



1 to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and reviewing data, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Washington Headquarters Office, Paperwork Project, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Project, Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE <i>May '92</i>	3. REPORT TYPE AND DATES COVERED <i>Final May '92</i>
----------------------------------	----------------------------------	--

4. TITLE AND SUBTITLE <i>Arms control verification is no longer a stumbling block to true disarmament</i>	5. FUNDING NUMBERS
--	--------------------

6. AUTHOR(S) <i>Col Mark C. Easton</i>	
---	--

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <i>U.S. Army Student Detachment w/ Columbia University Ft Benjamin, Harrison, IN 46216</i>	8. PERFORMING ORGANIZATION REPORT NUMBER
--	--

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) <i>Harrison Institute Columbia University New York, NY 10027</i>	10. SPONSORING/MONITORING AGENCY REPORT NUMBER
---	--

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT <div style="border: 1px solid black; padding: 5px; width: fit-content;">This document has been approved for public release and sale; its distribution is unlimited.</div>	12b. DISTRIBUTION CODE
---	------------------------

13. ABSTRACT (Maximum 200 words) <i>attached</i>

DTIC
 ELECTE
 JUL 0 1 1992
 S A D

92-17013

14. SUBJECT TERMS <i>verification, army control, on-site inspection agency, disarmament.</i>	15. NUMBER OF PAGES <i>38</i>
16. PRICE CODE	

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
---------------------------------------	--	---	----------------------------

92 6 29 016

CPT Mark C. Easton is a 1982 graduate of the United States Military Academy. He recently received a masters in international affairs from Columbia University. CPT Easton has served with engineer units in Germany and Ft. Stewart, Georgia. Presently, he is attending the U.S. Army Russian Institute in Garmisch, Germany.

Accession For	
NTIS CRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	



Statement A per telecon Capt Jim Creighton
TAPC/OPB-D
Alexandria, VA 22332-0411

NWW 6/30/92

Abstract

Verification is generally recognized as a necessary element of any significant agreement on arms limitations and reductions. Verification matters, for a long time, have been a stumbling block in the way of disarmament between the Soviet Union and the United States. However, the mid 1980s marked a fundamental change in the Soviet attitude towards verification.

This paper argues that the breakup and democratization of the Soviet Union affords the perfect opportunity for true nuclear disarmament. The United States must take the lead in pursuing this goal, yet to date, it is in no hurry to ratify the SIIARI treaty. The United States is also on a course towards the abandonment of the ABM Treaty. Will the United States be the cause of future stumbling blocks in true nuclear disarmament?

Finally, The On-Site Inspection Agency (OSIA) needs to become a growth industry. OSIA can play an important role in the conversion of the Soviet military industrial complex and the downsizing of the military.

WordPerfect 5.1 was used to format this paper.

The rapidly unfolding events in the former Soviet Union demand immediate attention be drawn to this once superpower's nuclear arsenal. The entire process of disarmament and arms control must be aggressively pursued in a new light. The old verification stumbling block is a thing of the past. Now, both the United States and the former Soviet Union should make good on proposals of the last forty-five years to rid the world of nuclear weapons.

Verification is generally recognized as a necessary element of any significant agreement on arms limitations and reductions. Verification matters, for a long time, had been a stumbling block in the way of disarmament between the Soviet Union and the United States. However, the mid 1980s marked a fundamental change in the Soviet attitude towards verification. This paper will address both the Soviet and US approach to verification with an emphasis on the legal aspects of verification. The role of the United Nations will also be discussed as it attempted to strike a median between the two superpowers. A thorough analysis of these approaches will show that much work was completed between these two superpowers and the UN in the field of arms control and disarmament, but political differences prevented any substantial cuts from taking place. With the Cold War no longer standing in the way, there is no excuse for not moving forward. The final two sections will cover prospects for the future and recommendations to be initiated immediately.

Differing Views to Arms Control

The United States coined the term "arms control". It was meant to denote internationally agreed rules limiting the arms competition rather than reversing it. Arms control includes diverse measures to freeze, limit or abolish specific categories of weapons; to prevent certain military activities; to regulate the deployment of forces; to reduce the risk of accidental war; to constrain or prohibit the use of certain arms in war; or to build up confidence among states through greater openness in the military field. It was hoped that all this together would produce an international climate conducive to disarmament.¹

The whole process of arms control can seem very paradoxical. How do adversary nations sign binding covenants agreeing to manage their military competition? They do it in the belief that their individual security is better served than the alternative of an unrestrained arms race. Also, they share an overriding interest in lowering the probability of conflict. And finally, it is hoped that such treaties will lighten the burden of the cost of maintaining military establishments.²

¹Jozef Goldblat, Agreements for Arms Control: A Critical Survey, Stockholm International Peace Research Institute, 1982, p. xv.

²Francesco Cologero, Verification: Monitoring Disarmament, Westview Press, Colorado, 1991, p. 1.

Arms control, however, was blocked for many years by the different perceptions of the notion of security on the part of the Soviet Union and the United States. The word "security" translates to mean "absence of danger" in Russian; while it means "guarantee against danger" in English. With this in mind the Soviets supported complete disarmament while objecting to "arms control without disarmament". The United States was more interested in verifiable partial measures than in disarmament. The major problem during the Cold War was reconciling these two approaches.³

Provisions for the verification of compliance in arms control treaties became a central feature of negotiations because of the two approaches between these adversarial countries. Soviet studies of arms control and disarmament had cursory, if not dismissive, treatment of verification up to the early 1980s. Roland Timerbayev, a long-serving disarmament specialist in the Soviet Foreign Ministry, authored the first substantial Soviet study of verification issues in 1983. This book signalled that the Soviet Union was on the verge of revamping its stance on verification.⁴

The advent of "perestroika" brought about a marked increase in verification-related output of the Soviet Union. Soviet officials also went to great lengths to point out the change in their verification stance.⁵ As the Soviet Foreign Minister Eduard A. Shevardnadze put it, "At last our (the USSR's) allergy to verification has perished". He also remarked in New York in September 1988 that, "We do not try to hide the fact that for a long time our attitude to any kind of inspections, especially on-site inspections, was unenthusiastic".⁶

Mr. Shevardnadze's remarks to the UN Conference on Disarmament in August 1987 were also indicative of the change that was brought on by "perestroika". He stated that the USSR proposed the "widest assortment" of forms and methods of verification, both national and international.⁷

These represented significant changes in the Soviet attitude

³Sergey Rogov, Disarmament, Vol. XIII, Number 3, 1990, p. 10.

⁴David Scrivener and Michael Sheehan, Arms Control Verification: A Bibliography of Western and Soviet Sources, 1990, p. 7.

⁵Ibid.

⁶E.A. Shevardnadze, "Press-konferentsia E.A. Shevardnadze", Pravda, 25 Sept. 1988, pp. 4-5.

⁷E.A. Shevardnadze, "At the Conference on Disarmament", Current Digest of the Soviet Press, Vol. 39, No. 32, 1987, pp. 13-14.

to verification. In the past the Soviets had equated verification to espionage. Their excessive preoccupation with secrecy and adamant stand against intrusive procedures for verification made arms control negotiations difficult.⁸

On the other hand, the American pursuit of unrealistically stringent verification demands added to the problem. American negotiators became obsessed with the details of verification to the detriment of thought about the substance of prospective agreements. Some have even suspected that the United States undermined future arms control treaties by exploiting verification uncertainties and compliance problems.⁹

Soviet attitudes toward verification, while often at odds with those of the United States, did have a logic and coherence. Soviet leaders had as much mistrust of American intentions as the Americans did of the Soviets. The Soviets have understood the need for appropriate verification and control in arms control verification from the beginning. Historical record shows that the Soviet Union presented an elaborate proposal for monitoring and controlling a ban on nuclear weapon production as early as 1946. This proposal included the creation of an international control commission with extensive powers of inspection and analysis. The plan was unacceptable to the United States, because it called for the destruction of all nuclear weapons before the control machinery was to be created.¹⁰

The plan the United States presented at this time was rejected by the Soviets, because it would have protected the American nuclear monopoly for at least a few years. In this plan the United States would have retained its bombs while the Soviets would have been barred from trying to build the bomb.¹¹

This was the setting for the start of the arms race as we know it. The United States and the Soviet Union were not the only principal players pursuing disarmament and arms control immediately following World War II. The newly formed United Nations would play a significant role as the backdrop for these two future nuclear superpowers.

The United Nations

On June 26, 1945, the United Nations Charter was signed in San Francisco. Two months later, in August 1945, the dropping of the first nuclear bomb, confronted the United Nations with the

⁸Scrivener and Sheehan, p. 15.

⁹Ibid, p. 2.

¹⁰Allan S. Krass, "The Soviet View of Verification", in Verification and Arms Control, William C. Potter, ed., 1985, p. 37.

¹¹Coit D. Blacker and Gloria Duffy, International Arms Control: Issues and Agreements, 2nd ed., Stanford University Press, 1984, p. 98.

urgent task of establishing control over nuclear energy, and of outlawing the use of nuclear weapons.¹² The very first resolution to the United Nations, unanimously adopted by the General Assembly in January 1946, pledged "the elimination from national armaments of atomic weapons and of all other major weapons adaptable to mass destruction".¹³

This resolution established the UN Atomic Energy Commission, which was asked to draw up plans for the control of nuclear energy and for the elimination of nuclear weapons. Both the United States and the Soviet Union submitted plans in 1946.

The United States put forward what came to be known as the Baruch Plan under which an international atomic development authority would be created. This authority would be entrusted with managerial control or ownership of all atomic energy activities potentially dangerous to world security; with the power to control, inspect and license all other atomic activities; as well as with developing the beneficial uses of atomic energy.¹⁴

The Baruch Plan was rejected by the Soviet Union on the grounds that it would interfere with national sovereignty and internal affairs of states. It also put control before prohibition which was the wrong priority in the Soviets view.¹⁵

The Soviets submitted a draft convention which reversed the priorities. In the Soviet's counter-proposal of June 1946, prohibition and destruction of nuclear weapons preceded control. The production and use of atomic weapons were to be prohibited and all atomic weapons were to be destroyed within three months, whereupon an international system to supervise the implementation of these commitments would be established.¹⁶

The Western powers never accepted the Soviet order of priorities. They felt that prohibition is useless in peace-time, when no country uses nuclear weapons, and may not be observed in times of war. Plus, the Americans were not quite ready to give up the monopoly of nuclear weapons, that they had had since 1945.¹⁷

The Atomic Energy Commission failed to reach an agreement due to the deadlock between the two plans. The Soviet Union,

¹²Jules Moch, "A Short History of Disarmament", in Disarmament and Arms Control, ed. Carlo Schaerf and Frank Barnaby, 1972, p. 79.

¹³UN General Assembly, Resolution 1(1), 24 Jan. 1946.

¹⁴Goldblat, p. 13.

¹⁵Moch, p. 79.

¹⁶Goldblat, p. 13.

¹⁷Moch, p. 79.

which was then considerably less advanced than the United States in the atomic field, could not accept a plan that could lead to an American monopoly of atomic weapons. Equally, the United States found unacceptable the Soviet proposal for the abolition of atomic weapons before establishing an effective international control to ensure compliance with the ban.¹⁰

The Atomic Energy Commission adjourned indefinitely in 1950. The United States lost their nuclear monopoly with the Soviets exploding their first nuclear device on September 23, 1949.¹¹ The talks on general and complete disarmament had failed. The failure to provide a satisfactory answer to such a fundamental question as what would be the political order governing international relations in a completely disarmed world may have doomed the process from the start.¹²

The issue of verification and compliance would appear again in a United Nations forum - the Eighteen Nation Disarmament Committee. Soviet Foreign Minister Andrei Gromyko provided a statement to the Committee that set the tone of discussions. "We are not prepared to take anyone at their word... We ourselves do not ask that we be taken at our word."¹³ The history of these negotiations shows that achieving agreements on verification measures has often been as difficult as achieving agreement on the measures to be verified.¹⁴

The relationship between verification and an arms control agreement is important and needs to be examined before looking at further attempts by the United Nations in its quest for disarmament.

Verification allows for the successful operation of an agreement once it enters into force. By undertaking certain restricted measures as called for in an agreement, states expect to decrease the likelihood of war. These restrictive undertakings are measures that directly affect the national security of States. Nations are unlikely to agree to treaties or agreements which affect their national security without some assurance that other parties to the agreement are in fact abiding by its terms. Verification provisions contained in an agreement are means of providing that assurance.¹⁵

Adequate verification is defined differently by individual

¹⁰Goldblat, p. 14.

¹¹Moch, p. 79.

¹²Goldblat, p. 22.

¹³ENDL/PC.21, 16 April 1962, p. 27.

¹⁴Ellis Morris, The Verification Issue in United Nations Disarmament Negotiations, United Nations 1987, p. 1.

¹⁵Ibid.

countries. There is no universally accepted definition. Verification measures can change based on a nation's perceived threat to national security posed by the arms in question. For this reason, verification measures must be discussed on a case by case basis and developed to meet each nation's political perception of the security requirements of each arms control measure.²⁴

Verification has been defined as "the process of determining, to the extent necessary adequately to safeguard national security, that the other side is complying with an agreement".²⁵ Verification is a process of making political judgments as to whether the behavior of a nation is consistent with the arms control agreement in question.

Monitoring provides the technical information on which the judgments are based. These two terms "verification" and "monitoring" should not be confused. Monitoring is an intelligence function that is used to determine what military programs other states are pursuing. Monitoring is carried on regardless of any arms control agreements, by unilateral methods and through co-operative measures between two or more states. National technical means (NTMs) are the primary ways of monitoring. NTMs include reconnaissance satellites, radar and other electronic collection systems, aircraft photography and seismic detection. Monitoring can also be conducted through non-technical means such as spies, informants and information exchanges between governments.²⁶

Whereas monitoring can provide concrete technical information, verification is inherently subjective and judgmental. Verification judgment receives input not only from monitoring, but is also influenced by interpretations of what the treaty provisions actually mean, by perceptions of the other nation's capabilities and intentions, by impressions created by past behavior, and by the general state of international and domestic politics at the time.²⁷

Adequate verification involves the acceptance of a degree of uncertainty and risk, since 100 percent verifiability is seldom possible. Adequate verification has been described as "nothing more than the recognition that few things in life can be determined with absolute certainty, that levels of confidence and margins of error are inevitable, and that the important questions

²⁴Ibid.

²⁵Security and Arms Control: The Search for a More Stable Peace (Washington, D.C., US Department of State, June 1983), p. 68.

²⁶Stephen M. Meyer, "Verification and Risk in Arms Control", International Security, Spring 1984, p. 80.

²⁷Morris, p. 1.

are how high can we make the levels of confidence and how narrow the margins of error".²⁸

Another difficulty encountered in the negotiation of verification measures is that they affect national sovereignty as well as national security. Most verification measures by their very nature, involve some degree of intrusion into areas of national control. Acceptance of more intrusive measures, such as on-site inspection, require a greater surrender of national sovereignty.²⁹

Just as verification issues proved an impasse to the Atomic Energy Commission, they would also prove to be a stumbling block for the Eighteen Nation Disarmament Committee. The Eighteen Nation Disarmament Committee (ENDC) began meeting in March 1962, charged with the task of negotiating a treaty on complete and general disarmament.³⁰ Complete and general disarmament were never achieved, but the ENDC did have a number of successes which should be noted.

The achievements of the ENDC include the partial test-ban Treaty of 1963³¹ and the nuclear non-proliferation Treaty of 1967.³² In 1969 the ENDC was expanded to include twenty-two nations, reorganized and named the Conference of the Committee on Disarmament (CCD). The CCD negotiated the prohibition on the emplacement of nuclear weapons on the sea-bed³³ and the prohibition of the development, production and stockpiling of

²⁸Les Aspin and Fred M. Kaplan, "Verification in Perspective", in William C. Potter, ed. Verification and SALT (Boulder, Colorado, Westview Press, 1980), p. 177.

²⁹Morris, p. 2.

³⁰The members of the ENDC were Brazil, Bulgaria, Burma, Canada, Czechoslovakia, Ethiopia, India, Italy, Mexico, Nigeria, Poland, Romania, Sweden, the Soviet Union, United Arab Republic, United Kingdom, and the United States. France, while technically a member, did not participate.

³¹Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Underwater, signed 5 August 1963, entered into force 10 October 1963.

³²Treaty on the Non-Proliferation of Nuclear Weapons, signed 1 July 1968, entered into force 5 March 1970.

³³Treaty on the Prohibition of the Emplacement of Nuclear Weapons of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil Thereof, signed 11 February 1971, entered into force 11 May 1972.

bacteriological(biological) weapons and toxins.³⁴ In June 1979 the CCD was reorganized and named the Committee on Disarmament (CD). Its membership has expanded to forty nations and since 1984 it has been called the Conference on Disarmament.³⁵ The CD has not produced an arms control agreement, but has moved towards resolving some outstanding issues, particularly in the verification area.

Recent world events, such as the Persian Gulf War and the collapse of the Soviet Union, have renewed interests in the value of the United Nations. In the spirit of "new political thinking", the Soviet Union had reassessed the potential of the UN as a center for the collective search for solutions to specific international problems on the basis of observance of the balance of interests of all States.³⁶ Now some say the United States must also rediscover the UN.³⁷

Regrettably, the arms control work of the UN to this point in history has not halted the arms race or reduced the military potential of states. In many cases, the weapons prohibited have had little, if any, military importance, and the outlawed activities have never been seriously contemplated as methods of war.³⁸ Now, more than ever, is the time to globalize disarmament and demilitarize international relations with the aid of the United Nations.³⁹ This, in turn, means that a more effective system of collective security than the one embodied in the UN Charter would have to be elaborated.⁴⁰

One proposal to do just that sees the creation of a new organization of the UN, to be the keeper of a small number of nuclear weapons and means of delivery, with an international police force to make the cache invulnerable. This organization would serve as a transitional force in the process of de-nuclearizing the world. Its purpose would be to prevent a state, which suddenly disclosed the possession of a nuclear armory, from threatening its use as a political instrument of submission of

³⁴Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological(Biological) and Toxin Weapons and on Their Destruction, signed 10 April 1972.

³⁵Morris, p. 3.

³⁶Alexander N. Kalyadine, Disarmament, Vol. XIII, No. 4, 1990, p. 13.

³⁷John Ruggie, Disarmament, Vol. XIII, No. 4, 1990, p. 28.

³⁸Goldblat, p. 355.

³⁹Vladimir Petrovsky, International Affairs(Moscow), March 1991, p. 4.

⁴⁰Goldblat, p. 363.

another state.⁴¹

It should be clear that any substantial reductions in the number of nuclear weapons in the world - if this is truly a goal of world leaders - will require a greater role for such international organizations as the United Nations than has been the case in the past.⁴²

While the United Nations has failed to live up to the expectations of its founders, it can share the blame with two key members of its Security Council. It is only the warming of relations between the United States and the Soviet Union that has brought about renewed hope for the UN's increasing importance in international affairs. A brief look at each country's approach to arms control and disarmament is important to understand the significance of the opportunity we have today for ridding the world of nuclear weapons.

The Soviet Approach

Mikhail Gorbachev took over as general secretary of the Communist party of the Soviet Union in March 1985. His six years in command of Soviet foreign policy facilitated the dramatic changes in Eastern Europe and in arms control negotiations. He repealed the Brezhnev Doctrine by notifying Eastern European's communist leaders that Soviet military forces would not intervene to keep them in power. He became a willing partner to a wide number of important arms control negotiations, and his regime opened the door to on-site inspection in the USSR.⁴³

Driven by the need to channel scarce resources into rebuilding and reorienting the Soviet economy, Gorbachev was eager to reduce his military forces and their budgets through arms control and arms reduction agreements.⁴⁴ The Soviet concentration on military buildup resulted in undermining and distorting the economy, which was the true rockbed of the country's security and independence.⁴⁵

In his statement of January 15, 1986 Gorbachev, then General Secretary of the CPSU Central Committee, outlined a strategy for peace designed to rid the earth of all nuclear weapons by the end of this century, to deliver mankind from the threat of nuclear

⁴¹Calogero, p. 218.

⁴²Blacker, p. 343.

⁴³Barry Schneider, "1990: The Year of the Treaty", Defense and Diplomacy, Vol. 8, No. 6, June 1990, p. 22.

⁴⁴Ibid.

⁴⁵Genrikh Trofimenko, International Affairs (Moscow), March 1991, p. 77.

holocaust and ensure a peaceful future.⁴⁶ Gorbachev's strategy called for a three-stage plan for total denuclearization.⁴⁷ The first stage included the 50 percent reduction of strategic arms; the second stage included deeper strategic cuts, the elimination of all INF weapons, and reductions in the arsenals of states other than the United States and the Soviet Union; the third stage included other cuts necessary for complete global denuclearization by the year 2000.⁴⁸

Gorbachev's plan was crucial, because many saw it as the starting point for Soviet discussion in arms control and disarmament. Others will argue that the Soviet Union had made similar proposals during the past 70 years. Victor Israelyan states that steps toward real disarmament at the state level were laid down as far back as the emergence of the world's first socialist state on the international scene. On Lenin's instructions, Soviet Commissar for Foreign Affairs Georgy Chicherin declared at the very first meeting of the Genoa Conference in 1922 the intention of the Soviet State "to propose a general reduction of armaments and to support every proposal aimed at easing the burden of militarism provided that the armies of all countries were reduced."⁴⁹ G. Tunkin states that Soviet consistent promotion of peace and disarmament were a basic prerequisite underlying the emergence of the principle of disarmament in international law. The Soviets have always believed that disarmament was the only way of ensuring peace.⁵⁰

Besides its proposals at the Genoa Conference in 1922, the Soviet Union was among the first to sign the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare in 1925. In the late 1920s and early 1930s it tabled a draft convention on general, complete and immediate disarmament and then a draft convention on arms reduction at the preparatory commission of the World Disarmament Conference and at the Conference itself.⁵¹

⁴⁶A. Soyvetov, "Complete Elimination of Nuclear Weapons. The Soviet Programme", International Affairs(Moscow), No. 4, 1986, p. 12.

⁴⁷See "Gorbachev's Plan to Scrap Nuclear Arms" in Current Digest of Soviet Press, 19 Feb. '86, pp. 6-9.

⁴⁸Fred Chernoff, Defense Analysis, Vol. 6, No. 3, Sept. 1990, p. 236.

⁴⁹V.L. Israelyan, "Two Approaches to the Disarmament Problem", International Affairs(Moscow), No. 9, 1983, p. 52.

⁵⁰G.I. Tunkin, ed. "The Principle of Disarmament", International Law, 1986, p. 135.

⁵¹Soyvetov, p. 16.

The Leninist course towards general disarmament, of which the destruction of nuclear weapons was a major component, was continued by the Soviet Union after World War II. As noted earlier, the Soviets tabled at the United Nations in 1946, a draft international convention envisaging an obligation not to use atomic weapons under any circumstances, to forbid their production and storage, and to destroy all the manufactured and unfinished atomic weapons at that time. Soviet experts believe the rejection of the draft by the United States brought about the escalation of nuclear armaments.⁵²

Until the death of Josef Stalin, the Soviet Union had no real nuclear doctrine. Unable to acquire nuclear weapons of his own, Stalin rejected the notion that nuclear weapons carried any unique military significance. He viewed them as merely another weapon to be used in battle. Stalin's death in 1953, however, brought about a revolutionary change in Soviet military doctrine.⁵³

Nuclear weapons came to be seen as decisive implements of war. Soviet rocket forces were viewed as the key weapons in the struggle against US imperialism. The Soviet Union recognized the need to fight a nuclear war if the circumstances ever arose. This meant they had to acquire nuclear superiority, not just parity with, over its primary capitalist enemies and they must be prepared to fight and win a nuclear war.⁵⁴

Under Brezhnev, military power was valued as the prime means for ensuring Soviet security and promoting socialist influence around the world. By the early 1970s the Soviet Union had attained military-strategic parity with the United States, as well as, acquired global power projection capabilities.⁵⁵ The Soviets felt they were now equals of the US on this one measure of power; however, this military might came at a fearful price. In order to fuel the engine of this military machine, significant economic resources were diverted. The Soviet Union became a military giant with a crippled economy.⁵⁶ The Soviets had allowed themselves to be dragged into a race in strategic nuclear armaments which put an unjustified strain on their economy. No matter what the cost, Soviet leadership felt military strategic

⁵²Ibid.

⁵³Michael J. Mazarr, START and the Future of Deterrence, Macmillan, London, 1990, p. 132.

⁵⁴Ibid, p. 133.

⁵⁵Vidya Nadkarni, "Soviet Perceptions of the East-West Balance", Comparative Strategy, Vol. 10, No. 3, July-Sept. 1991, p. 247.

⁵⁶Ibid, p. 248.

parity with the United States had to be preserved.⁵⁷

The latter part of the 1980s saw a realization that defense spending was a disproportionate burden on the nation as a whole. Less would have to be spent on defense if any progress was to be made in improving an economy which had been in a state of stagnation for some time.⁵⁸ Gorbachev saw arms control diplomacy as a vehicle for change, as an opportunity to reorder priorities from military to civilian spending at home.⁵⁹

In the past, arms control was seen as a means to limit the advantages of the US.⁶⁰ From 1945 to 1985, Soviet arms control objectives sought a number of military, political and economic objectives, all within the overarching goal of avoiding war. These objectives were as follows:

1. Limit nuclear threats to the Soviet homeland.
2. Consolidate the gains of the Second World War.
3. Limit the military capability and political cohesion of Western alliances.
4. Restrain American advances in military technology.
5. Codify equal status with the US.
6. Build confidence and trust between East and West.⁶¹

Larger nuclear arsenals had done nothing to enhance the Soviet Union's perception of its own security. Therefore, the opposite approach of seeking stability through lower levels of nuclear weapons might work better.⁶² Since 1985, Gorbachev was not so concerned as Brezhnev was to use arms control to demonstrate military parity with the United States. His criterion for military force requirements was "sufficiency" rather than parity.⁶³ The Soviets began to make bold moves to ban and eliminate whole classes of nuclear weapons. They also brought about fundamental changes in their approach to the problem of monitoring compliance with disarmament obligations. The Soviet position concerning on-site inspections radically

⁵⁷Sergei Kortunov, International Affairs(Moscow), March 1990, p. 6.

⁵⁸WJR Gardner, "Soviet Nuclear Deterrence - is Minimalism Dead?", Royal United Services Institute for Defense Studies Journal, Autumn 1991, p. 33.

⁵⁹Jane M. Sharp, "Continuity and Change in Soviet Arms Control Policy", The Journal of Soviet Military Studies, Vol. 3, No. 1, March 1990, p. 9.

⁶⁰Gardner, p. 32.

⁶¹See Sharp, pp. 1-3.

⁶²Gardner, p. 32.

⁶³Sharp, p. 4.

changed.⁶⁴ Gorbachev was more willing than any previous leader to provide military data and to open up Soviet territory and military facilities to observation and inspection.⁶⁵

The Soviets now consider on-site inspections a major aspect of monitoring. The criteria for effective monitoring was defined by Gorbachev to insure: "infallible, unquestionable, reliable and scrupulous means exist for ensuring complete confidence that weapons are being eliminated, obligations concerning remaining weapons and permitted military activities are being observed, and bans are not being circumvented."⁶⁶

Such an attitude was not the case prior to Gorbachev's arrival. As much as the Soviets called for "general and complete disarmament" they lacked any credibility when the requirements of verification of compliance came into play. It would take an overhaul of the Soviet system before such requirements could take place in the Soviet Union.⁶⁷

Soviet writings on international law recognize the feasibility of provisions for territorial arms inspection and admit the possibility of foreign nationals performing this function. However, it was more likely they would oppose territorial arms inspection on international grounds. The common excuse being that the proposed activities of an arms inspectorate would interfere with the domestic affairs of the Soviet Union.⁶⁸

The Soviets viewed arms control as facilitating espionage against the Soviet camp.⁶⁹ Until recently, the primary obstacle to the conclusion of an arms control agreement was the Soviet leadership's reluctance to permit foreign inspectors to operate on Soviet territory. They expressed this reluctance in international law terms, claiming that inspection activities would constitute an undue interference in the domestic affairs of the Soviet state. The international law principles of noninterference and state sovereignty expressed very fundamental

⁶⁴Alexander N. Kalyadine, Disarmament, Vol. XIII, No. 4, 1990, p. 12.

⁶⁵Sharp, p. 5.

⁶⁶As quoted from Pravda, 7 August 1987 by Kalyadine, p. 12.

⁶⁷Zigurds L. Zile, Robert Sharlet, and Jonathan Love, The Soviet Legal System and Arms Inspection: A Case Study in Policy Implementation, New York, 1972, p. ix.

⁶⁸Zile, p. 14.

⁶⁹Thomas W. Wolfe, Soviet Influences on an Arms Control Environment, RAND Study P-2995, p. 1

concerns of Soviet leadership.⁷⁰ Conveniently relying on international law was easier than admitting to Soviet secrecy laws and a pervasive suspicion of foreigners.⁷¹ It also allowed for the continuous and intensive process of inculcating in the Soviet population a high respect for the value and importance of armed might.⁷² Allowing inspection activities would run counter to this emphasis.

The Soviets also called upon the UN Charter when dealing with Western insistence for more intrusive verification. They saw the Final Document of the First Special Session of the UN General Assembly on Disarmament of 1978 as the authoritative and the most consensual source for treaty compliance.⁷³ They believed a key prerequisite for any disarmament agreement is the acceptance of the premise that the agreement is based on the principle of undiminished security of states as put forth by the Final Document. This principle states: "The adoption of disarmament measures should take place in such an equitable and balanced manner as to ensure that no individual state or group of states may obtain advantages over others at any stage. At each stage the objective should be undiminished security at the lowest possible level of armaments and military forces".⁷⁴

The Soviets believed the principles set forth in the Final Document constitute the single legal basis of any verification system that is devised in contemporary international relations. Verification should correspond to the principle of legitimacy which means that verification measures must not harm the security of either side, endanger their economic and social development, or be of a discriminatory nature. Verification should correspond to the principle of effectiveness which means the verification system agreed upon must ensure timely detection of violations which may endanger both the supreme state interests of the parties to an agreement as well as the fate of such an agreement itself. Verification should correspond to the proportionality principle where the scope of verification corresponds to the disarmament measures being taken, be they freeze, limitation, reduction or elimination. Verification should correspond to the principle of universality which means the equal right of every

⁷⁰Zile, p. 308.

⁷¹Ibid.

⁷²Ibid, p. 56.

⁷³B.R. Tuzmukhamedov, "Verification of Disarmament", Perestroika and International Law, A. Carty and G. Danilenko, eds., 1990, p. 49.

⁷⁴Quoted from paragraph 29 of the Final Document by Victor L. Israelyan, "Arms Limitation and Disarmament Talks: Soviet Approach", 28 McGill Law Journal, 1983, p. 758.

party to an agreement to verify the observance of the agreement is observed. Finally, verification should embody the principle of complementarity of various verification means and methods which are employed either simultaneously or stage-by-stage.⁷⁵

In addition to international law and the UN Charter, the Soviets based their concern for arms control and disarmament on their constitution. Article 28 of the Constitution of the USSR stated clearly that Soviet foreign policy is aimed at "achieving universal and complete disarmament and consistently implementing the principle of the peaceful coexistence of states with different social systems".⁷⁶

The Soviets blamed the failure of disarmament on the West. They saw the arms race in direct contradiction to the basic idea of the United Nations Charter and that of international law.⁷⁷ They, in particular, faulted the United States for using verification matters as the main pretext for not undertaking any substantial steps in disarmament. The Soviets accused the West of purposely proposing excessive and unacceptable verification requirements, thereby ensuring that negotiations were undermined.⁷⁸ Most notable was the attempt to reduce verification to one of its forms - on-site inspection. The Soviets saw this as putting forward the solution of verification problems as a condition sine qua non for negotiations on substantive issues of disarmament, and ignoring approaches to verification, which had already won broad international approval.⁷⁹

The provisions of the Final Document, in the Soviet view, clearly showed that verification issues should be discussed and settled simultaneously and in close connection with the concrete problems of arms limitation and disarmament under consideration rather than as separate issues.⁸⁰ By playing up the verification aspects the American side was portrayed as seeking to cover its intentions and continuing to pursue the arms

⁷⁵A. Stanislavlev and B. Tuzmukhamedov, "This Seemed Unattainable", International Affairs (Moscow), No. 3, 1988, pp. 29-30. A discussion of the Final Document of the First Special Session on Disarmament.

⁷⁶Israelyan, McGill Law Journal, p. 757.

⁷⁷Tunkin, p. 135.

⁷⁸Tuzmukhamedov, p. 50.

⁷⁹V.L. Israelyan, "For Effective Control of Real Disarmament", International Affairs (Moscow), No. 3, 1984, p. 150.

⁸⁰Ibid.

race.^{a1} Such attempts to use verification issues as grounds for avoiding agreements on arms limitations and disarmament were seen as "immoral and sanctimonious" by the Soviets.^{a2}

As often the case, the verification concept advanced by the US was usually lopsided allowing only the US to check whether the other side complies with the accords and did not take into account the legitimate concerns of the partner. This is illustrated by the position taken at the negotiations to prohibit chemical weapons. The United States put forth a so called double standard in relation to inspection on request. Demanding on the one hand that the right to conduct inspections at state enterprises and installations be made legally binding, the American delegation on the other hand made an effort to introduce provisions in the future convention which would make it possible to exempt from on-site inspection the installations owned by private companies and transnational corporations, using as a pretext the necessity to protect commercial and industrial secrets. In this way, the United States would deliberately limit the verification over a considerable segment of the powerful chemical industry in capitalistic countries while at the same time placing under control all the chemical enterprises in socialist states.^{a3} (No doubt an early attempt to get the Soviets to move to a market economy!!!)

In 1986 the Soviet Union announced that it was willing to accept international on-site inspection of the destruction or conversion of production facilities of chemical weapons. Prior to this limited concession, the Soviet Union had consistently rejected any forms of intrusive international verification measures, including the establishment of any international agency for verification.^{a4} This fundamental change in the Soviet attitude towards verification was an integral part of drastic reforms, taking place in the domestic and foreign policies of the Soviet Union.^{a5} The problem of verification was no longer on the agenda as some kind of obstacle to agreements.^{a6}

Some in the West say the Soviets were "scared" into this new approach by the escalation of the arms race by the United States, especially by its space plans. The Soviets felt it was

^{a1}Israelyan, "Two Approaches...", p. 58.

^{a2}R.M. Timerbayev, "A Soviet Official on Verification", Bulletin of the Atomic Scientists, Vol. 43, No. 1, Jan.-Feb. 1987, p. 8.

^{a3}Stanislavlev, p. 26.

^{a4}Morris, p. 95.

^{a5}Tuzmukhamevdov, p. 51.

^{a6}Timerbayev, p. 8.

consistent with "new political thinking" as sent forth by Gorbachev. The new Soviet approach was motivated by the high sense of responsibility for the destinies of the all nations.⁸⁷ It was in this regard that the Soviets assumed in 1982 a unilateral commitment to refrain from first use of nuclear weapons; in 1983, also unilaterally, it imposed a moratorium on launching antisatellite weapons; in 1985, on deploying medium-range missiles in Europe; and finally, in that same year, on nuclear weapon tests.⁸⁸

This "new political thinking" called for a Soviet reorientation in its approach to dealing with its international environment. Concrete manifestations of Gorbachev's new orientation included their withdrawal from Afghanistan, their agreements to the on-site inspection provisions of the Intermediate-range Nuclear Force (INF) Treaty, and a decrease in military aid to Third World countries.⁸⁹ In more recent times, it served as the foundation for the CFE and START Treaties.

Gorbachev had gone out of his way to make a number of unilateral or asymmetric concessions to obtain arms control agreements. In the INF agreement, the Soviets gave up more than twice as many missiles and three times as many warheads as the US; in the CFE treaty they gave up tens of thousands more tanks, artillery pieces, and military vehicles. And in START, not only did the Soviets agree to get rid of more deliverable warheads than the US, they had fewer to begin with.⁹⁰

The United States declared in the past its adherence to the idea of liquidating nuclear weapons. The Soviet Union had offered the opportunity to do just that. Yet, the new Soviet ideas were not acted upon immediately, and usually drowned in a quagmire of all kinds of questions, doubts and evasions of answers to the clear-cut proposals.⁹¹ Washington has shown a negative attitude to disarmament in the past as manifested in its refusal to ratify some treaties and accords signed earlier, such as the SALT II Treaty.⁹² Many believe the same will happen with CFE and START as ratification is continually put off to a later date. These agreements were not to begin moving through the congressional labyrinth in early 1992. A lot in the world

⁸⁷Sovyetov, p. 16.

⁸⁸Ibid, p. 17.

⁸⁹Gloria Duffy and Jenniter Lee, "The Soviet Debate on Reasonable Sufficiency", Arms Control Today, October 1988, p. 19.

⁹⁰The Bulletin of the Atomic Scientists, Nov. 1991, p. 16.

⁹¹Sovyetov, p. 20.

⁹²Israelyan, "Two Approaches...", p. 57.

could happen before either treaty is ratified.⁹³

The former Soviet Union is also calling for an international verification mechanism under the aegis of the UN. Verification as a part of disarmament is a global problem that requires an international solution.⁹⁴ The UN must become the single center for the coordination of efforts for security through disarmament.⁹⁵

The U.S. Approach

The Soviets saw the American approach to arms control in the following manner. Continued armament should not be impeded by arms control. Soviet conduct worldwide was the cornerstone to American preparedness to negotiate with the Soviets on the elaboration of arms control measures. The Americans sought to reduce the largest possible amount of weapons of a potential enemy and, if possible, to leave the US arsenals untouched. The priority condition to any agreement was effective verification. A cut in some types of weapons should give the U.S. the right to build up weapons of other types.⁹⁶ In essence, the American position can be summed up by what Hans J. Morgenthau wrote in 1975: "Arms control is not disarmament at all, it is a mere regulation of the arms race."⁹⁷

In regards to arms limitations talks, the Soviets saw the Americans as creating a "technical" deadlock by their insistence for on-site inspection. Any time the Americans did not want to reach concrete agreements they would emphasize such verification measures, shifting the blame for that on the USSR which allegedly had displayed intractability in verification matters.⁹⁸

Such was the case when Gorbachev came to power in the Soviet Union in 1985. Ironically, the Soviet Union had finally produced a leader in favor of a liberal arms control agenda after the United States had already turned to a conservative president, Ronald Reagan, an avowed skeptic about the utility of arms

⁹³The Bulletin of the Atomic Scientists, November 1991, p. 5.

⁹⁴Stanislavlev, p. 32.

⁹⁵O.A. Grinyevsky, "The Verification of Arms Control, Disarmament Agreements and Security", Disarmament, Vol. 11, No. 2, Summer 1988, p. 18.

⁹⁶V. Abarenkov, "US Arms Control Policy: Words and Reality", International Affairs(Moscow), No. 8, 1982, p. 69.

⁹⁷The Dynamics of the Arms Race, ed. by D. Carlton and C. Schaerf, London, 1975, p. 57.

⁹⁸Abarenkov, p. 72.

control.⁹⁹ It was Reagan who said in 1978 that "the Soviet Union cannot possibly match us in an arms race".¹⁰⁰ Such an attitude would spur the arms race to new heights.

The history of the nuclear age was dominated by the adversarial relationship between the United States and the Soviet Union. Each sought to assure its own security through the strength of their own nuclear forces.¹⁰¹ Over 40 years they deterred the other from attacking through their own ability to destroy the attacker in retaliation. They found themselves in a position of "mutual assured destruction".¹⁰²

How the United States incorporated nuclear weapons into American military strategy was never a simple matter. The complexities grew exponentially as the Soviets acquired a nuclear arsenal of their own and as new technological advances occurred or became feasible, such as thermonuclear weapons, intercontinental ballistic missiles, antiballistic missiles, tactical nuclear missiles, MIRVed (multiple independently targeted reentry vehicle) missiles, neutron bombs, cruise missiles, ballistic missile-equipped submarines and missile accuracies capable of killing hardened sites.¹⁰³

The official rationale for the design of US nuclear forces was the idea that deterring the Soviet Union from a potentially successful conventional attack against Western Europe could only be accomplished by an explicit threat that the US would be prepared to respond to such an attack by initiating the use of nuclear weapons and by escalating if necessary to global nuclear war.¹⁰⁴ In other words, they were stimulated by fear of Soviet expansion.¹⁰⁵

Purely economic concern was another rationale. The US and its NATO allies would have to come up with 96 divisions of conventional forces to match the Soviet bloc forces. This would have been far too costly and in 1954, NATO decided to deploy tactical nuclear weapons in order to compensate for its weakness

⁹⁹Schneider, p. 23.

¹⁰⁰Arms Control Association, Arms Control and National Security, Washington, D.C., 1989, p. 33.

¹⁰¹Arms Control Association, p. 6.

¹⁰²Ibid.

¹⁰³Col. Lloyd J. Matthews, ARMY, December 1991, p. 52.

¹⁰⁴Calogero, p. 227.

¹⁰⁵John N. Hazard, American Journal of International Law, Vol. 75, 1985, p. 845.

vis-a-vis the Soviet bloc in conventional arms.¹⁰⁶

From the early 1950s to the late 1970s, US strategic nuclear deterrent strategy kept searching for a sustainable balance among credible deterrence, affordability, moral acceptability, and other complicating factors. In the process, the declared strategy of the United States evolved, through several iterations, from "massive retaliation" to "flexible response". More recently, the search has turned to at least some contemplation of "minimum deterrence".¹⁰⁷ Yet, the United States still maintains its pledge to initiate the use of nuclear weapons in response to Soviet conventional aggression in Europe even to this day.¹⁰⁸

It is now argued that there is no chance at all of a successful conventional forces attack by the former Soviet Union across Europe, therefore this first strike pledge is a useless anachronism.¹⁰⁹ Some find it hard to believe that the United States, the world's most powerful country, needs to threaten to use nuclear weapons first in order to meet its security needs, but other nations must forego them in the interests of international security. They feel its time for President Bush to announce that the United States will never initiate the use of nuclear weapons and that our nuclear devices exist only to deter others from getting and using their own.¹¹⁰

Current US nuclear policy is directed toward three objectives: deterring conflict, controlling escalation should deterrence fail, and terminating conflicts on terms favorable to US political objectives.¹¹¹ Some feel that the objective fact of Soviet or Russian strategic nuclear capabilities, not current political variables or expectations, must be the key guide to US force planning for the future.¹¹²

The United States continues to maintain its stance on strict verification in arms control agreements. The US believes that on-site inspection, the most intrusive methods of verification, is essential to disarmament. It has explained that its insistence for on-site inspection was at least in part due to differences in political systems. In a statement to the Eighteen

¹⁰⁶Calogero, p. 206.

¹⁰⁷Larry D. Welch, "U.S. Strategic Forces After START", Global Affairs, Summer 1991, p. 25.

¹⁰⁸Mazarr, p. 107.

¹⁰⁹Calogero, p. 228.

¹¹⁰Morton H. Halperin, New York Times, 1 Oct. 1991, p. 23.

¹¹¹Mazarr, p. 1.

¹¹²Welch, p. 31.

Nation Disarmament Committee the United States said, "The United States knows that US underground tests in violation of a publicly proclaimed international treaty could not be concealed from a free press in a free country. The United States has no similar assurances with regard to the Soviet Union".¹¹³

The United States saw its arms control negotiations with the Soviet Union differing from its arms control negotiation with all other states for three reasons: (a) the Soviet Union was seen as an expansionist nation, whereas the state system as it existed was accepted by most other countries; (b) Soviet territorial expansion was backed by an enormous military forces; and (c) the Soviet Union did not accept the binding authority of the United Nations Charter as a codification of international law.¹¹⁴

The United States constructed its approach to nuclear arms negotiations with the Soviet Union on a simple principle: the goal of the negotiators must be equality in deterrence. The agreed limits on nuclear arsenals must make impossible any Soviet nuclear blackmail based on the plausible threat of a successful aggressive first strike.¹¹⁵

Some experts believe the United States wastes its time in pursuit of arms control. They feel the strategic arms control process has not contributed at all to the ability to prevent war.¹¹⁶ Arms control simply does not work as advertised as far as they are concerned. They point to the historical experience of the 1920s and 1930s to demonstrate the failure of formal arms limitation agreements. They find that such agreements are negotiable and sustainable only when the political context is usually friendly and when war is nowhere in sight. These agreements cannot help prevent war, promote stability, or achieve other lofty objectives. They lead to treaty-compatible, treaty-evasive or treaty-avoiding weapon systems which make sense primarily with reference to arms control and not to prospective military utility for national geostrategic needs. Finally, they provide irresistible incentives for non-democratic countries to cheat. In the eyes of these experts, such agreements allowed Germany and Japan to build huge military machines.¹¹⁷

Experience and evidence has shown that arms control has ill served American national security as far as some are concerned.

¹¹³Morris, p. 96.

¹¹⁴Eugene V. Rostow and Mary Elizabeth Hoinkes, "The United States Approach to Negotiating Arms Limitation Agreements with the Soviet Union", 28 McGill Law Journal, 1983, p. 750.

¹¹⁵Ibid, pp. 753-754.

¹¹⁶Colin S. Gray, "Destination Unknown: From SALT to START", Strategic Review, Spring 1991, p. 36.

¹¹⁷Ibid, p. 41.

They believe it is a great myth that arms control reduces the size of superpower nuclear arsenals and creates stability. Strategic nuclear weapons deployed by the Soviet Union between 1970 and 1985 increased by 533 percent, from 1,876 to 9,987. The increase registered by the United States was 275 percent, from 4,000 to 10,174. Richard Pipes's comment "If this is arms control, it might be interesting to experiment for a while with an honest arms race" is used to show the irony of this myth.¹¹⁰

These same doubters of the value of arms control further comment that the Soviets build missiles in response to its perceived military necessities, not in congruence with agreements with the West.¹¹⁹ They find it difficult to think of an arms control treaty, with the possible exception of the nuclear non-proliferation treaty, that the Soviet Union has not violated. Such Soviet non-compliance and circumvention meant that the treaties and agreement at issue had failed to accomplish the habits of obedience and control of the Soviet arsenal that they were designed, on the US side, to achieve.¹²⁰ While congressional action can make politically-binding commitments legally binding on the US government under US law, the Soviets did not have the same obligation. The Soviets would generally abide by the precise terms of an arms control treaty, as required by the general norms of international law (such as *pacta sunt servanda*), but would also take advantage of any loopholes in a such a treaty in search of possible advantages for Soviet foreign policy.¹²¹

Other experts continue to see the value of arms control, but in a new light to reflect the end of the Cold War. The old framework for arms control is seen as obsolete. They say the dogma of "mutual assured destruction" should also be tossed aside with the Cold War antagonisms.¹²² A new look needs to be taken regarding the value of strategic defenses. The US no longer faces a rational adversary. Its enemies today are instability and unpredictability. For this reason, some feel strategic defenses can contribute to crisis stability. They believe these defenses become even more important as strategic

¹¹⁰Colin S. Gray, "Nuclear Delusions", Policy Review, Summer 1986, No. 37, p. 48.

¹¹⁹Ibid, p. 49.

¹²⁰Ibid, p. 51.

¹²¹Jeffrey R. Boffa, "Soviet Views of Arms Control Treaties: Contradiction and the Process of Resolution", Temple Int'l & Comp. L.J., 223, 1988, p. 235.

¹²²Edward L. Rowny, "Arms Control and the Future of U.S. - Soviet Relations", Strategic Review, Winter 1991, pp.17-18.

offensive reductions take place.¹²³

Many nuclear arms experts in the US and members of Congress now believe the ABM Treaty has outlived its usefulness. They feel it is time the United States and the former Soviet Union agree to get beyond this treaty and create a strategic balance based a survivable, effective strategic defenses.¹²⁴

Colin S. Gray, a leading American expert in the field of defense policy and strategic theory, introduced a recent work of his with a statement by Louis J. Halle to sum up the frustration of arms control. It follows:

In no other organized endeavor of the nations of mankind has so much work been expended to so little effect as in the efforts to achieve arms control. We must suppose that there has been something fundamentally wrong at the conceptual level to account for so consistent a failure on so large a scale over so long a period.¹²⁵

What was fundamentally wrong was that the two superpowers were negotiating arms control while simultaneously engaging in a vigorous race to increase and to improve the same weapons the negotiations were supposed to control. It is common knowledge that the pace of technological development rushed ahead of the pace of negotiations.¹²⁶

Future Prospects

A UN Governmental Expert Group that Inga Thorson chaired was charged with carrying out a comprehensive study on the relationship between disarmament and development. The report, submitted to the General Assembly 10 years ago in 1981, showed that both the United States and the Soviet Union ran the grave risk of allowing their economies to falter by continuing the pursuit of an arms race. The analyses showed convincingly the devastating effects on the economy caused by devoting human, material and financial resources to the arms race. Two points were drawn from the conclusions. First, a fundamental choice had to be made. The world could either continue to pursue the arms race with vigor and accept the heavy burden that it places on the economy, or, it could move consciously toward a more sustainable international economic and political order. It could not do both. Second, there is a mutual self-interest among all countries in effective disarmament, irrespective of economic and

¹²³Ibid, p. 22.

¹²⁴Ibid, p. 24.

¹²⁵Colin S. Gray, "START II: "Good" Arms Control?", Global Affairs, Summer 1991, p. 47.

¹²⁶Inga Thorson, "Negotiating Arms Limitation Agreements: Non-Aligned Perspectives", 28 McGill Law Journal, 1983, p. 780.

social systems, or levels of economic development.¹²⁷

One could wonder if maybe Gorbachev got hold of this report and took it to heart for his "new political thinking". As to the fundamental choice, both the US and the Soviet Union were late arriving to the conclusion about the burdens of the arms race. The former Soviet economy is shattered; the US economy is in serious trouble. The second point is taking awhile to sink in as well.

This mutual self-interest of all countries in effective disarmament needs to be brought to the forefront. It is beyond doubt that the Cold War has ended. It is time to revive some of the traditional norms and practices of international law that were suppressed during the Cold War.¹²⁸

International treaties need to be honored, most especially the Nuclear Non-Proliferation Treaty. Evidence from the history of the arms race points to the instability of nuclear deterrence. At no time was either superpower satisfied that what it had in its nuclear arsenals was sufficient to give it security.¹²⁹

Some are calling for a minimum deterrent, but it is very doubtful how long it will stay minimum with countries always thinking of ways of making their own weapons more effective, and those of the other side more vulnerable. The Non-Proliferation Treaty provides the true solution. According to article VI of the Treaty, the nuclear weapons states undertook to pursue the aim of nuclear disarmament, as part of the ultimate objective of general and complete disarmament. There is no provision in the Non-Proliferation Treaty for a permanent retention of nuclear armaments.¹³⁰

The retention of nuclear weapons does not guarantee peace in the world. The elimination of nuclear weapons is a step in the right direction. It cannot happen overnight. The most efficient way to achieve arms reduction is the complete elimination of weapons in a given category, one at a time, as was done by the INF Treaty.¹³¹

There are those who will argue that the practical difficulties of achieving a denuclearized world would appear to make that goal close to impossible. There would be problems getting countries like Britain, France, China, India and Israel, as well as other possible clandestine nuclear weapons states to

¹²⁷Ibid, p. 781.

¹²⁸W. Michael Reisman, "International Law After the Cold War", The American Journal of International Law, Vol. 84, 1990, p. 861.

¹²⁹Calogero, p. 208.

¹³⁰Ibid, p. 211.

¹³¹Ibid, p. 212.

agree to a multilateral framework for nuclear disarmament and rigorous inspections.¹³² Senator Sam Nunn, chairman of the Senate Armed Services Committee, properly concluded: "We are on the verge of either having the greatest destruction of nuclear weapons in the history of the world or the greatest proliferation of nuclear weapons, nuclear materials and the scientific know-how to make these weapons."¹³³ It will take the nations of the world working in concert to prevent the latter.

Others feel that the leaders of the former Soviet republics have not written off nuclear weapons as an element of political prestige and as a deterrent to war.¹³⁴ As the West seems to be moving towards abandoning its first strike nuclear doctrine, these independent republics, enamored with the diplomatic and political clout that possession of nuclear weapon confers, could take up first strike as their own.¹³⁵ The prospect of a Soviet nuclear civil war cannot be dismissed.¹³⁶ There is also the fear that some Soviet scientists and weapons designers will sell their skills to foreign countries eager to become nuclear powers.¹³⁷ For these reasons Secretary of State James A. Baker stated, "First and foremost, we must help the Soviets destroy and control the military remnants of the cold war."¹³⁸ Congress also voted to put up \$400 million to help the USSR and its republics dismantle nuclear weapons.¹³⁹ It will take a lot more money for the job to be done correctly and the United States plans to hold a conference with other Western nations to work out a plan to fund such an endeavor.

Before that meeting takes place, Washington and Moscow should move quickly to implement some of the measures from the START treaty, regardless of its ratification. The old obstacles to verification are no longer in the way. These measures include: 1) data exchange: this calls for precise information on numbers, locations and characteristics of weapons; 2)

¹³²Chernoff, p. 237.

¹³³George J. Church, "Soviet Nukes On The Loose", Time, December 16, 1991, p. 40.

¹³⁴Leon Sloss, Washington Quarterly, Autumn 1991, p. 146.

¹³⁵Reisman, p. 865.

¹³⁶Barry Schneider, "The First Nuclear Civil War?", Defense and Diplomacy, July/August 1991, p. 7.

¹³⁷Church, p. 41.

¹³⁸New York Times, 13 Dec. 1991, excerpts from Baker's speech at Princeton University.

¹³⁹Church, p. 41.

notification: this includes information on the movement of missiles, bombers and submarines, especially critical now as each republic claims independence and control of weapons on their territory; and 3) on-site inspection: there is no substitute for having American inspectors on the ground, able to see for themselves that the Soviet nuclear arsenal is secure.¹⁴⁰ The US has been using the on-site inspection card for 40 years. Now is the time to play it or see if we were really bluffing

The INF Treaty proved that the US had a hard time coming up with properly trained, language-qualified personnel for the 133 Soviet INF sites. Add to that hundreds of START and CFE sites, plus the undeclared sites east of the Urals with tactical nuclear weapons and the load could well prove unmanageable for the US alone.¹⁴¹ And the cost will be high. The US On-Site Inspection Agency for INF, which employs 300 people, has an annual budget of \$83 million.¹⁴²

A final note on a possible obstacle to true nuclear disarmament should be noted. This is the American proposal to amend the Antiballistic Missile (ABM) Treaty. The usual reason given is to protect the United States from an accidental or unauthorized nuclear attack. The US has no deployed strategic defenses to defend against ballistic missile attack, though the treaty does allow a single site armed with 100 fixed launchers. The US dismantled its single system, considering the operational costs more than its very limited protection was worth.

There are two schools of thought on the impact of strategic defenses on arms control: 1) defenses are inherently destabilizing, thereby leading to increases in strategic offensive forces; and 2) defenses can enhance strategic stability by improving the survivability of strategic retaliatory forces and their command and control elements.¹⁴³

The ABM Treaty failed to lead to the hoped for cuts in strategic offensive forces, but it has prevented an arms race in defensive forces. And it is the foundation for cutbacks in offensive strategic arms as seen in the START Treaty. In order to continue to move ahead in strategic arms reductions, the ABM Treaty should not be abandoned. It is hard to imagine even the former Soviet republics eliminating strategic nuclear forces while the United States is deploying a major strategic defense.

While recent events may have shown that the Soviets are open

¹⁴⁰Richard Burt, Los Angeles Times, 29 Sept. 1991, p. M-5.

¹⁴¹Mark M. Lowenthal, "The Politics of Verification: What's New, What's Not", Washington Quarterly, Winter 1991, p. 126.

¹⁴²Brigitte Sauerwein, "CFE: The Story So Far", International Defense Review, 1/91, p. 37.

¹⁴³Wayne Schroeder, "Strategic Defense and Arms Control", Comparative Strategy, Vol. 10, No. 1, Jan-Mar 1991, p. 83.

to US suggestions on the values of a limited defense system, they lack the money for any such system.¹⁴⁴ The post-Soviet leadership has a low-cost offensive response to unilateral US defense deployments available, all of which would increase the strategic threat to the United States. Their simplest and lowest cost response would simply be to not carry out the 50 percent reduction in warheads on its ICBM force mandated by START.¹⁴⁵

The theoretical excuse of an accidental or unauthorized launch being used for abandoning the ABM Treaty is starting to sound like the demand for on-site inspection. Is the United States truly interested in true nuclear disarmament or are we looking for excuses to spend more money on expensive weapons that do absolutely nothing for our security? The Soviet Union is in a far better position than the United States to make good on its Cold War proposals of nuclear disarmament, for they have no money and no desire to carry on this silly game. A far wiser way to prevent accidental use is to get on with drastic reductions in the nuclear arsenal.

As the world moves beyond the Cold War, the superpowers should move away from bilateral accords such as START, which merely channel the arms race in different directions and move towards multilateral accords that call for worldwide demilitarization as called for by the Non-Proliferation Treaty. This treaty itself indicates what is needed to end the arms race - a comprehensive multilateral disarmament agreement. The breakup and democratization of the Soviet Union affords the perfect opportunity to make this happen.¹⁴⁶

Recommendations

A recent study published by the Center for Science and International Affairs at Harvard University calls for the United States "to think and act boldly" in making adjustments to the dramatic changes in the nuclear situation in the former Soviet Union. This study's bold vision calls for a complete denuclearization of the former Soviet Union with the United States footing the bill and later providing for the security of this area.¹⁴⁷

Another recent study in Columbia Law Review calls for

¹⁴⁴Neil Munro, Defense News, 16 Sept 1991.

¹⁴⁵Spurgeon M. Keeny, Jr., "Limited ABM Defense: Dangerous and Unnecessary", Arms Control Today, October 1991, p. 18.

¹⁴⁶James Raffel and Brian D'Agostino, "Time for an Old Blueprint", The Bulletin of the Atomic Scientists, November 1991, p. 32.

¹⁴⁷Kurt M. Campbell, Ashton B. Carter, Steven E. Miller, and Charles A. Zraket, Soviet Nuclear Fission (Center for Science and International Affairs, John F. Kennedy School of Government, Harvard University, November 1991).

"carrying a big carrot" when working towards disarmament. The authors of this study believe that international agreements linking "multilateral disarmament and economic development" offer the most promising way towards disarmament and security in the international environment.¹⁴⁸ The developed states of the world, such as the United States, with their relative wealth have always spent freely in their pursuit of national security. The breakup of the Soviet Union now presents an opportunity to achieve this goal of security in a new cheaper, safer way.¹⁴⁹

Both studies are on track in that the United States is identified as the country which can influence most the future outcome in the former Soviet Union, especially in regards to the future of its nuclear arsenal. Yet, the U.S. seems to be dragging its feet in this field.

While President Bush's unilateral initiatives for the reduction of nuclear weapons should be applauded, he has failed to raise the all-important topic of how destruction of warheads is to be verified. Many in his administration feel a mere "exchange of information" will suffice to establish the whereabouts and eventual destruction of about 15,000 nonstrategic nuclear weapons deployed throughout the former Soviet Union.¹⁵⁰ It has even been hinted that providing for verification now could only "slow the process down."¹⁵¹

Such an attitude is irresponsible. The greatest threat to U.S. security is the proliferation of weapons of mass destruction. The United States now has the opportunity and moral obligation to insure that a potential source of this proliferation is accounted for and destroyed. Proper verification will bring immediate benefits. It can make it more difficult for new republics or dissident factions to gain control of nuclear weapons on their territory. It locks the Russia Federation into a decision to make good on its pledges to match U.S. cuts. And, most importantly, it sharply limits the possibility of sales of nuclear materials recovered from Soviet warheads to undesirable countries or organizations.¹⁵²

While I do not believe the United States will succeed in

¹⁴⁸David A. Koplow and Philip G. Schrag, "Carrying a Big Carrot: Linking Multilateral Disarmament and Development Assistance," Columbia Law Review (vol. 91, June 1991) pp. 993-1059.

¹⁴⁹Ibid, p. 1058.

¹⁵⁰Christopher Paine and Thomas B. Cochran, "So Little Time, So Many Weapons, So Much To Do," The Bulletin of the Atomic Scientist (January/February 1992) p. 13.

¹⁵¹Ibid, p. 16.

¹⁵²Ibid.

obtaining the total disarmament of the former Soviet Union as argued for in the above Harvard study any time soon, I do feel there are immediate steps that need to be taking that are just as bold.

First, the United States must ratify the START Treaty. Secretary James Baker has yet to introduce the treaty to the Senate and, unless he does so in the next few weeks, the tight congressional calendar will make Senate action on the treaty virtually impossible this election year.¹⁵³ This could exacerbate problems Russia is having with the three republics holding strategic nuclear weapons and significantly postpone deeper cuts in strategic forces.

Unless this treaty is ratified, it has no legal force and the nuclear capabilities of the non-Russia republics will remain a problem. If Ukraine and Kazakhstan were to take possession of the former Soviet strategic forces on their territories, they would become the world's third and fourth largest nuclear powers, dealing a devastating blow to the nuclear nonproliferation regime. The provisions of the START Treaty would bring about a logical elimination of the strategic nuclear weapons in these republics.

Second, the United States must make it clear to the new non-Russian states that, in addition to implementing the provisions of the START Treaty, they must join the Nonproliferation Treaty as non-nuclear states. As discussed above in the Columbia study, these states must understand that U.S. political and economic support will depend on their willingness to remain non-nuclear-weapon states.

Third, the On-Site Inspection Agency (OSIA) needs to become a growth industry. As the Soviet threat fades and budget cuts bite deeper into the Pentagon pocketbook, OSIA must be expanded and given greater funding. This agency has conducted over 400 INF inspections since July 1988 on former Soviet or former Warsaw Pact territory.¹⁵⁴ Yet, as the dramatic shuffling of some 15,000 tactical nuclear weapons has been taking place in the former Soviet Union, technical experts from OSIA already in the former Soviet Union monitoring reductions in nuclear weaponry from the 1987 INF Treaty are being used to ensure food and medical supplies from Operation Provide Comfort fall into the right hands. Twelve teams, totaling 97 advisers from the agency, are overseeing the distribution of humanitarian aid to ensure that it reaches the needy and not black marketers.¹⁵⁵

¹⁵³Spurgeon M. Keeny, Jr., "Save START," Arms Control Today (April 1992) p. 2.

¹⁵⁴Peter Grier, "On-Site Arms Control Verification Proceeds," The Christian Science Monitor (September 25, 1991).

¹⁵⁵Michael Smith, "U.S. Arms Verification Officials Police Aid to Republics," Defense News (February 24, 1992) p. 50.

It does not take a rocket scientist to figure out that scarce resources like OSIA inspectors could be employed better. The U.S. perception of the benefits of on-site inspections (OSIs) continues to be based on a paradoxical premise: "OSIs will be most needed but least helpful when cooperation by the host country cannot be expected. Conversely, inspections are likely to be most useful precisely when they are least needed - when parties to an agreement have a strong desire to cooperate."¹⁵⁶ Just because our relationship with the former Soviet Union is no longer hostile, we should not dismiss the importance of on-site inspections or the value of these inspectors.

OSIA should serve as a facilitator for U.S. private firms interested in disarmament procedures. The \$400 million of Nunn-Lugar money which is to be used to assist in "planning and resolving technical problems associated with weapons destruction and proliferation"¹⁵⁷ should be given to OSIA to be put to immediate use. To date this money has been "trickled out in grudging negotiations" rather than used boldly to steer the former Soviet Union and U.S. firms in the direction stated in the original Soviet Nuclear Threat Reduction Act of 1991.¹⁵⁸

OSIA, with its past five years of experience in the former Soviet Union and in the disarmament field, can greatly assist companies in dismantling the nuclear weapons in the former Soviet Union. Problems have already been identified in storing and securing nuclear weapons while they await destruction. This area represents a potential \$1-billion business that many U.S. companies with expertise in such matters would love to pursue. OSIA can grease the skids and open the door for such companies in the former Soviet Union.¹⁵⁹

U.S. companies can assist in accounting for and processing special nuclear materials, dismantling and storage of high explosives, and construction of new storage and deactivation sites for nuclear weapons. Presently, the capacity of Soviet assembly/disassembly facilities is no more than 2,000 weapons per year under normal procedures. At this rate, it would take over 7 years to dismantle and destroy just the tactical nuclear weapons, while START provisions will put added strain to existing

¹⁵⁶Sidney N. Graybeal and Michael Krepon, "On-Site Inspections," in Verification and Compliance (Cambridge, MA, 1988) ed. by Michael Krepon and Mary Umberger, p. 106.

¹⁵⁷Paine and Cochran, p. 13.

¹⁵⁸Graham Allison, Ashton B. Carter, and Philip Zelikow, "The Error of Caution on Disarming the Former Soviet Union," The Washington Post (National Weekly Edition, April 13-19) p. 25-26.

¹⁵⁹"U.S. Companies Target Emerging Market For Dismantling CIS Nuclear Arsenal," Aviation Week & Space Technology (February 10, 1992) p. 23.

facilities.¹⁶⁰

OSIA can also serve as a monitoring agency for the storage of special nuclear materials. The Soviet Union produced an enormous quantity of plutonium and enriched uranium since World War II. This large stockpile of fissionable material presents a substantial potential proliferation threat, both now and in the future. This material could prove to be a long-term security problem, since the half-life of U-235 is 713 million years and the half-life of plutonium 239 is 24,000 years.¹⁶¹ In addition to monitoring this material, OSIA could insure adequate funding was made to companies and scientists seeking to convert such materials to practical, non-weapons use.

While eventual dismantlement of nuclear weapons is the goal, OSIA can make an immediate impact by overseeing the disarming of these weapons. Members of the military of the former Soviet Union can easily remove tritium bottles or the batteries that power the arming and fuzing circuitry for some of the weapons. Once disabled, OSIA can then tag these weapons and track them until their destruction.

OSIA should also play an important role in helping conversion of the Soviet military industry and the downsizing of the military. Top-ranking military officers in OSIA have established professional ties with important leaders in the former Soviet military that can prove beneficial to the future attitude of whatever military structure emerges from the former Soviet Union.

A Russian legislator called the former Soviet Army "the 16th republic, hungry and unsettled but well armed and trained." The military population, including dependents, is 40 million. Such a size could qualify it to be the third-largest commonwealth state, after Russia and Ukraine.¹⁶² It is in our interest to pay attention to the needs and problems of this group. They could easily upset disarmament progress and future security hopes.

With this in mind, OSIA could initiate construction projects for housing, recommend alternatives for future military structures, and organize joint training between our military forces. Joint training for inspectors should also be

¹⁶⁰Soviet Nuclear Fission, p. 45.

¹⁶¹Ibid, pp. 29-30. The total Soviet plutonium stockpile is in excess of 100 metric tons (100,000 kg), and the highly enriched uranium stockpile is in excess of 500 tons. Only 3-7 kg of plutonium is needed to make a plutonium fission bomb. 10 kg of highly enriched uranium, or about 25 kg of uranium enriched beyond 20 percent in U-235, suffices to make a uranium fission bomb.

¹⁶²Alexei Izyumov, "16th Republic: Armed and Dangerous," The Washington Post (National Weekly Edition, January 27-February 2, 1992).

highlighted, especially with respect to the rules for the interpretation of applicable treaties and knowledge of the relevant norms of the new national laws.

The republics of the former Soviet Union have agreed to keep all long-range nuclear weapons under a single control. The four republics with battlefield nuclear weapons - Russia, Belarus, Kazakhstan, and Ukraine - promised Secretary of State James Baker, recently, that all tactical nuclear weapons would be transferred to Russia by July 1, 1992 for eventual storage and dismantling. A problem with Ukraine occurred in March 1992 when it suspended its transfers, saying Russia had failed to provide assurance that the transportation and destruction of the weapons was being handled properly.¹⁶³ Any cases like this in the future should be immediately addressed by OSIA. If necessary, OSIA personnel should be prepared to have nuclear weapons turned over to their custody if relations between the republics breakdown. A continuous disarmament and verification process should take place with problems immediately addressed.

OSIA, in conjunction with its Russian counterparts, can lay the foundation for a universal nuclear inspection regime under the auspices of the United Nations. A universal, effective verification regime can lead to the slashing of nuclear arsenals throughout the world. Deep reductions will make the regime that much more important.

Finally, some will argue that verification provisions are rather hollow without means to enhance or punish noncompliance.¹⁶⁴ The range of responses to a treaty violation leads most often to the extremes: "the innocent state may have to choose between destroying the treaty regime in toto or acquiescing in the illegitimate behavior."¹⁶⁵ I believe the economic incentives and world opinion will prove to be significant "big carrots" in the new world order.

I also believe that a verification plan cannot ensure strict compliance if a state deliberately chooses to deviate from its agreement. "Strict compliance is founded best in a mutual desire to reap the benefits of an agreement."¹⁶⁶ It is not Russia or

¹⁶³Eric Schmitt, "Aid to Russia; Russia is Said to Plan for a Smaller Armed Force," The New York Times (April 2, 1992) p. A10.

¹⁶⁴Kenneth L. Adelman, "Why Verification is More Difficult (and Less Important)," International Security (Spring 1990) p. 141.

¹⁶⁵Koplow and Schrag, p. 1024.

¹⁶⁶Peter Pericles Orphanos, "INF Treaty On-Site Verification: An Emerging Standard For Policing Arms Control Treaty Obligations," New York Law School Journal of International and Comparative Law (vol. 10, 1989) p. 444.

Ukraine we will have to worry about in the future. It is in their best interest to continue to seek the benefits of disarmament agreements. Unfortunately, I think we may find that the United States will no longer have a mutual desire to abide by some treaties.

My recommendations have focused on the actions the United States needs to take in the former Soviet Union. These recommendations are based on the United States agreeing to reciprocal verification. This may be too great an assumption. On-site inspection in the United States has the potential for a serious violation of the Fourth Amendment's prohibition against unreasonable searches.¹⁶⁷ In the landmark case, *Reid v. Covert*, the Supreme Court held that a treaty between the U.S. and a foreign nation may not violate the Constitution.¹⁶⁸

Our efforts to verify disarmament in the former Soviet Union will establish the future pattern for international controls in tracking nuclear weapons and materials. Confidence in this procedure rests on its impact on the entire world community. Certain individual states, including the United States, cannot remain above the regime. To err in favor of disarmament, rather than the Constitution, may be the consequence of our desire for security.

¹⁶⁷Kevin C. Kennedy, "The Constitution and On-Site Inspection," Brooklyn Journal of International Law (vol. 14, 1988) p. 25.

¹⁶⁸Orphanos, p. 444.

BIBLIOGRAPHY

- Abarenkov, V. "US Arms Control Policy: Words and Reality." International Affairs (Moscow, 1982), No. 8.
- Adelman, Kenneth L. "Why Verification is More Difficult (and Less Important)." International Security (Spring 1990).
- Allison, Graham, Ashton B. Carter, and Philip Zelikow. "The Error of Caution on Disarming the Former Soviets." The Washington Post (National Weekly Edition, April 13-19, 1992).
- Aspin, Les and Fred M. Kaplan, "Verification in Perspective." in William C. Potter, ed. Verification and SALT. Colorado, 1980.
- Blacker, Coit D. and Gloria Duffy, International Arms Control: Issues and Agreements, 2nd ed., Stanford University Press, 1984.
- Boffa, Jeffrey R., "Soviet Views of Arms Control Treaties: Contradiction and the Process of Resolution", Temple Int'l & Comp. L.J., 223, 1988.
- The Bulletin of the Atomic Scientists, (November 1991).
- Bunn, Matthew. Foundation for the Future: The ABM Treaty and National Security, Washington, D.C., 1990.
- Burt, Richard. "Start Sooner on U.S.-Soviet Nuclear Safety." Los Angeles Times (29 Sept 1991), p. M-5.
- Calogero, Francesco. ed., Verification Monitoring Disarmament. Colorado, 1991.
- Campbell, Kurt M., Ashton B. Carter, Steven E. Miller, and Charles A. Zraket. Soviet Nuclear Fission: Control of the Nuclear Arsenal in a Disintegrating Soviet Union (Center for Science and International Affairs, Harvard University, November, 1991).
- Charlton, D. and C. Schaerf. The Dynamics of the Arms Race. London, 1975.
- Chayes, A. "An Inquiry Into the Workings of Arms Control Agreements." Harvard Law Review 85(March 1972).
- Chernoff, Fred. Defense Analysis Vol. 6, No. 3 (Sept 1990)
- Church, George J. "Soviet Nukes On The Loose." Time (16 Dec. 1991).
- Gardner, W. "Soviet Nuclear Deterrence - is Minimalism Dead?"

- RUSI Journal (Autumn 1991).
- Gilmartin, Patricia. "Bush Faulted for Foot-Dragging On Weapon Disposal Initiative," Aviation Week & Space Technology (February 10, 1992).
- Global Affairs (Summer 1991).
- Goldblat, Jozef. Agreements for Arms Control: A Critical Survey. Stockholm, 1982.
- Gray, Colin S. "START II: "Good" Arms Control?" Global Affairs (Summer 1991).
 "Nuclear Delusions." Policy Review (Summer 1986).
 "Destination Unknown: From SALT to START." Strategic Review (Spring 1991).
- Grier, Peter. "On-Site Arms Control Verification Proceeds," The Christian Science Monitor (September 25, 1991).
- Grinyevsky, O. "The Verification of Arms Control, Disarmament Agreements and Security." Disarmament (Summer 1988).
- Halperin, Morton H. The New York Times (1 Oct. 1991), p. 23.
- Hazard, John N. "Obychnoe Oruzhie: Mezhdunarodnoe Pravo, by I.P. Blishchenko." (book review), 79 Am. J. Int'l L. 845 (1985).
- Heckrotte, Warren. "A Soviet View of Verification." The Bulletin of the Atomic Scientists (Oct. 1986) Vol. 42, No. 8.
- Israelyan, Victor. "Openness, Transparency and Confidence-Building." Disarmament Vol. 11, No. 2, (Summer 1988).
 "Two Approaches to the Disarmament Problem." International Affairs (Moscow, 1983) No. 9.
 "Arms Limitation and Disarmament Talks: Soviet Approach." 28 McGill Law Journal (1983).
 "The Impact of the Disintegration of the USSR on World Politics." At The Harriman Institute (vol. 5, no. 6, February 25, 1992).
- Izyumov, Alexei. "16th Republic: Armed and Dangerous," The Washington Post (National Weekly Edition, January 27-February 2, 1992).
- Kalyadine, Alexander. Disarmament (1990) Vol. XIII, No. 4, p. 2.
- Keeny, Spurgeon M. "Limited ABM Defense: Dangerous and Unnecessary." Arms Control Today (Oct. 1991).
 "Save START." Arms Control Today (April 1992).
- Kennedy, Kevin C. "The Constitution and On-Site Inspection."

Brooklyn Journal of International Law (vol. 14, 1988).

Koplow, David A. and Philip G. Schrag. "Carrying a Big Carrot: Linking Multilateral Disarmament and Development Assistance." Columbia Law Review (June 1991, vol. 91).

Kortunov, Sergei. International Affairs (Moscow, March 1990), p. 5.

Krass, Allan S. "The Soviet View of Verification." in William C. Potter, ed., Verification and Arms Control. 1985.

Krepon, Michael and Mary Umberger. Verification and Compliance (Cambridge, MA, 1988).

Lowenthal, Mark M. "The Politics of Verification: What's New, What's Not." Washington Quarterly (Winter 1991).

Matthews, Col. Lloyd J. ARMY (Dec. 1991), p. 52.

Mazarr, Michael J. START and the Future of Deterrence London, 1990.

Meyer, Stephen M. "Verification and Risk in Arms Control." International Security (Spring 1984).

Moch, Jules. "A Short History of Disarmament." in Carlo Schaerf, ed. Disarmament and Arms Control 1972.

Munro, Neil Defense News (16 Sept. 1991).

Morris, Ellis. The Verification Issue in U.N. Disarmament Negotiations (United Nations, 1987).

Nadkarni, Vidya. Comparative Strategy Vol. 10, No. 3, (July-Sept. 1991).

Orphanos, Peter Pericles. "INF Treaty On-Site Verification: An Emerging Standard For Policing Arms Control Treaty Obligations." New York Law School Journal of International and Comparative Law (vol. 10, 1989).

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).

Petrovsky, Vladimir. International Affairs (Moscow, March 1991).

Potter, William C. ed., Verification and Arms Control (Center for International and Strategic Affairs, 1985).

Raffel, James. "Time for an Old Blueprint." The Bulletin of the

- Atomic Scientists (Nov. 1991).
- Reisman, W. Michael. "International Law After the Cold War." The American Journal of International Law (Vol. 84, 1990).
- Rogov, Sergey. Disarmament (Vol. XIII, No. 3, 1990) p. 10.
- Rostow, Eugene V. and Mary E. Hoinkes, "The United States Approach to Negotiating Arms Limitation Agreements with the Soviet Union." 28 McGill Law Journal (1983).
- Rowny, Edward L. "Arms Control and the Future of U.S.-Soviet Relations." Strategic Review (Winter 1991).
- Ruggie, John. Disarmament (Vol. XIII, No. 4, 1990).
- Sauerwein, Brigitte. "CFE: The Story So Far." International Defense Review (Jan. 1991).
- Schmitt, Eric. "Aid to Russia; Russia is Said to Plan for a Smaller Armed Force," The New York Times (April 2, 1992) p. A10.
- Schneider, Barry. "1990: The Year of the Treaty." Defense and Diplomacy Vol. 8, No. 6 (June 1990).
"The First Nuclear Civil War?" Defense and Diplomacy (July/August 1991).
- Schroeder, Wayne. "Strategic Defense and Arms Control." Comparative Strategy (Jan.-Mar. 1991).
- Scrivener, David and Michael Sheehan, Arms Control Verification: A Bibliography of Western and Soviet Sources 1990.
- Shevardnadze, E. "At the Conference on Disarmament." Current Digest of the Soviet Press (Vol. 39, No. 32, 1987).
- Sharp, Jane. "Continuity and Change in Soviet Arms Control Policy." The Journal of Soviet Military Studies (Vol. 3, March 1990).
- Sloss, Leon. Washington Quarterly (Autumn 1991), p. 146.
- Smith, Michael. "U.S. Arms Verification Officials Police Aid to Republics," Defense News (February 24, 1992), p. 50.
- Sovetov, A. "Complete Elimination of Nuclear Weapons. The Soviet Programme." International Affairs (Moscow, No. 4, 1986).
- Stanislavlev, A. and B. Tuzmukhamedov. "This Seemed Unattainable." International Affairs (Moscow, No. 3, 1988).

- Thornson, Inga. "Negotiating Arms Limitation Agreements: Non-Aligned Perspectives." 28 McGill Law Journal (1983).
- Timerbayev, R. "A Soviet Official on Verification." The Bulletin of the Atomic Scientists (Jan.-Feb. 1987).
- Trimble, Phillip R. "Beyond verification: The Next Step in Arms Control." Harvard Law Review (February 1989, vol. 102).
- Trofimenko, Genrikh. International Affairs (Moscow, March 1991).
- Tunkin, G. ed. "The Principle of Disarmament." International Law (1986), p. 135.
- Tuzmukhamedov, B. "Verification of Disarmament." in A. Carty and G. Danilenko, eds., Perestroika and International Law 1990.
- U.S. State Department. Security and Arms Control: The Search for a More Stable Peace (Washington, D.C., June 1983).
- Welch, Larry D. "U.S. Strategic Forces After START." Global Affairs (Summer 1991).
- Wolfe, Thomas W. "Soviet Influences on an Arms Control Environment." (Rand Study P-2995) Santa Monica, CA: Rand, 1964.
- Zile, Zigurds L., Sharlet, Robert., Love, Jonathan. The Soviet Legal System and Arms Inspection: A Case Study in Policy Implementation (New York, 1972).