becoming a more reliable partner with the West; nevertheless, its willingness to participate is tempered by an inability to economically support many initiatives, and the more conservative forces in the parliament. We cannot predict the future of the Russian Federation. Because of this uncertainty, we must continue to press forward with new ideas and discard Cold War prejudices. It would be lamentable if relations fail to encompass more forward-looking objectives. Successful cooperation will increase the stability of the nuclear non-proliferation regime and further integrate the emergent global international community. Both results are worthy goals.

Bibliography

Adams, Jan S. "Institutional Change and Soviet National Security Policy." In *Soviet National Security Policy Under Perestroika*, ed. George Hudson. Boston: Allen & Unwin, Inc., 1990.

Agreement Between the United States of America and the Russian Federation Concerning the Safe and Secure Transportation, Storage and Destruction of Weapons and the Prevention of Weapons Proliferation, 17 June 1992.

Allison, Graham, Ashton B. Carter, and Philip Zelikow. "The Soviet Arsenal and the Mistaken Calculus of Caution." *Washington Post*, 29 March 1992, C3.

Arkin, William M., Damian Durrant, and Hans Kristensen. "Nuclear Weapons Headed for the Trash." *The Bulletin of the Atomic Scientists*, December 1991, 15-19.

Baker, James A., III. "Points of Mutual Advantage: Perestroika and American Foreign Policy." *Vital Speeches of the Day* 56, no. 3 (1989): 66-70.

"Basic Principles of Privatization Offer Incentives, Impose Restrictions on Foreigners." *Soviet Business Law Report* 2, no. 14 (1992): 1-3.

Belov, Petr. "Nonparity Parity." *Literaturnaya Gazeta*, no. 38 (1992): 10. Trans. in *FBIS*, 25 September 1992, 61-62.

Bohlen, Celestine. "Arms Factory Can Make Bricks, But, Russia Asks, Is That Smart?" *New York Times*, 24 February 1992, A1/A6.

"Break-up May Aid Proliferation." *Jane's Defence Weekly*, 25 January 1992, 105.

Broad, William J. "U.S. Plans to Hire Russian Scientists in Fusion Research." *New York Times*, 6 March 1992, A1/A6.

Brown, Leslie. "The Siberian City of Tomsk is Open for Business...at Last." *Business America* 112, no. 11 (1992): 2-4.

Budiansky, Stephen, et al. "The Nuclear Epidemic." *U.S. News & World Report*, 16 March 1992, 40-44.

Campbell, Kurt M., et al. *Soviet Nuclear Fission: Control of the Nuclear Arsenal in a Disintegrating Soviet Union*. Cambridge, Mass.: Center for Science and International Affairs, 1991.

Carter, Ashton B., and Owen Coté. "Transport, Storage, and Dismantlement of Nuclear Weapons. In *Cooperative Denuclearization: From Pledges to Deeds*, eds. Graham Allison et al. Cambridge, Mass.: Center for Science and International Affairs, 1993.

Cochran, Thomas B., et al. *Nuclear Weapons Databook, Volume 4, Soviet Nuclear Weapons.* New York: Harper & Row, 1989.

Colton, Timothy J. *Commissars, Commanders and Civilian Authority*. Cambridge, Mass.: Harvard University Press, 1979.

Crow, Suzanne. "Russia's Relations with Members of the Commonwealth." *Radio Free Europe/Radio Liberty Research Report*, 8 May 1992, 8-12.

Crow, Suzanne. "The Twilight of All-Union Diplomacy." *Radio Free Europe/Radio Liberty Research Report*, 3 January 1992, 27-28.

Dean, Jonathan., and Kurt Gottfried. *A Program for World Nuclear Security*. Cambridge, Mass.: Union of Concerned Scientists, February 1992.

"Decree of the President of the USSR," *Izvestia*, 12 January 1991, 2. Trans. in *The Current Digest of the Soviet Press* 43, no. 2 (1991): 30-31.

Dienes, Leslie. "Economic and Strategic Position of the Soviet Far East: Development and Prospect." In *The Soviet Far East: Geographical Perspectives on Development*, ed. Allan Rodgers. New York: Routledge, Chapman and Hall, Inc., 1990.

Dowdy, Edward J. Science Advisor to Ambassador Robert L. Galluci. Lecture given at the University of Illinois, Urbana, Illinois, 23 April 1992.

Druzenko, A., and B. Reznik. "On the BAM-Part 3. Lessons of Forecasts and Forecasts of Lessons." *Izvestia*, 21 August 1987, 2. Trans. in *The Current Digest of the Soviet Press* 39, no. 34 (1987): 22.

Erlanger, Steven. "Russia Sells War Machines to Pay High Costs of Peace." *New York Times*, 3 February 1993, A1/A7.

Essayons (Let Us Try). Public Affairs Office, U.S. Army Corps of Engineers. Washington, D.C.: Government Printing Office, 1991.

"Estimated Soviet Nuclear Stockpile (July 1991)." *The Bulletin of the Atomic Scientists*, July/August 1991, 48.

"Farewell, Construction Battalions!" *Izvestia*, 12 June 1990, 3. Trans. in *The Current Digest of the Soviet Press* 42, no. 24 (1990): 30.

Gaddis, John L. *The Long Peace: Inquiries Into the History of the Cold War*. New York: Oxford University Press, 1987.

Galluci, Robert L. "Disposing of Nuclear Weapons in the Former Soviet Union." *U.S. Department of State Dispatch*, 10 August 1992, 631-634.

"GAO Raises Questions In Evaluation of Nunn-Lugar Implementation." *Nuclear Waste News* 12, no. 31 (1992): 1-3.

Gelman, Yuli M. Interview conducted at the Omaha office of the U.S. Army Corps of Engineers. Omaha, Nebraska, 4 August 1992.

"Grachov, Rutskoi on Rebuilding Russian Army." *Izvestia*, 1 June 1992, 1-3. Trans. in *The Current Digest of the Soviet Press* 44. no. 22 (1992): 12-15.

Gray, Colin S. "The Soviet Threat in the 1990s." *Global Affairs* 5, no. 2 (Spring 1990): 25-44.

Gritsenko, Igor. "Superhighway from Western Border to Pacific Ocean Proposed." *Izvestia*, 15 September 1992, 2. Trans. in *Foreign Broadcast Information Service-USR-92-122*, 23 September 1992, 47-48.

Heller, Mikhail, and Aleksandr Nekrich. *Utopia in Power: The History of the Soviet Union from 1917 to the Present*. New York: Summit Books, 1986.

Hilts, Philip J. "Tally of Ex-Soviets' A-Arms Stirs Worry." *New York Times*, 16 March 1992, A3.

Jones, Ellen. *Red Army and Society*. Boston: Allen & Unwin, Inc., 1985.

Kanet, Roger E., and Edward A. Kolodziej, eds. *The Cold War as Cooperation*. Baltimore: John Hopkins University Press, 1991.

Karatnycky, Adrian. "The Ukrainian Factor." *Foreign Affairs* 71, no. 3 (1992): 90-107.

Kazenov, Sergey. "Cuts Without Trust?" *Pravda*, 8 April 1993, 5. Trans. in *Foreign Broadcast Information Service-SOV-93-071*, 15 April 1993, 5-7.

Knabe, Brend. "Die Vertagungs des BAM-Programms." *Bundesinstitut fuer Ostwissenschaftliche und Internationale Studien* 35 (1982): 1-53.

Kolodziej, Edward A. "What is Security and Security Studies?" *Arms Control* 13, no. 1 (April 1992): 1-31.

Konovalova, N. "High-Speed Rail Line Construction Begins." *Sankt Peterburgskiye Vedomosti*, 8 August 1992, 1. Trans. in *Foreign Broadcast Information Service-USR-92-115*, 8 August 1992, 35.

Kornai, Janos. "Resource-Constrained Versus Demand-Constrained Systems." *Econometrica* 47, no. 4 (July 1979): 801-819.

Kornai, Janos. *The Road to a Free Economy*. New York: W.W. Norton & Company, 1990.

Korotich, Vitaly. "The Ukraine Rising." *Foreign Policy* 85 (1991-92): 73-82.

Kostenko, Yuriy. "Ukraine's Nuclear Weapons: Good or Evil." *Golos Ukrainy*, 29 August, 1 September 1992. Trans. in *Foreign Broadcast Information Service-USR-92-119*, 78-80.

Kozyrev, Andrei. "Russia: A Chance for Survival." *Foreign Affairs* 71, no. 2 (1992): 1-16.

Kozyrev, Andrei. "Transformation of Kafkaesque Metamorphosis: Russia's Democratic Foreign Policy and Priorities." *Nezavisimia Gazeta*, 20 August 1992, 1. Trans. in *Foreign Broadcast Information Service-SOV-92-167*, 27 August 1992, 19-25.

Laird, Robbin F. "The Evolution of Soviet Foreign Policy and the Future." In *Soviet Foreign Policy: Classic and Contemporary Issues*, eds. Frederic J. Fleron, Jr., Erik P. Hoffmann, and Robbin F. Laird. New York: Aldine de Gruyter, Inc., 1990.

Laqueur, Walter. "Foreign Policy Concepts of the Russian Right." *New Times*, no. 38 (1992): 12-14.

Levgold, Robert. "The Gulf Crisis." *The Harriman Institute Forum* 3, no. 10 (October 1990): 1-8.

Lockwood, Dunbar. "Bush Clears Way for Weapons Dismantlement, Security Aid." *Arms Control Today* 22, no. 4 (May 1992): 16, 21.

Michailov, Victor N. "Conversion of the Nuclear Complex, Nuclear Disarmament, and the Safety of Nuclear Tests at Novaya Zemlya." *Swedish National Defense Publication: Lectures and Contributions*, 15 July 1992.

Mihalisko, Kathleen. "Defense and Security Planning in Ukraine." *Radio Free Europe/Radio Liberty Research Institute Report on the USSR* 3, no. 49 (1991): 15-19.

Miller, Elisa B., and Allan Rodgers. "Conclusions and Recent Developments." In *The Soviet Far East: Geographical Perspectives on Development*, ed. Allan Rodgers. New York: Routledge, Chapman and Hall, Inc., 1990.

Milot, Marc Dean, Roger Molander, and Peter Wilson. "The Day After...in the USSR." RAND Corporation, Handout Update #1, 8 January 1992.

Minkov, V.E., and M. Stolov. *Brief Description of the FSU Construction Management System with Particular Regard to the Construction of Storage Facilities.* Argonne National Laboratory, Special Projects Office Report 92/4, April 1992.

The Modern Encyclopedia of Russian and Soviet History, s.v. "Railroads in Russia and the Soviet Union."

Morrocco, John D. "Soviet Military Breakdown Worries U.S. as Control Over Nuclear Arms Splinters." *Aviation Week & Space Technology*, 16/23 December 1991, 20-21.

Mueller, John A. *Retreat from Doomsday*. New York: Basic Books, Inc., 1989.

Nahaylo, Bohdan. "The Birth of an Independent Ukraine." *Radio Free Europe/Radio Liberty Research Institute Report on the USSR* 3, no. 50 (1991): 1-5.

Norris, Robert S. "The Soviet Nuclear Archipelago." *Arms Control Today* 22, no. 1 (January/February 1992): 24-27; 30-31.

Nunn, Sam, et al. "Trip Report: A Visit to the Commonwealth of Independent States." Undated.

"Nuclear Material Reportedly Offered for Sale." *Der Spiegel*, 9 March 1992, 176-178. Trans. in *Foreign Broadcast Information Service-SOV-92-047*, 10 March 1992, 1-3.

"Obstacles Loom for Implementation of START-2." *Radio Free Europe/Radio Liberty Research Bulletin* 10, no. 3 (1993): 1, 3.

Odom, William E. "The Soviet Military in Transition." *Problems of* Communism 39, no. 3 (May-June 1990): 51-71.

Ozhegov, Sergey. Moscow Institute of Architecture. Interview at the University of Illinois, Urbana, Illinois, 21 February 1992.

Paine, Christopher, and Thomas B. Cochran. "So Little Time, So Many Weapons, So Much to Do." *The Bulletin of the Atomic Scientists*, January/February 1992, 13-16.

Prishchep, V.I. "Debaty o Stroibatakh." *Voyenno-Istoricheskiy Zhurnal* 2 (1991): 34-37.

Rahr, Alexander. " 'Atlanticists' versus 'Eurasianists' in Russian Foreign Policy." *Radio Free Europe/Radio Liberty Research Report*, 29 May 1992, 17-22.

"Resolution of the Russian Federation Supreme Soviet on Regulating the Forming and Activity of Associations, Concerns, Corporations and Amalgamations of Enterprises in the Russian Territory." Kremlin International News Broadcast, 25 October 1992.

"Russia Turns to Washington for Weapons Waste Disposal." *World Environment Report* 18, no. 16 (4 August 1992): 1-2.

The Russian Privatization Program: A Guide for Foreign Investors. Moscow: The State Committee of the Russian Federation for the Management of State Property, 20 August 1992.

Schmemann, Serge. "Ukraine Halting A-Arms Shift to Russia." *New York Times*, 13 March 1992, A2.

Schmitt, Eric. "Soviet Atom Move is Ahead of Schedule." *New York Times*, 28 February 1992, A4.

Scott, Harriet F., and William F. Scott. *The Armed Forces of the USSR*. Boulder, Co.: Westview Press, Inc., 1984.

Shabad, Theodore. "Economic Resources. " In *Siberia: Problems and Prospects for Regional Development*, ed. Alan Wood. New York: Croom Helm, 1987.

Simpson, John, and Darryl Howlett. "Nuclear Non-Proliferation: The Way Forward." *Survival* 33, no. 6 (November/December 1991): 483-499.

Solchanyk, Roman. "Kravchuk Defines Ukrainian-CIS Relations. *Radio Free Europe/Radio Liberty Research Report*, 13 March 1992, 6-9.

Sorokin, Yevgeny. "Not in the Ranks and Not in the Battle." *Pravda*, 26 April 1989, 3. Trans. in *The Current Digest of the Soviet Press* 41, no. 17 (1989): 28-29.

Tannenbaum, Frank. *The Balance of Power in Society*. New York: The MacMillan Company, 1969.

Teague, Elizabeth. "Tackling the Problem of Unemployment." *Radio Free Europe/Radio Liberty Research Institute Report on the USSR* 3, no. 45 (1991): 1-7.

Thompson, James C., and Richard F. Vidmer. *Administrative Science & Politics in the USSR & the United States: Soviet Responses to American Management Techniques 1917-Present*. South Hadley, Mass.: Addison-Wesley Publishing Company, 1979.

"Three Little Nukes." *U.S. News & World Report*, 23 March 1992, 26.

"Trade Controls With the West." *Business International: Doing Business in East Europe*, 1 July 1992, 1-6.

Trout, John. Telephone interview with the Special Projects' Office at the Omaha, Nebraska headquarters of the U.S. Army Corps of Engineers, 16 November 1992.

"Unsecured Warehouses Store Nuclear Weapons." *Kuranty*, 15 January 1992, 2. Trans. in *Foreign Broadcast Information Service*, 24 January 1992, 6.

Waltz, Kenneth N. *Theory of International Politics*. Reading Mass.: Addison-Wesley Publishing Company, 1979.

"Where the Weapons Are." *The Bulletin of the Atomic Scientists*, November 1991, 48-49.

Whitney, Craig R. "Illicit Atom-Material Trade Worries Germans." *New York Times*, 20 October 1992, A7.

Willett, Susan. "Controlling the Arms Trade; Supply and Demand Dynamics." *Faraday Discussion Paper No. 18*, November 1991.

Wood, Alan. "From Conquest to Revolution: The Historical Dimension." In *Siberia: Problems and Prospects for Regional Development*, ed. Alan Wood. New York: Croom Helm, 1987.

World Military Expenditures and Arms Transfers (WMEAT). Washington, D.C.: U.S. Arms Control and Disarmament Agency, 1991.

Wuchte, Thomas A. "Non-Strategic Nuclear Weapons in the Former Soviet Union: A Cause for Alarm?" *Military Review*, forthcoming.

Yager, Joseph A. "Prospects for Nuclear Weapons Proliferation in a Changing Europe." *Center for National Security Negotiations (CNSN) Paper* 4, no. 1 (1992).

"Yeltsin Orders Formation of Russian Forces." *Xinhua General News Service*, 7 May 1992, 1.

"Yeltsin's Decree on the Restructuring of the Government." *ITARTASS News Agency*, 2 October 1992, 1-7.

Zamascikov, Sergei. "Insiders' Views of the Soviet Army." *Problems of Communism* 37, no. 3-4 (May-August 1988): 110-116.

Zubok, Vladislav. "Tyranny of the Weak: Russia's New Foreign Policy." *World Policy Journal* 9, no. 2 (1992): 191-217.