

**SOVIET POLITICS OF DISARMAMENT UNDER GORBACHEV
WITH SPECIAL REFERENCE TO SDI**

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DECLARATION

Certified that the dissertation entitled:
"SOVIET POLITICS OF DISARMAMENT UNDER GORBACHEV"
WITH SPECIAL REFERENCE TO SDI", submitted by Soumen
Dhar Choudhury, is in partial fulfilment of six
credits out of a total requirement of twenty-four
credits for the degree of Master of Philosophy (M. Phil)
of this University. This dissertation has not been
submitted for any other degree in this University and
is his own work.

We recommend that this dissertation be placed
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PREFACE

PREFACE

The world has come a long way from the " twilight year" of 1939 when physicists, Rudolf Peierls and Otto Frisch began work on Uranium fission and concluded that an atom bomb was a practical possibility. From then on " the fate of the earth" depended on the mercy of nuclear weapons. Today we are witness to a quantitative expansion and qualitative improvement of nuclear weapons. Paradoxically, the world has also been witness to years of arms control negotiations between the two superpowers.

However, before the successful INF Treaty was signed, which called for the destruction of a whole class of nuclear weapons, the superpower negotiations seemed oddly stylised. Both sides expended their energies for eventual disarmament, while at the same time strived for security through nuclear weapons. The deterrence doctrine aggravated the situation further, by nullifying Winston Churchill's famous dictum that safety is the sturdy child of terror.

But, apparently, Churchill's sturdy child may soon take birth, given the renewed vigour shown by the two superpowers to achieve disarmament. Gorbachev's advent on the scene boosted the prospects of a global disarmament. The Soviet Union is now even more genuinely interested in arms control and disarmament, though this not to underestimate Soviet Union's role in arms control regimes in the pre-Gorbachev era. Soviet Union took a lead in demanding a ban on nuclear weapons and the use of atomic energy for peaceful purposes. The plea for disarmament by the Soviet Union starts

with the very establishment of the Soviet State in 1917, when it was obvious to Lenin and the Bolshevik leadership that to survive and develop the Soviet Union would need peace.

In keeping with the Leninist tradition of peaceful co-existence, Gorbachev has given the call for a world free of nuclear weapons. And, he has followed it up with a set of unilateral proposals, which has received applause from even his critics in the west. Apparently, there is a need for a cogent analysis of the present Soviet approach to the arms control regime. Hence, a comprehensive study of the various Soviet arms control and disarmament proposals in the post-1984 period is called for. This is what the dissertation endeavours to do.

This dissertation seeks to examine the following hypotheses so as to provide a critical analysis of the topic at hand;

1. That the renewed interest in arms control and disarmament is mainly due to the initiatives taken by the Soviet Union;
2. that Gorbachev's "new thinking" and his fervent appeals to the US to enter into negotiations to halt the arms race has given a new dimension to the process of arms control mechanism;
3. that the economic crisis in the Soviet Union is partially responsible for the unprecedented steps taken by Gorbachev in the field of arms control and disarmament;
4. that whether Strategic Defence Initiative Programme-

which is perceived by the Soviets as a component of a "winnable" nuclear theory—would jeopardise further talks in arms control between the US and the Soviet Union; and

5. that there is a change in the Soviet arms control policy under Gorbachev.

The crux of the research project would be an historical-analytical study of issues involved. It will have a holistic approach—that is, an analysis of the wider issues involved. The survey of literature would bank upon both the primary and secondary sources. There is a goal behind such analysis, and, that is, to search for basic issues involved. Though, a value-free social science is a myth, yet objectivity would be maintained as far as possible. Stress would be given on dialectic to ensure the importance of divergent views and opinions and to eschew only bias in favour of particular standpoint(s). Lastly, it needs to be mentioned that the period of study would begin from the coming of Gorbachev to power.

Chapter I presents a discussion on the series of initiatives taken by Gorbachev aimed at global disarmament and arms control. The chapter begins with a presentation of Gorbachev's novoye myshleniye (new thinking) in the field arms control negotiations and then goes on to analyse the onslaught of peace proposals put forward by Gorbachev. This is followed by an argument in favour of arms race modelling to understand the complexities of arms race.

This is followed by a chapter which examines the economic crisis in the Soviet Union and in this context

analyses why arms control is so important from the Soviet point of view. It further discusses the organic relationship between disarmament and development, and rounds off with a case for conversion of Soviet military economy.

The next chapter examines the nature of Strategic Defence Initiative. It then goes on to analyse the Soviet reaction to the "Initiative". The chapter also tries to present a possible Soviet response and, therefore, discusses the Soviet Ballistic Missile Defence Programme. An examination of the Soviet "Star Peace" proposals rounds off the chapter.

The final chapter presents a discussion on the Soviet approach to arms controls. It analyses the external and internal factors affecting the Soviet arms control mechanism, and the intermixing of military thinking and arms control. The chapter concludes with a discussion on Gorbachev's new approach to arm control negotiations.

The dissertation concludes with a summary of the major findings, and the perspective that informs it.

My indebtedness are due to my supervisor, Dr. Anuradha Mitra Chetty, whose scholarly guidance made the task of writing this dissertation a pleasure. While offering valuable criticisms in the course of my writing the present work, she gave me freedom to pursue my own ideas.

The members of my family were a constant source of encouragement and supported my endeavour both morally and materially. My room-mate, Devash Tandon, braced me during the months when I was working for this dissertation. I am also beholden to my friends at Jawaharlal Nehru University. The errors, if any, are solely mine.

Place: JNU, New Delhi.

Dated: 30th May, 1990.

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CHAPTER - I

GORBACHEV'S INITIATIVES IN ARMS CONTROL
AND DISARMAMENT.

CHAPTER - I

GORBACHEV'S INITIATIVES IN ARMS CONTROL AND DISARMAMENT.

(I)

RE-THINKING IN SOVIET POLITICS OF DISARMAMENT AND ARMS CONTROL:

The change of guards at the Kremlin brought Mikhail Sergeyevich Gorbachev at the helm of power on 11th March, 1985- a time when the world was passing through a period of increasing tensions. Nuclear weapons has reached a stage where the push of a button would suffice to unleash unspeakable destruction and disaster. Fresh hopes have been aroused since then-hopes, which have set the ball rolling for thinking de-novo the question of whether the world could live with nuclear weapons. Gorbachev has set before himself the task of removing the danger of nuclear weapons. His appraisal of the nuclear question vividly reflects the idea of President John F. Kennedy, who spoke of "the nuclear sword of Damocles, hanging by the slenderest of threads, liable to be cut at any moment by madness, accident or miscalculation".¹

Securing and establishing peace over a long period of time obviously requires much more than finding ways and designing tools for preventing wars. It requires a world of foresight, which is being so very aptly demonstrated by Gorbachev, and which his illustrious predecessors so sadly lacked. The various peace proposals and unilateral steps regarding arms control and disarmament are aimed at bringing stability and peace by drawing away intellectual and financial resources which are tied up in the designing of more sophisticated, more pernicious and powerful weapons and counter weapons.

" It is disarmament that will release huge material and intellectual resources and make it possible to redirect them towards goals of construction, economic development and prosperity. "

The peace initiatives unleashed by Gorbachev are organically linked with the process of the acceleration of Soviet's socio-economic development and the comprehensive restructuring processes currently under way in the Soviet Union. The emergence of new conditions on the world scene has added a new dimension in international politics. "Even the most powerful defences are useless against sophisticated weapons of mass destruction. There can be no winner in a nuclear war or in the arms race." ³ Hence, the need for " peaceful competition" and " peaceful rivalry". Underlining the importance of arms control and disarmament, Gorbachev stressed- " Modern weapons have turned military power into a veritable boomerang, a nuclear one moreover, that is as sure to hit the thrower as his adversary. Therefore, concern for national security now demands the most scrupulous consideration of the security interests of other states. Mutual and equal security of all is imperative. This is our final outcome." ⁴

Arms control is intrinsically linked with politics-core so in the " East-West political relationship." It is at once an arrangement by the opposite sides for furthering their own interest and a means to outwit each other. Here comes the necessity for selfless and sincere approach to relieve the mankind from the scourge of nuclear weapons.

2 N.S. Gorbachev, Forsterium(Moscow, 1986), p. 49.

3 N. Shemlyov, Soviet Peace Initiatives: 1946-1987 (New Delhi, 1987), p. 3.

4 N.S. Gorbachev, Speeches and writings vol. 1 (Oxford, 1987), p. vi.

Albeit, till the advent of Gorbachev, arms control negotiations were not pursued with faith and tenacity, they provided an opportunity to start a political dialogue between the Superpowers. But they could move no further than formal dialogues primarily because the talks got bogged down on, interalia, which side could reap the "maximum harvest" out of it. Indeed, a clear political will was missing.

This is where Gorbachev scored over others, including his predecessors and western counterparts. His series of initiatives made it amply clear that the Soviet Union has come a long way from the days when it was dubbed as the "evil empire". The extent of Gorbachev's concessions caught the west in general, and the US in particular, offguard, "The western powers have looked on with bewilderment, consternation and, at times, near paralysis as the Soviet government has boldly seized and held center-stage through an impressive array of unaccustomed concessions and 'Madison Avenue' public relations."⁵ Apparently, Gorbachev has been successful in pursuing a new strategy vis-a-vis disarmament negotiations—the hallmark being his uncanny ability to make judicious use of firmness with flexibility, but always ready to promote peace.

Combining realism with diplomacy and foresightedness he assessed correctly that "for the most part, it is the arms race(which) stands in the way of good Soviet-American relations".⁶

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J. Haslam, "The UN and the Soviet Union; a new thinking?", International Affairs(London), vol. 65 No. 4, Autumn 1989, p. 677.

6

M.S. Gorbachev, Perestroika; New Thinking for our Country and the World(London) 1987, p. 218.

An improvement of relations between the two superpowers is not only an important but also the most potent factor in easing the tensions world over. Albeit the division of the world into power blocs cannot be wished away, a smooth understanding needs precedence over misgivings which, generally, tend to blur the actual image of things. Hence the emphasis by Gorbachev of nuclear war being an act which can only be unleashed by a "madman".⁷

The new thinking on disarmament posits from the revolutionary changes sweeping the Soviet Union. Organically linked with domestic reforms, "the Soviet foreign policy has also undergone an incredible transformation".⁸ This new thinking in the dialectics of international politics is the outcome of the changing realities of the present day world. "The pivot of the new political thinking is the recognition of the integrity of a contradictory but interconnected world."⁹ The two main social systems of the present day world, viz, capitalism and socialism cannot remain isolated from the other and hence, the need to bring an accord between the two systems. Cooperation and not confrontation, is the most essential aspect of the new thinking in international affairs. Disparity between theory and praxis has been done away with under the new thinking.

7 Ibid, p. 220.

8 Eric Connelias, "USSR Initiates A New World Order", World Focus (New Delhi), Vol. 9, no. 10-11-12, Oct-Nov-Dec 1988, p. 24.

9 Georgi Shakhmazarov, "The East and the West; Ideologization of interstate relations", Kommunist(Supplement), No. 5, Issue 11, 1989, p.3.

Making an epistemological break with past, the new thinking has treaded new paths in the international affairs. This has enabled " to build international confidence and to reach agreements on the reduction of nuclear arms and, finally on nuclear disarmament." ¹⁰ This perspective forms the backdrop of the fundamental principle of the new political outlook which stresses that " a nuclear war cannot be a means of attaining political, economic, ideological or any other means. " ¹¹

The imperatives of the international political orders based on the axiom that co-existence and not belligerence is the most viable option. Therefore, a nuclear-weapon world, divided into military blocs, goes contrary to this precept. Qualitatively a new order is basic to this assumption. Because the interdependence of the world is felt in all fields-economy, trade and commerce, technology etc.

New Thinking recognises that security is indivisible and should be equal for all. It believes that security derives from respect for the interests of all countries and peoples, and recognition of their equality in international affairs. This negates the " Brezhnev Doctrine" which " states that a threat to socialism in one country is the concern of all socialist countries, which have the right-and the duty- to take the necessary action to remove the threat. " ¹² formulated

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- 10 Nikolai Nikolsky, The philosophy of New Thinking and the Soviet initiatives (New Delhi: 1988)p. 2.
- 11 Yuri Gvozdev, New Thinking and the Initiative of the six (New Delhi: 1989), p. 31.
- 12 David Holloway, The Soviet Union and the Arms Race (London: 1983),p. 99.

after the Soviet invasion of Czechoslovakia in 1968, this doctrine provides a theoretical justification for intervention in socialist countries by force of arms, if necessary.

Contrary to the concept of Asian Collective security of Brezhnev,¹³ Gorbachev, as part of his new political thinking, "is now eager to encourage the participation of both Beijing and Washington in creating a new order...(which) is part of a larger design to restructure international relations."¹⁴

Gorbachev's new political thinking gave a bodyblow to the votaries of cold war, the proponents of which would like to see that the status-quo is maintained-conditioned as they were for the last few decades to this concept. The new thinking "not only challenges... the Soviet apparatus and military establishment, it is a much greater challenge to the conventional wisdom of the rest of the world."¹⁵

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- 13 The Asian Security Ideas of Brezhnev, proposed in 1969, was widely seen as a thinly veiled attempt to isolate China and the United States in Asia.
- 14 C. Raja Moha, "Rediscovery of Asia Pacific," World Focus(New Delhi) Vol. 9, no. 10-11-12, Oct-Nov-Dec. 1988, p. 55.
- 15 K. Subrahmanyam, "Logic of Disarmament", World Focus(New Delhi) ibid, p. 45.

The new political thinking can justly be viewed as the trail-blazer in the drive for disarmament, peace and re-structuring of inter-state relations on new democratic lines. For one, the United States and the NATO partners have taken a pragmatic stand by responding favourably, albeit not always, in some issues concerning arms control and disarmament. At last, the days of Soviet Union as an "evil empire" are over. And, a new perception of the world order is slowly coming up which is based on the re-examination of "military doctrines in compliance with the new interpretation of the issue of war and peace, the new dialectic of power and security...." 16

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DISARMAMENT AND ARMS CONTROL INITIATIVES BY GORBACHEV.

The predecessors of Gorbachev (and even Reagan) always drew back after peering into the "nuclear abyss". The necessity to maintain the balance of power—the status quo in the world: impeded the process of arms control talks. Both superpowers tended to adopt what Nicholas Wheeler and Ken Booth 17 have called, "strategic fundamentalism", in which the conflict is attributed almost exclusively to the malevolent nature of the adversary. Besides, the cold war between the two superpowers became an ideological struggle between two antithetical political systems—each intolerant of the values and policies of the other. Cold war further aggravated due to the bipolar structure of the international system which emerged

16 Nikolsky, n. 10, P.3.

17 See N.J. Wheeler and Ken Booth, "Beyond the security dilemma: technology, strategy and international security", in C.K. Jacobsen (ed.) The Uncertain Course (Oxford: 1987) pp 313-337.

from the upheaval of the second world war.

Before the advent of Gorbachev, the rhetoric of peace talks got blurred in the ever-continuing process of horizontal escalation of arms (both nuclear and conventional) with a view to achieve parity.

Gorbachev has attacked all these traditional concepts and seriously got down to the act of discussions with his US counterpart. Not just that he launched peace-offensives by taking unilateral stands on arms control and disarmament. The futility of parity of arms has been recognized by Gorbachev. Parity of arms does not provide a sufficient guarantee of national security under the condition of an arms race or even of equilibrium at high levels. Furthermore, "the possibilities for savings and the avoidance of economic bottlenecks provides incentives for arms reduction and arms limitation agreements...." 18

A sharp contrast can be perceived in Gorbachev's concept vis-a-vis the relationship between socialism and capitalism. He stresses cooperation. His pronouncements avouch of non-interference and with actions that may force his control over the block states. 19 Another departure from the past practice is the declaration by Gorbachev that military means alone cannot protect the Soviet Union and hence, there should be reduction in nuclear and conventional weapons.

18 Alan B. Sherr, The Other Side of Arms Control, Soviet Objectives in the Gorbachev era (Boston: 1988), P.35.

19 The recent upheaval in the East European countries where Russia refused to intervene is a clear indication of the new political equation developing under Gorbachev's stewardship.

"A journey of a thousand miles, must begin with a single step", so goes a Chinese proverb. Gorbachev began his long journey on the road to arms control and disarmament by taking that first vital step at the Geneva Summit in November, 1985. To create a favourable atmosphere for the Soviet-American talks in Geneva, Gorbachev in an interview with the editor of Pravda on April, 1985, "suggested" that the USSR and the USA introduce, for the entire duration of (Geneva) talks, a moratorium on the introduction- including research and development, testing and deployment- of space strike weapons, and a freeze on their strategic offensive armaments....²⁰ The US administration responded negatively to this proposal.

But for Gorbachev, it was no setback. He took a very radical step on July 29, 1985, when he declared Soviet Union's decision to discontinue, unilaterally, all nuclear explosions as of August 6, 1985.²¹ It was an effective measure capable of halting the nuclear blast drive gripping the world. It could also have halted the modernisation of the existing nuclear weaponry for obvious reasons. No wonder the chance of taking an important step in the "dying out" of nuclear arms was missed.

These formed the backdrop of Gorbachev-Reagan Summit in Geneva on November 19-21, 1985. In that Summit, Gorbachev offered "an all-embracing complex of measures to the effect of blocking all the paths for the arms race, be it in the outer space or on Earth, be it nuclear, chemical or conventional weapons."²²

²⁰ Quoted in The USSR proposes Disarmament (1920s-1980s) (Moscow) 1986, p. 324.

²¹ Albeit it was to remain valid till Jan. 1, 1986, its extension was made conditional on US attitude towards similar moratorium. But the silence on the Soviet nuclear test ranges for 18 months was answered by explosive sounds in the Nevada deserts in the USA.

²² Shmalyov, n. 3, p. 95.

This formidable task would have drastically reduced the threat of nuclear war, even though the offer was ambitious in its dimensions.

The Geneva talks accepted the fact that a nuclear war cannot be won and must never be fought. Short of concrete results, the summit meeting in Geneva provided a springboard for future talks in arms control. It ushered in a new era in Soviet-US as in East-west relations. Besides, both sides recognized the disastrous effects of any conflicts—nuclear and conventional, and "agreed to accelerate the work at the negotiations on nuclear and space arms."²³

Gorbachev successfully pierced the dark clouds of mistrust even before the next summit at Reykjavik(1986) by reiterating the pledge not to be the first to use nuclear weapons although the US had declined to make a similar declaration.²⁴ Persistent peace proposals by the Soviet Union provided the necessary impetus in improving US-Soviet relations. The basic framework of the entire political infrastructure began to crumble. The dialectics of international politics regards the presence of an "enemy" for cold war and arms race to flourish. The stereotype "enemy" viz., "Soviet Threat" proved to be illusory.²⁵ After all a country which calls for a nuclear-weapon-free world cannot remain an enemy any longer.

²³ F. Buzlinsky, From Geneva to Reykjavik, (Moscow, 1987), P. 90.

²⁴ The US were under the illusion that such a proposal would be contrary to the "deterrent" theory, and hence, to the disadvantage of the US and its allies.

²⁵ Unfortunately, even while the western press and the western leaders were talking of the "omnipresent Soviet threat", Gorbachev had already unleashed his peace offensive as part of his "new thinking". The Reagan Administration and his allies were still living with the illusion of a "winnable nuclear war." A positive rethinking in the part of Reagan came only at the fag end of his presidency.

In the past, the Soviet and American leaders seemed satisfied by just articulating the hope that the "genie" would be put back into the bottle. Gorbachev, on the contrary, concretised this hope, albeit partially by proposing for a complete and universal elimination of nuclear armaments by the year 2000 AD. This envisages a step-by-step and consistent process of ridding the earth of nuclear weapons by the end of this century.

Stage one of the plan proposed a reduction by the USSR and the USA by one-half the nuclear weapons that can reach each other's territory.

In stage two (should start no later than 1990 and last for 5 to 7 yrs), the other nuclear powers will begin to join the process of nuclear disarmament.

Stage three (which will begin no later than 1995) will lead to the complete elimination of all remaining nuclear weapons. ²⁶

Though forthright and revolutionary these proposals however, can only work if all the nuclear weapons states show the same enthusiasm as the Soviet Union has shown. But the question arises: Will they agree? Obviously it is too unrealistic to expect a total elimination of all nuclear weapons. It is a well-known fact that only 5% of the nuclear arsenals of the USSR and the USA are more than enough to destroy the world.

26 For details see Shmelyov, n. 3, pp. 96-97 and the "Statement by General Secretary of the Central Committee of the CPSU" in Gorbachev's, Speeches and Writings, Vol. 1 (Oxford, 1988) pp. 110-113.

An important prerequisite for this ambitious proposal to fructify is that the Soviet Union and the United States should terminate all nuclear tests in which all other nuclear weapon states should join in. Rhetorics apart, this proposal surpasses all imagination of the analysts regarding its feasibility, given the noncommittal by the US and even the USSR as far as the strategic arms reduction talks (START) are concerned.

Limitations of the above proposal apart, "Soviet disarmament efforts are marked by continuity and consistency as regards the fundamental principles of the Soviet approach to the solution of this overriding task of world politics".²⁷

The continuity is reflected in the Soviet foreign policy which all along has upheld the Leninist doctrine: "Disarmament is the ideal of socialism".²⁸ Indeed the 27th Communist Party of Soviet Union (CPSU) Congress²⁹ had given a comprehensive expression to the main directions of the Soviet foreign policy. Deriving its understanding from a realistic reappraisal of the world correlations of forces, a logical outcome of the changing world view of the Soviet leadership, the congress made a serious departure from the policies of preceding leadership by providing a number of bold and innovative

27 Shmalyov, n. 3, p. 2.

28 V.I. Lenin, Collected Works, Vol. 23 (Moscow, 1982) p. 95.

29 CPSU Congress would refer to the 27th Congress held on 25th February, 1986, unless otherwise mentioned. This Congress, the only one to take place after Gorbachev became the General Secretary of the CPSU, is important as it reflects the main directions of the Soviet foreign policy under Gorbachev and shall be referred to in this dissertation quite often.

conceptualisations about world politics.

In his report to the Congress, Gorbachev discussed at length the Soviet attitude towards nuclear weapons and arms race. He believed that " nuclear weapons harbor a hurricane which is capable of sweeping the human race from the face of the earth".³⁰ Rejecting the thesis that war "(is) a means of settling political and economic contradictions and ideological disputes among the states,"³¹ he idealised a " world without weapons and violence...(hence) the struggle against the nuclear threat, against the race, for the preservation and strengthening of universal peace remains the fundamental directions of the Party's activities in the international arena".³² This policy appears imperative and without alternative.

Gorbachev's Report to the Congress underlined the considerations which " could lead to an improvement of the situation"³³

- a) He demolished the theory of 'deterrence'³⁴ or 'containment' which, he opines, would " encourage an arms race that may sooner or later go out of control."
- b) he emphasised the necessity of universal security, is vital, given the short time that is needed to annihilate human beings and thus impede " the possibilities of adopting political decisions on questions of war and peace" during crisis;

30 XXVII CPSU Congress: Documents and speeches(N. Delhi,1986)
p. 81.

31 Ibid, p. 82.

32 Ibid, p. 82

33 Ibid, p. 82-85.

34 Nuclear deterrence is a threat which expresses a conditional choice to kill non-combatants- a choice that is being condemned by traditional morality. It accepts the arms race as a tool to make this threat "credible."

- c) he stressed the significance of the "state and character of the relation between the Soviet Union and the US"; and
- d) underlined the impossibility of maintaining a perpetual status quo vis-à-vis any power.

At the same time, the doctrine undermines confidence by putting a premium on creating uncertainty in the minds of the other side, which must fear that a credible deterrent might actually be used. This concept had grown beyond the traditional concept of deterrence. The high priest of cold war and arms race, the US, regards deterrence to be a system that has preserved the peace, as it were, between the two superpowers for more than forty years.

"Gorbachev attacked the notion of nuclear deterrence on four grounds; first, deterrence was not 100 per cent effective, as the number of nuclear weapons grew, deterrence could fail at any time because of human failure, technical malfunction, or malice; second, a strategy based on military intimidation cannot reduce military conflict; third, deterrence assumes that war is the 'perpetual concomitant of human existence', a view that cannot be accepted by civilized people; and, fourth, deterrence is based on 'rationality' but what is rational in the context of one culture or of one country with a particular historical and political background may not be rational from the perspective of another country" (Sherr, n. 18, p. 104)

Albeit the western analyst still clung to the theory of deterrence. Reagan in his last years of Presidency implicitly gave it a bodyblow by signing the INF Treaty with the USSR, and, ironically, by for SDI to render nuclear weapons "impotent and obsolete". He thus cut away the moral props of nuclear deterrence theory.

The road from Geneva to Reykjavik proved to be bouncy and full of hurdles. But Gorbachev removed these hurdles with peace offensives, which, through a mixture of appreciation and scepticism, succeeded partially to break the ice. As they say, an appeal to reason has never been known to fall on deaf ears. So it was, when the two super-powers decided to meet in the Icelandic capital of Reykjavik. The world suddenly felt a sense of relief—the feeling that important decisions were imminent. In this summit (held on October 11-12, 1986) the "chances of a 50 per cent cut in strategic weapons appeared very bright (along with the) prospects for complete elimination of the Soviet and the US medium range missiles in Europe. An understanding was reached on radical cuts in medium-range missiles deployed in Asia".³⁵

Unfortunately, the "Star Wars"³⁶ (the Brain-child of Reagan) came in the way of an agreement. Reagan rejected the Soviet proposal of prohibiting all testing on space-based weapons, excluding research and testing conducted in laboratories. He stuck to his position of developing the "Star Wars" by urging that "the US should have the right to test and carry out research into anything that might in any concern SDI—at laboratories and elsewhere, including outer space itself".³⁷

35 Tapan Das, "US-USSR Summits; A Historical Perspective," Mainstream (New Delhi), Vol. XXVI No. 33, May 28, 1988, p.26.

36 The Strategic Defence Initiative (SDI), popularly known as the "Star Wars" programme, was announced to the world public in the famous "Star Wars" speech of March, 23, 1983 by Ronald Reagan. SDI is a means by which nuclear weapons would be rendered "impotent and obsolete" from the outer space. The critics of "Star Wars" regard it to be a euphemism for mass destruction directed from the outer space, notwithstanding the thesis put forward by Reagan that the SDI is a shield against Soviet attack—to intercept and destroy strategic missiles launched by the USSR before they can reach and cause havoc against the USA or its allies.

37 BuZlatsky, n. 23, p. 115.

This intransigent attitude of the US Administration watered down the good work done by the Soviet Union. As Gorbachev rightly observed, "I told the President that we were losing an historic chance. At no other time were our positions so close to each other as now"³⁸ to achieving results of historic importance. Thus, in spite of considerable concessions by the Soviet Union, the two sides failed to come to terms. Significantly, the Pentagon and the US allies backed Reagan's "courage" of "not giving away the store."³⁹

The setbacks of the Summit did not dampen the enthusiasm of the Soviet Union. In a major move of far-reaching consequences, the Soviet Union carried forward the torch of disarmament by offering in February, 1987 "to single out the problem of medium-range missiles in Europe"⁴⁰ from the Reykjavik package and to sign a separate agreement on it."⁴¹

Carrying forward the concept of perestroika in international relations as a means to reverse the trends of growing tensions and 'spiralling arms race, not only

38 Ibid, p. 115-116. One of Gorbachev's criticisms of the US position was that, "The scope of our partner's approach was not broad enough".

39 Das, n. 35., p. 26.

40 This proposal was the forerunner of the INF Treaty (1987)

41 Das, n. 35, p. 26. A major concession on the part of the USSR was its offer to delink the issue of French and British missiles, and, the proposal of new verification measures, including on-site inspections.

in Europe but in other parts, especially, the Asia-Pacific region, &c., Gorbachev called for the restructuring of relations in Asia-Pacific region, a region, which many critics consider to be, of utmost importance in years to come. Gorbachev's Vladivostok speech ⁴², on July 28, 1986 and the Krasnoyarsk speech ⁴³, on September 16, 1988, underscored the importance that the Soviet Union placed on its role in this strategically crucial part of the world.

In his Vladivostok speech, Gorbachev outlined the following Soviet foreign policy measures towards the countries of Asia-Pacific region—

- a) a readiness to co-operate with all countries of the Asia-Pacific region;
- b) to utilise every opportunity of cooperation, particularly in the economic field waiting for political cooperation to develop in time;
- c) to accept a legitimate security status of the USA in the region without, however, conceding its dominance;
- d) to prevent the growth of Japan into a military power;
- e) to welcome all regional co-operation efforts in the Asia-Pacific region, including Association of South-East Asian Nations (ASEAN) and South Asian Association of Regional Cooperation (SAARC); and

42 For the text of Vladivostok speech, see M. Gorbachev's Moratorium (Moscow, 1986), pp. 159-162 (only excerpts are given in this book) and 'Text of Vladivostok Speech' (full text is given in this pamphlet) (Moscow, 1986). For a critical commentary, see M. Kapita, 'Paths to peace and security in the Asia and Pacific Region', International Affairs (Moscow), no. 8, August 1987, pp. 27-37; V.D. Chopra (ed), Mikhail Gorbachev's new Thinking: Asia Pacific: A critical Assessment (New Delhi, 1988).

43 For the full text see M. Gorbachev, 'Text of Krasnoyarsk Speech', September 16, 1988 (Moscow, 1988); and Supplement to Soviet Land, No. 10, October, 1988.

- f) a high priority to developing friendly relations with China and Japan whereas continuing the great friendship with India.

The Soviet interest in the Asia-Pacific region, stems from the fact that Soviet Union being an Asian and Pacific power is interested in delivering "this explosive region from the burden of armaments and military-political tensions (so as to) offer a short cut to stable peace".⁴⁴ Since the USA (including its ally, Japan) are bent on turning the region into a "zone of active confrontation with the Soviet Union",⁴⁵ these proposals by Gorbachev are specifically important.

The speech on Soviet policy in Asia-Pacific in Vladivostok by Gorbachev,⁴⁶ has to be studied along with his famous speech in Krasnoyarsk (September, 16, 1988) and his message to Vladivostok Conference, "The Asia-Pacific Region: Dialogue, Peace and cooperation", 1-3 October, 1986.⁴⁷

44 Shmeloyov, n. 3, pp. 121-122.

45 Ibid, p. 122.

46 The concept of the importance of Asia-Pacific gained currency under after Gorbachev took over. This is clearly reflected in the draft of programmes of the 27th CPSU Congress, which underlined the viable stakes of Soviet Union in Asia-Pacific.

47 The very fact that a Conference was convened in Vladivostok to discuss, as Gorbachev said in a message to the delegates, "the numerous problems of the Asia-Pacific region, to exchange views on the prospects of its development in conditions of peace and cooperation beneficial for all its peoples", is itself an indication of the utmost importance that Soviet-Union is giving, given its geo-strategic position and economic advantages.

The increasing involvement of the US in Asia-Pacific is one of the main reasons for the Soviet interest in the region. This is not to belittle the important developments within and without Soviet Union which also led to a new awareness of the over-all significance of the region. The reappraisal and reassertion of Soviet interests in Asia-Pacific has also a historic-economic angle (which can be juxtaposed with the political card) and that is, "the programme to develop and utilise the rich and untapped natural resources of Soviet Far East (for which) normalisation of relations with Japan and China and bilateral economic ties with Japan, in particular, were prerequisites for the success of such a programme. (Besides), the institutionalisation of the status-quo in Europe after the conclusion of the Helsinki Accord in 1975" and other developments, viz in Middle East, in Afghanistan, etc. were important to Soviet Union as far as Asia-Pacific Region was concerned. ⁴⁸

In its operational form, the Soviet interest in the Asia-Pacific region is part of the bigger plan of freeing the world of nuclear weapons. Hence in his Krasnoyarsk speech, Gorbachev gave "concrete proposals to Washington for initiating talks on limiting the scale of military activity in the North Pacific...." ⁴⁹ Furthermore, he stressed for "a stop to the arms race, eliminate nuclear arms confrontation with the US and its allies, particularly Japan and South Korea.... settle regional conflicts such as in Kampuchea and in Korean Peninsula" ⁵⁰ and "withdrawal of the Soviet Union from its

48 Zafar Iqbal, "Soviet Policy in Asia-Pacific: An Overview", in V.D. Chopra, n. 42, pp. 170-171.

49 Ibid p. 175.

50 Ibid p. 189.

bases in Vietnam (Cam Ranh Bay) if the US shuts down the Philippine bases". 51

One of the more innovative approaches called for by Gorbachev offers the proposals of the kind of radical arms control agreements which could have a profound impact upon the size of the nuclear armories, and the international images those armories tend to sustain. To this end, Gorbachev, in his report to the 27th CPSU Congress, declared Soviet Union to be "a staunch adversary of nuclear war" 52 and assured that the "USSR will not be the first to use nuclear weapons". 53

The 27th CPSU documents contained a basic framework for arms control. Hence as a preliminary step to arms control agreements, Gorbachev called for 54

- a) "renunciation by the nuclear powers of war—both nuclear and conventional—against each other (US and USSR) or against third countries;"
- b) "prevention of an arms race in outer space... a ban on and the destruction of chemical weapons...";
- c) "a strictly controlled lowering of the levels of military capabilities of countries to limits of reasonable adequacy";
- d) "disbandment of military alliances, and as a stage towards this renunciation of their enlargement and of the formation of the new ones"; and
- e) "balanced and proportionate reduction of military budgets". Gorbachev further

52 XXVII CPSU Congress: Documents and Speeches, p. 30, p. 86.

53 ibid p. 86.

54 ibid p. 86.



Gorbachev further buttressed his bargaining cards for arms control with the US by announcing on August 18, 1986, to extend unilateral moratorium on nuclear explosions until January 1, 1987.⁵⁵ "The USSR strictly observed the moratorium for one year, while the United States continued its testing, exploding a total of 18 nuclear devices."⁵⁶ Public opinion round the world applauded the step but the Reagan Administration made sure that the intermittent sound from the test sites at Nevada desert never stopped. Such was their doggedness that they refused to budge to the growing world concern against nuclear weapons.

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This formed the backdrop--none too optimistic but still full of hopes-- of the "historic" Washington Summit on December 8-10, 1987. This Treaty on the total elimination of Soviet and US intermediate and shorter-range missiles was a historic milestone in the chronicle of man's eternal quest for world without wars. "Gorbachev's peaceful revolution and pragmatism were chiefly responsible for the Intermediate-Range Nuclear Force (INF) Treaty..."⁵⁷ (hereafter referred to as the INF Treaty)

Thus the most turbulent chapter in the history of East-west arms control culminated with the signing of the

55 The Unilateral Soviet moratorium expired on August 6, 1986.
56 Das, n. 35 p. 26.
57 Hans A. Bethe, "Chop down the nuclear arsenals", Bulletin of the Atomic Scientists(Chicago), vol. 45 no. 2, March 1989, p. 12. Bethe was the recipient of Nobel Prize for Physics in 1967.

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INF Treaty, its proper designation being 'Treaty between the USA and the USSR on the elimination of their intermediate-range and shorter-range missiles.'⁵⁸

The INF Treaty envisaged destruction of all US and Soviet ground-based missiles of 500 to 5500 km. range and prohibition of their future production.⁵⁹ "... the elimination⁶⁰ and prohibition of INF missiles would also preclude development of missiles equipped with futuristic weapons like microwave, radiation and laser weapons."⁶¹

The INF Treaty provides verification measures to monitor "mutual compliance with considerable confidence... by satellite imagery and other national technical means."⁶²

The Treaty envisaged elimination of 1,752 missiles (including 470 SS.20 & SS.4 missiles) by the USSR and 859 missiles (including 429 medium-range Pershing-2s deployed in France) by the US.⁶³

"The Treaty has a claim to 'firsts'. It is the first to provide for on-site and short notice verification. It

58 Jonathan Dean, 'The INF Treaty negotiations', SIPRI Yearbooks 1988: World Armaments and Disarmament (SIPRI, Oxford, 1988) p. 357.

59 According to the Treaty destruction of missiles, launchers, and associated equipment for missiles of ranges between 1000-5500 kms. must take place within 3 years and that of missiles in the 500-1000kms. range, within 18 months.

60 'Elimination' means destruction of existing missiles, including their production.

61 Dean, n. 58, p. 386.

62 Ibid, p. 387.

63 V.P. Dutt, 'A Second Detente', Hindustan Times (New Delhi) 6 September, 1988.

is the first arms reduction agreement. former arms control agreement have been limitation treaties..... Again, it is the first time that an entire category of nuclear missiles are to be destroyed and modern ones at that. " 64

The propaganda blitzkrieg by the US " about the supposed unworkability of past treaties (by the Soviet Union) persuaded much of the public opinion that on-site inspection was essential to preventing cheating".⁶⁵ This has become the mainstay of the INF Treaty which augurs well for future treaties. Violation of treaties cannot be levied only at the doors of the USSR. Indeed, the US can be faulted on more counts, viz, the "Star Wars" programme is a gross violation of the Anti-Ballistic Missile Treaty (ABM Treaty) "whereas the Soviets' record of compliance with arms control treaties during the past twenty-nine years has in fact been good..."⁶⁶ This does not of course mean that the Soviets have a clean slate. For example, the giant radar unit in Siberia is considered to be a violation of the ABM Treaty (1972).

Even after consigning the intermediate-range and short-range ground-launched missiles "into history's waste-bin"⁶⁷ Europe will be far from being denuclearized. " In comparison

64 Lt. Gen. A.M. Vohra, 'The Historic INF Treaty', Hindustan Times (New Delhi), February, 10, 1988.

65 Thomas F. Helstead, 'On-Site Inspection provision may be the pact's main flaw', International Herald Tribune (Paris), January 26, 1988.

66 Ibid.

67 Walter Stutzle, '1987—the turning point?', SIPRI Yearbook 1988: World Armaments and Disarmament, p. 3.

with other regions, Europe remains, even after the removal of the INF missiles, positively stuffed with nuclear weapons." 68 This is the most important problem the two superpowers shall have to address to. Hence, a realistic study of the two superpowers strength shall have to be made. In this regard the path shown by Gorbachev becomes all the more important as it is the path to a world free of nuclear weapons.

In the course of the INF negotiations, "the Soviet Union had made a series of concessions, agreeing to each new NATO disarmament demand, in turn NATO was forced into a long overdue reassessment of what exactly it wanted from the arms control process....Once the Soviet Union made it clear that it was prepared to countenance significant reductions and even the total elimination of entire categories of nuclear weapons than the question (arose whether) NATO actually wanted significant nuclear disarmament?" 69 Going by the tenor of the US and NATO's actions it is clear that they are not interested in "complete nuclear disarmament." 70 The US superiority in nuclear weapons is the most vital explanation in this regard. The interplay of conventional and nuclear weapons comes into the picture whenever arms control talks take place.

Even though major concessions were made by the Soviet Union⁷¹, critics in US and the West poured their wrath

68 Christopher Bertram, 'Europe's security dilemmas', Foreign Affairs, (USA) Summer 1987, p. 951.



69 Michael J. Sheehan, Arm Control: Theory & Practice (Oxford, 1988) p. 157.

70 Ibid, p. 157.

71 The breaking of the organic 'linkage' between SDI and progress in arms control/reductions was an act of statesmanship on the part of Gorbachev.

against the treaty. Dr. Henry Kissinger stated that the INF treaty has given the Soviet Union an upper hand over NATO countries (especially the US) because, inter alia, the Soviets have more long-range missiles and that "the Soviet Union has asked the Americans to ask its NATO allies to stigmatize their nuclear weapons".⁷² Clinging to the age-old cliché of the "enemy", cannot remove the dread of nuclear catastrophe but can only aggravate it.

Politically this treaty is important on the ground that the US was doggedly engaged by the Soviet Union in a "productive dialogue" thereby taking the conservative supporters by surprise.⁷³ Shocked right-wingers in the US dubbed Reagan as a "useful idiot" for Soviet propaganda. Psychologically, this treaty has given an impetus to the public opinion which would like to see the beginning of the end of nuclear weapons become more frantic.

This historical perspective formed the backdrop of the Reagan-Gorbachev summit in Moscow on May 29-June 2, 1988. The summit, though disappointing in its specifics, made a progress toward a treaty on strategic arms. Obstacles, on the strategic arms, came on their way in the form of space-based defences and sea-launched  missiles.⁷⁴ The Soviet Union and the US signed nine minor agreements in the course of their talks in Moscow. ⁷⁵

72 Henry Kissinger, "INF Treaty and relations between the Soviet Union and NATO Countries", Times of India (New Delhi), March 14, 1988.

73 C. Raja Mohan, 'Dismantling Cold War', The Hindu (Madras), January 2, 1989.

74 'Comfort in a Gray summit', International Herald Tribune (Paris), June 4, 1988.

75 It included, inter alia, agreements on: (a) to notify each other at 24 hours in advance of future strategic ballistic missile launches; and (b) Joint verification experiments to increase the confidence in each other's ability to verify the yield of underground nuclear test explosions.

The US intransigence once again "dogged" the summit proceedings. Albeit, the Soviet Union "readily agreed to discuss drastic cuts in conventional arms in Europe" (it was the main complaint by the US against the Soviet Union for a treaty on strategic weapons); the US side showed tardiness in signing the strategic Arms Reduction Treaty (hereafter START).⁷⁶ The only achievement, and that too a formal one, being the ratification of the INF Treaty marked by an exchange of documents. The two leaders gave a diametrically different view on the summit- on the one hand, Reagan expressed satisfaction⁷⁷ and on the other hand, Gorbachev admitted that the summit was one of "missed opportunities".

That the pace-setting Soviet leader has displayed a shrewd understanding of American sensitivity should be clear also from the fact that Vietnam's decision to pull out 50,000 of its troops from Kampuchea was announced on the eve of Moscow summit. The visit of the Vietnamese Foreign Minister to Moscow just a week prior to the Reagan Gorbachev meeting could not have been a coincidence. The other regional conflict which has for along strained US-Soviet relations relates to Angola. In this case, too, the Gorbachev touch seems to have been responsible for the first serious dialogue which took place between the foreign ministers and military chiefs of South Africa, Angola and Cuba. The most reassuring part of this concerted bid to unite the Angola logjam and clear the way for the withdrawal of South African and Cuban troops from Angola is the American support for it.

76 Nikhil Chakravarty, 'Continued dialogue the message of Moscow Summit', The Telegraph(Calcutta), June 10, 1988.

77 Reagan took a typical philosophical stance of a "good treaty even if it took some time."

Above all, the fact that the Moscow Summit took place at a time of unprecedented ferment in Soviet society lent a new and constructive dimension to US-Soviet relations. Summit rhetoric apart, the Soviet-American ties have certainly been raised to a higher summit.

"Missed opportunities" in the Moscow Summit did not refrain Gorbachev from taking further unilateral steps toward arms control and disarmament. On December 7, 1988, he announced unprecedented unilateral reductions in Soviet conventional forces in a speech to the United Nations. In a follow-up explanation, the Soviets made clear that the cuts would include "the most up-to-date tanks" and modern equipment.⁷⁸ Later on some battlefield nuclear weapons were also included in 'Cuts', whose removal would coincide with the withdrawal of troops from Eastern Europe.⁷⁹

Gorbachev's statesman-like quality showed another Coup de theatre when his ingenuity gave a new direction to the Soviet military by announcing the novel strategy "defensive sufficiency" or "rational, sufficient defence". This strategy is being backed by concrete steps, viz., making unilateral arms cuts in the Soviets' European forces, by restructuring the remaining forces in a way so that they may be pure defensive. Working overtime, the western defence analysts camp up with two divergent schools of thought⁸⁰

- a) one school of thought believes that the concept calls for radical changes in Soviet military doctrine and is less offense-oriented and less reliant upon nuclear weapons; and

78 William M. Arkin, 'Gorbachev talks but who listens?' Bulletin of the Atomic Scientists, (n. 57), pp 5-6.

79 Ibid. pp. 5-6.

80 Raymond L. Gerthoff, 'New Thinking in Soviet Military Doctrine', Washington Quarterly (Washington D.C.), Summer, 1988.

- b) The other school opines that the nuclear weapons continue to play a vital role in the Soviet strategy and that there has been no change, nay continuity, in the Soviet art of war. ⁸¹

This concept forms the bedrock of the Soviet military strategy. In perspective, this strategy is more defence-oriented as studied with the various unilateral initiatives by Soviet Union shows. It is with reference to this aspect that the stand taken by the Soviets can be better appreciated.

A survey of steps taken by the Soviet Union in 1989, highlights the following initiatives _____

- a) On March 7, 1989, the Soviet Union proposed major East-West reductions in troops and armour in Europe, along with negotiations to eliminate all battlefield nuclear weapons from the continent. A three-phased plan for radical cutbacks was also offered. ⁸²
- b) The Soviet president, Gorbachev, announced on April 7, 1989, that the Soviet Union has decided to halt production of all weapons grade enriched uranium from 1989. ⁸³
- c) On May 12, 1989, Gorbachev announced that the Soviet Union would unilaterally withdraw 500 tactical nuclear weapons systems from Eastern Europe (by 1989) and said that Moscow was ready for total removal of nuclear weapons from the continent by 1991 if the US reciprocated. ⁸⁴
- d) In a radical step (unheard of before) Gorbachev made public for the first time that the country current

81 Leon Goure, 'New Soviet Military Doctrine: Reality or Myth?' Strategic Review (Washington D.C.) Summer 1988. Also see Steven P. Adragna, 'Doctrine and Strategy', Orbis vol. 33 No. 2, Spring 1989, pp. 165-179.

82 'Soviet proposals on arms, troop cuts in Europe', Times of India (New Delhi), March 8, 1989.

83 'Gorbachev vows to stop arms-grade uranium production', Times of India (New Delhi) April 8, 1989.

84 'Soviets to remove 500 N-missiles', Times of India (New Delhi), May 13, 1989.

military spending stood at 77.3 billion roubles and announced a 14 per cent (10 billion roubles) cut and called for further reduction in it. ⁸⁵

- e) Gorbachev announced that Moscow was ready for further unilateral cuts in its short-range missile via NATO alliance was prepared for talks on reducing them, in his address to the twenty-three member Council of Europe (first eastern bloc leader to do so). He reiterated the promise that his country would remain true to the ideal of a non-nuclear world. ⁸⁶
- f) The Soviet Union voiced its readiness to 'radically reduce or completely destroy' the superpowers' stock of the barbaric weapons. ⁸⁷
- g) In keeping with Gorbachev's plans to reduce Soviet forces, the Soviet military has been cut by 235,500 men and more than 7,000 tanks and 700 airplanes had been withdrawn. ⁸⁸
- h) A major breakthrough was achieved by the US and the Soviet negotiators on a treaty to slash their arsenals of long-range nuclear weapons. This was prefaced by the Soviet Union's decision to drop its demand that a strategic arms treaty and a space defence accord be linked. ⁸⁹

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- 85 'USSR cuts defence budget by 14 p.c.' Times of India (New Delhi) May 31, 1989
 - 86 'Gorbachev offers further arms cut', Times of India (New Delhi), July 7, 1989.
 - 87 'USSR offers to completely destroy chemical weapons', Times of India (New Delhi), September 27, 1989.
 - 88 'USSR cuts military by 2, 35,500 men', Times of India (New Delhi), November 7, 1989.
 - 89 'US, USSR to slash long-range nuclear arsenals', Times of India (New Delhi), September 24, 1989.

(III)

The depth and seriousness of Gorbachev's concern over the dangers of nuclear war and the costs of the military competition cannot be doubted. The Soviet Union is more serious about its interest in engaging the United States in productive negotiations on the arms control than before. But it is also clear that Gorbachev is walking on a tight rope. He cannot afford to have the Soviet Union appear weak or intimidated by pressure; he also feels the need to avoid taking actions that would fuel the notion abroad of a renewed "Soviet threat". This calls for a carefully calculated policy, which has so far been evident. Moreover, the obvious domestic pressures on him, also to be taken into account. While some among the Soviet military leaders appear to support his policies, on the ground that a strong industrial base is necessary for the future of Soviet Power, there are hints that others are concerned about the effect of cuts in their services, stemming from arms control agreements or budgetary reductions.

Several elements in Gorbachev's new thinking bear watching. One is his emphasis upon the "mutuality of security". The Soviet Union can never be secure while the United States feels itself insecure. He has also observed that the Soviet Union has no need of an "external enemy", breaking with Stalin's reliance upon a "capitalist encirclement" to justify military requirements and programmes. His questions about Soviet military requirements suggest that he is beginning to follow logic to the concept of sufficiency. In the broader aspects of foreign policy he has recognized the interdependence of states in the world economy, and has accepted the implication that autarchy is impossible at a time when economic problems are international.

These are "tender shoots" that might wither or flower, depending upon internal and external circumstances. But what they suggest is the possibility that the Soviet Union may have moved a long way from the "two camp" doctrine of hostility toward a period when, if encouraged, it would recognize its own interest in playing a more constructive role in the international system and in international economic institutions. This too could have an important effect on the debate within the United States on the prospects for a more constructive relationship with the Soviet Union.

From the political angle, the "geostrategic interests of the US and the USSR are connected with their allies in Europe- NATO and the Warsaw Pact".⁹⁰ Both would like not to jeopardise these vital interests, particularly in light of the "unprecedented concentration of military forces in Central Europe. (Hence the Soviet) concept of 'the common European home'⁹¹ is a much thoughtful alternative ___ an alternative to break the traditional concept of 'power blocs', since it provides for a deep and asymmetric reductions in Warsaw Pact and NATO forces as well for dismantling the system of military confrontation between East and West.

(IV)

A CASE FOR ARMS RACE MODELLING:

Complex reality of arms race is one of perplexing

90 Sargey M. Rogov, 'Detente is not enough', Foreign Policy, (Washington D.C.), No. 74, Spring 1989, p. 98.

91 Ibid p. 98; Also see N. Malcolm, "The Common European Home and Soviet European Policy", International Affairs (London), vol. 65 No. 4, Autumn 1989, pp. 659-676; V. Stupishin, 'Common European Home and the slogan for a United States of Europe', International Affairs (Moscow), March, 1989, pp. 89-95.

situations faced by the analysts. Here the innovative work of Lewis F. Richardson⁹² on arms race modelling can be useful. Arms race modelling can be useful in three major ways⁹³_____

- a) they can describe and summarize the complex realities of arms races;
- b) arm race models can be a useful tool to help an analyst better understand and predict the complex reality of arms race; and
- c) arms race models can be useful if they can help prescribe a treatment that will achieve a desired end. It is here that the normative aspect of arms race modelling come into sharper focus. Most arms race modelers agree that arms races are costly and sometimes dangerous. Many arms race models point to the conclusion that nations should pursue co-operative efforts to diminish or eliminate the negative aspects of arms race.

Describing, summarization, understanding, prediction and prescription are what an analyst would like to be able to do when studying an arms race. An arms race model is a tool that can aid the analyst in achieving these useful ends. There are different types of arms race modelling approaches available to facilitate analysis of arms race.

Albeit, still an unpopular scientific instrument, arms race modeling is a possible alternative in arms race researches, if used with certain caution. Based on strong mathematical bases, arms race modeling provides necessary insights into the intricacies of the politics of arms race.

92 L.F. Richardson, Arms and Insecurity(Pittsburgh, 1960)

93 Charles H. Anderson, 'Arms Race Modeling: Problems and Prospects', Journal of Conflict Resolution(Newbury Park), vol. 33 No. 2, June 1989, pp. 346-348. Also see U. Luterbacher and M. Ward(eds.) Dynamic Models of International Conflict, (Lynne Rienner, 1985).

CHAPTER - II

ECONOMICS OF DISARMAMENT.

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(I)

THE SOVIET ECONOMIC SCENE:

The Soviet economy has for 7 decades been a 'command' economy where the decisions for the whole economy were made by centrally controlled administrative bodies. The state monopolised all the decisions- it determined the quantity of goods to be produced, the prices were fixed by it, and also, the type of goods to be produced. This 'administered' economy of the Soviet Union has been in stark contrast to the 'market-economies' of the West. Unlike the Soviet type command economy, "the economy under capitalism has the following features: capital-intensive production, private ownership, competition between firms, production for the market(for exchange), wage labor and the extraction of surplus value or profit".¹

In reviewing Soviet economy it is evident that it has undergone rapid industrialization since the late 1920s which has transformed a "backward agrarian country into a powerful industrial state."² It accounts for over 20 per cent of world industrial output, as against 3-4 per cent in the pre-revolution days.³ This development could not be matched in other areas. Extensive deployment of the available economic assets yielded good returns, which in the long run backfired. The average annual economic growth

1 David Lane, Soviet Economy and Society(Oxford: 1985), p. 4. Also see, Alec Nove, The Soviet Economic System (Boston: 1986) for an erudite account of the Soviet economic scene.

2 David Fentrell, "The Soviet Economic Crisis: Prospects for the Military and the Consumer" in Jonathan Alford, The Soviet Union: Security Policies and Constraints (Aldershot: 1985) p. 90.

3 Sachin Mukerjee, "changes in Socialist Economy", World Focus(N. Delhi) vol. 9, No. 10-11-12, Oct.-Nov.-Dec. 1988, p. 26.

rate began to slow down- it fell from 5.1 per cent in 1974-75 to 3.1 per cent in 1984-85. ⁴ Failure to switch over to intensive exploitation of the economic assets is one of the major reasons for this downward trend in economic growth. Currently the common grouse in the Soviet Union is that the essential commodities are in very short supply or sometimes not even available. Soviet Union is thus, today witnessing the classic economic exposition- too much money chasing and too few goods. ⁵ Forecasts about further deterioration in the economic front are now common. And this is not without some justifications.

4 Mukerjee, *Ibid.* p. 25. Gorbachev in his address delivered to the 27th Congress of the CPSU stated that "the targets for economic development set in the CPSU Programme, and even the lower targets of the 9th and 10th five year plans, were not attained.... We had failed to produce a timely political assessment of the changed economic situation, that we failed to apprehend the acute and urgent need for converting the economy to intensive methods of development and for the active use of the achievements of scientific and technological progress in the national economy... the economy continued to develop largely on extensive basis.... (XXVII CPSU Congress; Documents and Resolutions, New Delhi: 1986, p. 29).

5 Western Commentators agree to the fact that in a 'state socialist economies' (a term used by Lane, n. 1. p.3) there is the absence of 'price inflation', albeit they recognise the presence of 'suppressed inflation' where demands of goods exceed the supply of goods at the ruling price- price being fixed by the government. See David H. Howard, 'A Note on Hidden Inflation in the Soviet Union', Soviet Studies, vol. 28, no. 4, Oct. 1976, p. 606.

In the 1970s, the Soviet Union said that its economy grew 5.3 per cent a year, and the central Intelligence Agency(CIA) reported that the growth rate was only 3.7 per cent. These figures have been dismissed by the Soviet economist Grigori Khanin⁶ as being too high. He puts the growth rate at 2 per cent. whereas, in the first five years of the 1980s, the economic growth was abnormally low. The prominent Soviet economist, Abel Aganbegyan, who is now economic adviser of Gorbachev, confirmed in 1988 that "in the period from 1981-1985, there was practically no economic growth".⁷

These shortcomings have been compounded by the fact that the grain production in the Soviet Union is very low. It is said that "a Soviet farmer can feed between 7-9 people on an area of land from which a Dutch farmer could extract food for 1124".⁸ One of Gorbachev's worst nightmares are the empty shelves in the Soviet stores. Since 1965, consumer goods output has risen less than 1 per cent a year. And since 1985, it has been falling by 3 per cent a year.⁹

The more the resources are diverted to military preparations, the less there will be for other things including investments in education and technological

6 N. C. Menon, 'Communism will fall', The Hindustan Times, (New Delhi), February 26, 1990.

7 Ibid(emphasis added).

8 Wolfgang Ahtenburg, 'Arms Control and the future', NATO Review, No. 4, vol. 37, August, 1989. p.3.

9 See Charles Wolf Jr. and Henry S. Rowan(eds), The Impoverished Super Power: Perestroika and the Soviet Burden(Santa Monica: 1990)

innovations_____ activities that contribute to economic growth and the underpinnings of economic and social development in the wider sense. Theoretically, if military expenditure retards growth, investment or productivity or both are likely to be adversely affected. In Soviet Union, as elsewhere in capitalist economies, there is a negative relationship between military expenditure and economic growth, more so when the military expenditure is associated with large outlays on military research and development (R&D) and on extensive military industrial capacity. Military expenditures and investment compete for the available non-consumption resources.

In the strictly economic sense, the output of the military sector can neither be consumed nor invested. In a relatively static economy with slow growth, military expenditures will exert severe inflationary pressures across a wide front. Further, a heavy emphasis on military technology tends to retard technical progress in the areas of economic activity not directly related to the military effort.

In the Soviet Union it is this negative effect of resources being diverted to the military sector coupled with a static economy, that has led to the downward trend of economic growth.

(II)

ECONOMICS OF DISARMAMENT

The structural weaknesses of the Soviet economy is contrasted by the "highly effective defence establishment which, because of its overriding priority has first call on the best available resources, to the detriment of the more mundane sectors of the economy." 10

The increasingly sluggish performance of the Soviet economy, in spite of its tremendous industrial potential and highly skilled manpower, can be perceptively seen in the negative relationship between defence expenditures and the rate of economic growth. Military preparations are an immense economic burden.

In a centrally-planned economy the decision to invest or otherwise is not a problem since the portion of output which is not to be invested is translated to effective accumulation. Hence, in such a condition it is imperative that to "expand arms production it is necessary to divert workers and means of production away from other activities."¹¹ The choice between "guns and butter" and "swords and ploughshares" in such a situation is evident. This implies that it is necessary to sacrifice some activities to increase arms production. In other words, diversion of resources to military expenditure from other uses is necessary to maintain the fluctuating demands of armaments.

The military spending has become a heavy burden on the Soviet economy and the present Soviet leadership is anxious to reduce the military expenditure. It is an obvious fact that disarmament is intertwined with development. Disarmament is a unique way to free the immense resources diverted to the arms race and rechannel the same for accelerating social and economic development. This is clearly reflected in the new political thinking of the Soviet leader, Gorbachev. In the political report of the 27th Congress of the CPSU, Gorbachev emphasised the

11 Massimo Pivetti, 'The Impact of Retrenchment on the American Economy', in David Carlton and Carlo Schierf (eds.), The Arms Race In The Era of Star Wars (London: 1988), p. 82.

"elaboration of principles for utilising part of the funds released as a result of a reduction of military budgets for the good of the world community...." 12

The historical reasons for disarmament_____ to end the arms race and easing the economic troubles____ are again being recognized, thanks to the vigorous and bold diplomatic initiatives taken by Gorbachev.

The Soviet leadership has acknowledged that the burden of defence expenditures is substantive. N. Goryshnikov, a Gosplan official, said in 1984, that "our national income is 63% of the US. Yet it is obvious that we cannot spend less than the US does on national defence.... This means the defence burden of our country is much greater than that of the US." 13

ESTIMATING SOVIET DEFENCE EXPENDITURE: The western specialists differ in their opinions regarding the Soviet defence budget. One school of thought believes that the defence budget of the USSR covers "the cost of weapons, ammunition, technical equipment, fuel, food and other equipment supplied to the armed forces, military schools,... pay of those employed, and the financing of capital construction." 14 whereas, Meier 15 offers a different view - he opines that only non-capital procurement is covered in the defence budget of the Soviet Union, while pay and other costs are covered in the undesignated parts of the state budget.

12 XXVII CPSU Congress: Documents and Resolutions(New Delhi: 1986), p. 97.

13 Quoted in Carl G. Jacobsen, "Soviet military expenditure and the Soviet defence burden", SIPRI Yearbook 1986: World Armaments and Disarmament(SIPRI; Oxford: 1986)p. 263.

14 C.G. Jacobsen, "Soviet defence costs- the unquantifiable burden" in C.G. Jacobsen(ed.), The Soviet defence unions: estimating costs and burden(Oxford: 1987), p.3.

15 N. Meier, "Economic Policy" in A. Brown and N. Meier (eds.) Soviet Policy for the 1980s(London: 1982) pp. 202-207.

The divergent views regarding the Soviet defence budget stems from the fact that secrecy conceals the actual expenditure on defence and related fields. The Soviet budget statistics are "the most impenetrable"¹⁶ and this lead to many conflicting hypotheses aimed at studying the budget estimates of the Soviet Union. This has given opportunity to the western specialists to make "a variety of estimates of Soviet military spending... each based on different assumptions and serving different purposes."¹⁷

In the absence of any concrete official data regarding the Soviet military spending, the western scholars base themselves on two conventional methods aimed at estimating the Soviet national Security expenditures (NSE) in roubles: the direct-costing approach of the Central Intelligence Agency (CIA) and the Stanford Research Institute (SRI) method developed by Stanley Cohn.

The direct-costing approach of the CIA "purports to tell the policy makers how much the Soviets are spending in roubles... by counting weapons, pricing them in dollars, and then converting dollars to roubles by estimated rouble/dollar conversion ratios."¹⁸

Stanley Cohn, on the other hand, accepts the published 'Defence'¹⁹ appropriations and 'Science' expenditures as total USSR outlays for NSE and for civilian research and development (R&D). According to Cohn, the 'Defence' appropriation

16 R. Tullberg and L. Hagmayer-Gaverus "World military Expenditures: The UTO", in SIPRI Yearbook 1987: World Armaments and Disarmament (Oxford: 1987, p. 128.

17 Ibid p. 128.

18 W.T. Lee, The Estimation of Soviet Defence Expenditures, 1955-75: An Unconventional Approach (New York: 1977) p. 5.

19 'Defence' is the Group III of the USSR State Budget.

covers all Ministry of Defence (MOD) outlay, save for (R&D). He believes that 50-100 per cent of the budget appropriations to 'Science' represents all military R&D and space outlays in the USSR. ²⁰

The most commonly accepted and used estimates of Soviet military spending are those presented by the CIA, though it is accepted that the direct-costing methods adopted by the CIA have a 10-15 per cent range of error. It is less than the 35 per cent range of error assigned to SRI method of Stanley Cohn. ²¹

Besides, it is argued "that so-called 'other expenditures' of national income contain current material expenditures of the defence industry rather than the total costs of weapons." ²² This 'hidden expenditure' of the military sector exclude exports of weapons which are clubbed with Soviet national accounts together with export of civilian goods.

Hence, if the above hypothesis is accepted, the total defence expenditure is much more than what the CIA estimates through its direct-costing method. According to a recent CIA estimate, "the Soviet defence burden increased from 12-14 per cent in the early 1970s to 15-17 per cent in the early 1980s." ²³ The former US National Security Adviser, Zbigniew Brzezinski ²⁴, puts it at 19% of its total national output. According to him, this figure was divulged by Edward Shevardnadze in a

20 Ibid p. 22. Abraham S. Becker in Soviet National Income, 1959-1964 (Los Angeles, 1969), is dubious of these published expenditures but has not given his own independent estimates of what the total expenditures may be.

21 O. Steinberg, 'Estimating total Soviet military expenditures: an alternative approach based on reconstructed Soviet national accounts' in Jacobsen (ed.) op. cit., p. 45.

22 Ibid p. 27.

23 Ibid, p. 43.

24 Suedet Deger, 'World Military Expenditure: The USSR' in SIPRI Yearbook 1989, Armaments and Disarmament (Oxford, 1989) p. 151.

discussion with George Shultz. If true, this figure of 19 per cent exceeds the estimated figure given by the CIA which claimed that the Soviet Union was spending around 15-17 per cent of its gross domestic product (GDP) on military.²⁵ However, drawing inferences from this number is fraught with danger; the actual military expenditure calculated from this figure will vary considerably, depending on the measure of national output used, that is, whether rouble or dollar figures are being used as well as on the exchange rates needed for converting figures from one currency to another.

Western scholars express serious misgivings as far as dependence on Soviet figures²⁶ are concerned, which can be manipulated by the Soviet authorities to disguise the figures they would like to hide. On the other hand, the estimates provided by the CIA has also drawn fair amount of criticisms, mainly directed at the CIA's dollar estimates of Soviet defence spending, since they are intended to allow comparisons with US military expenditure. The figures provided by the CIA came under severe scrutiny after 1976 'doubling', when the CIA doubled its estimate of the rouble value of the Soviet military budget because, according to CIA, the previous rouble estimates of the Soviet defence expenditure had been undervalued by almost 50 per cent. The revisions of the cost estimates were

25 Q. Peel, "Soviet Press Publishes Military Spending Figures for the First Time," Financial Times, May 5, 1986.

26 The Soviet Union published only a single line entry for defence in the state budget. This figure was considered uninformative because its scope was not defined and changes in the announced figure did not correspond with changes in the observed level of military activities.

performed in-house by CIA analysts and involved a review of all Soviet defence activities. The explanation provided by the CIA for the revised estimate was that the percentage of Soviet Union's gross national product (GNP) going to defence programmes were larger because the efficiency of the defence sector was much less than previously believed to be.

SYMBIOTIC RELATION BETWEEN DISARMAMENT AND DEVELOPMENT:

Departing from the usual practice of being secretive about the country's military spending, Gorbachev became the first Soviet leader to announce "that the country's current military spending stood at 77.3 billion roubles (Rs 1, 625 billion)..."²⁷ In his report to the congress of People's Deputies he disclosed that "in 1987-88 it was frozen saving 10 billion roubles."²⁸ In a major departure from the past the Soviet President declared that in 1990-91 the military spending would be slashed by another 10 billion roubles or 14 per cent and "urged the Supreme Soviet to review the issue in line with domestic considerations".²⁹

The openness vis-a-vis the military spendings is organically linked with the new political thinking unleashed by Gorbachev. Indeed, the conditions in the Soviet Union, after the great expectations raised by perestroika and glasnost, is such that secrecy prevailing until now has become

27 'USSR cuts defence budget by 14 per cent', Times of India (New Delhi), May 31, 1989.

28 Ibid.

29 Ibid.

redundant". "...the Soviet Union under Gorbachev's leadership realized the implications of... development first, presumably because the stagnation in the Soviet economy was more pronounced than that in the US and western countries." 30

A close interrelationship- both politically and economically - between disarmament and development is discernable. The concept of disarmament for development is based on the realisation that real disarmament can stop or greatly reduce the huge waste of resources on war preparations, etc. Disarmament releases additional material and intellectual opportunities for accelerating social and economic development. In the Soviet Union, the arms race had a tremendous negative impact on its economy. "Its best brains(have been) devoted to defence R&D(since) the cold war has cut off the Soviet Union from access to Western technology and put various constraints on trade and financial flows which would have contributed to its economic growth." 31

The process of restructuring in Soviet Union is intrinsically related to the peace offensive launched by Gorbachev. Given the bad shape of the Soviet economy it is necessary that real resources- monetary, manpower and R&D- are released from the military section. Gorbachev's civilian economic reform programmes 32 are technology- intensive. To achieve this, Soviet Union needs enough resources. For example, it is estimated that every year 20, 000 dollars are spent on a single soldier. 33 These resources can be used to the advantage

30 K. Subrahmanyam, 'Logic of Disarmament', World Focus (New Delhi), vol. 9, no. 10-11-12, Oct.-Nov.-Dec. 1988 p. 42.

31 Ibid. p. 844.

32 See the text of the Political Report of the CPSU Central Committee to the 27th Congress of the CPSU in XXVII CPSU Congress, (n.12), pp 27-67.

33 Ivan Kovalenko and Raisa Youzouhammadov(eds), Disarmament for development(New Delhi: 1989) p. 5.

of the Soviet Union's general economic health and dynamism, which are "pre-requisites for sustainable military might."³⁴

At the Third special session on Disarmament in New York in 1988, the Soviet Foreign Minister Eduard Shevardnadze "pointed out that the disarmament measures the Soviet Union had taken had already released considerable resources for the internal social development."³⁵ But at the same time it needs to be emphasised that the initial expenses that shall be incurred during the elimination process of various weapons would be considerable. Albeit in the long run the advantages that would accrue from disarmament would outweigh the money spent during the various stages of elimination. "... more money could be saved because of not having to fund the training and maintenance of the military personnel servicing these weapons."³⁶

The INF Treaty has provided the opportunity to the Soviets to remodel the various military trucks, tractors and other special towing vehicles according to the needs of the civilian industries. One of Soviet enterprises, the Odessa Tractor plant, in 1986 joined hands "with a Swiss-West German company, 'Liebherr' (to) convert SS-20 missile transports vehicles chassis into giant mobile telescopic cranes".³⁷ In some of the factories which were earlier producing missiles and defence items are now being used to

34 David R. Jones, 'The Soviet defence burden through the prism of history' in Jacobsen(ed), n. 14 p. 171.

35 Ernest Obninsky and Albert Shelonkov, 'Essence of the problem in Kovalenko and Touzmohammedov(eds.) n. 33 p. 20.

36 Obninsky and Shelonkov, n. 35. p. 21.

37 Tapan Das, 'After the INF Treaty', Hindustan Times, October 9, 1988.

produce " high quality and chronically short-supplied consumer goods like washing machines, fridges, bicycles, etc."³⁸

Besides, highly skilled workers, technicians, engineers and scientists can now use their skill in the development of the economy by productively participating in various civilian sectors. The resources from military R&D can be effectively used in the civilian industries and factories. The " substantial savings of financial, material and labour resources... will greatly offset the initial expenses".³⁹

DEFENCE SPENDING AND DETENTE: According to the CIA estimates the annual rate of growth of defence spending in the Soviet Union declined to about 2 per cent during 1977-83 from 4-6 per cent during 1965-76, calculated in constant 1970 roubles.⁴⁰ Coupled with this decline was the lessening of the procurement of military hardware, which " levelled off during 1975-82."⁴¹ This has resulted in maintaining the share of Soviet defence spending in the decelerating Soviet GNP at roughly 12-14 per cent during 1977-82.⁴²

According to Dessai, the Soviet " urgings for a return to Detente" is a strategy of a return to external borrowing

38 Ibid.

39 Obminsky and Shalenkov, n. 35, p. 22. It is claimed that there will be a net saving of around 300 million roubles from intermediate range missiles reductions, which is to spent in the 'social sphere', specifically, housing constructions. It is estimated that about 30, 000-40, 000 flats will be built with the money.

40 For a comprehensive analysis of the alternative estimates of Soviet defence spending and defence share of GNP, see A.S. Becker's Sitting on Bayanata: The Soviet Defence Burden and the Slowdown of Soviet defence spending (Santa Monica: 1985), pp. 3-22.

41 P. Dessai, The Soviet Economic: Problems and Prospects (Oxford: 1987) p. 39.

42 The revised estimates by the CIA (1986), using 1982 rather than 1970 prices, suggest a slightly higher range of 15-17 per cent instead.

and importation of credit financed know-how".⁴³ She perceives a logical relation between the confrontational atmosphere during the first Reagan administration and the normalised relations between the two superpowers in the later half of the 1980s. Desai and Galbir Singh have shown that "productivity of the imported equipment is substantially higher than that of the domestic equipment, but by a more plausible factor ranging upto five times (by deploying) general production function, and an augmented data set." ⁴⁴

Albeit it is difficult to draw inferences from the substantial initiatives taken by Gorbachev in the field of arms control, it can be safely presumed that there is more of sincerity of approach rather politeness to outwit the Americans and its allies in a bid to partake technical know-how from the West. Even the western scholars accept that the Soviets are not lagging behind as far as modern technologies are concerned. The advances made by the Soviet Union in the field of armaments and military R&D are enough evidence of its capability to match the west in science and technology.⁴⁵

Detente, on the other hand, will allow the Soviet Union to furbish its economy. Moreover, it provides for the elimination of the strongest motive for bid to the friendly countries. Indeed, the Soviet Union is now a heavy borrower of funds. No wonder, Gorbachev has found it necessary to state that "the Soviet Union was ready

43 Desai, n. 41, p. 49.

44 Ibid, p. 50.

45 "A new invention is recorded every seven minutes in the USSR, and as many as 60 countries use Soviet Licences", Mukerjee, n. 3, p. 26.

No wonder, Gorbachev has found it necessary to state that "the Soviet Union is ready for inclusion of its economy in the world economy on a mutually beneficial and equal basis." ⁴⁶

(III)

THE IMPROGLIO:

For years, the Soviet defence sector has competed with civilian heavy industry. In the process it received a substantial share of metallurgical products and a much larger share of machinery. The defence industry and the armed forces limited the growth of the civilian labour forces, with the former taking the major share of the highly skilled manpower.

The "opportunity costs of defence," ⁴⁷ which, otherwise could have accrued to the society, have been extremely high for the USSR. A top ranking Soviet social scientist, N.N. Inozentsev has acknowledged in 1979 that "the Soviet Union, possessing a total economic potential that is less than the USA, has been able.... to achieve equality and parity with the USA in such a vitally important sphere as strategic arms." ⁴⁸ Naturally the opportunity costs of defence is much higher for USSR than in the USA. Moreover, due to slow economic growth in the last decade, the opportunity costs of Soviet defence activities have increased considerably.

Due to the high cost of defence at a time of slow growth of national income, the Soviet Union is undergoing a major capital scarcity. This has jeopardised the Soviet industries in general.

46 "USSR cuts defence budget by 14 per cent", n. 27.

47 Myron Rush, "Impact and Implications of Soviet Defence Spending in H. Sonnenfeldt(ed.), Soviet Politics in the 1980s (Boulder, 1985), p. 131.

48 Quoted in Ibid, p. 131.

In a supply-constrained economy, like that of the Soviet Union, aggregate demand is too high relative to total output, and, the resources devoted to the military must be at the expense of some other category of national expenditures. In the Soviet Union, the consumer sector thus suffered, when defence spending has been forced up to increased levels due to the arms race between the super powers. Hence, any economic reform aimed at increased consumption has to entail reductions in the defence budget. The interrelationship between Soviet domestic economic liberalization and international security concerns was emphasized by the foreign Minister Eduard Shevardnadze as, "The main thing is that the country not incur additional expenses in connection with the need to maintain its defence capacity and protect its legitimate foreign policy interests." 49

It follows from the discussion that the general economic repercussions of defence spending are considerable. Exposure to the negative effects of the lasting arms race is immense, as also to the damage emanating from high-quality resources being absorbed by defence. The burden of defence decelerates economic growth and thus narrows the physical framework for comprehensive satisfaction of the needs and requirements of the general public. It blocks manpower urgently required for economic development.

(IV)

A CASE FOR CONVERSION OF MILITARY ECONOMY:

Conversion of military economy concerns "the release and utilisation of resources currently being consumed by the arms race for peaceful purposes." 50 This process has an

49 Quoted by Dager, n. 24.

50 Vevgeny Bugrov, 'Conversion', in Kovalenko and Jouzmoheymadov ed. n. 33, p. 59.

important bearing on the ability of a nation to participate in any reversal of the arms race. The INF Treaty provides an opportunity to implement conversion measures effectively.

A military economy needs the backing of a large material and manpower resources, which inevitably creates "a special interest group that is tied to the continuation or expansion of military economy".⁵¹ As far as the Soviet Union is concerned the military economy is different from the civilian economy in that the former gets priority which governs access to every kind of supply for enterprise operation. The managers and engineers of the civilian sector are at a relative disadvantageous position vis-a-vis the powers and privileges of the managers and engineers of Soviet military enterprises.

In the USSR, in contrast to the US and other industrialised west European nations, the industrial reconstruction after the second world war saw an emphasis on heavy industrial base and a collateral military economy. This priority had an important bearing on the civilian industry and its relation to the military and allied heavy industry base.

Growing military spending demands a large supply of labor resources to provide for both larger armies and military industrial expansion. This calls for a reallocation of manpower from the civilian sector. But disarmament releases a large number of manpower which can be productively utilised in the civilian sphere. Inge Thorson, in a United Nation sponsored study of the socio-economic effects of disarmament, said that, "On the key issue of employment, there is... persuasive evidence that virtually all possible alternative to military expenditure and production will result in at least as many and, in most cases, more jobs being created."⁵²

51 Seymour Nelson, 'The Conversion of Military Economy: The USSR', in Lloyd J. Dumas (ed.), The Political Economy of Arms Reduction: Reversing Economic Decay (Colorado: 1982) p. 69.

52 Quoted by Bugrov, n. 50, p. 88.

The jobs lost by general disarmament measures will, in the long run, be compensated by those created in the non-military spheres. For a country, like the Soviet Union, which is undergoing labor shortages, the employment effect of curtailing military expenditures will be equally beneficial.

"Conversion, far from entailing unemployment, is an active counter-agent to unemployment, a powerful job-creating catalyst." ⁵³ As it stands, the dialectics of world development leads humanity to conclusion that it is dangerous, and even impossible, to advance the economy while speeding up the arms race. Thus, it is imperative to put a stop to galloping expenditure on armaments and channelize them into people's everyday needs. The present-day arms race is a dog-eat-dog competition in the elaboration and production of sophisticated mass-destruction weapons on which billions and billions of dollars (or roubles) are squandered. Economically speaking expenditures on the arms race create relatively few additional jobs. Conversely, employment in the military sectors leads to job losses in the civilian sectors.

In Soviet Union (or for that matter other socialist countries) reduction in the size of armaments would be a welcoming feature. In a socialist economy there is no private capitalist who are in the business of arms production. All such production is carried on totally at state-owned plants and, hence, no groups or individuals have any stake in the maintenance of an arms industry. Since many branches of the Soviet economy are perennially short of skilled labour, it would economically beneficial to divert this skilled manpower to the civilian sectors. As Korbeyev points out, "As soon as the prospect of an agreement on arms reductions became a reality the Soviet State Planning Committee (Gosplan) would be able to start planning the necessary measures. Its plans would evidently specify the main lines of the

conversion of each defence industry with due regard to the likely requirements of the economy for the post-conversion period. * 54

Conversion is neither too complex a process nor by any standards a utopian dream. Naturally it would entail a series of measures in the technological economic and social spheres, which is not likely to affect the economy adversely. It is pointed out that what would have to be done in the course of converting arms production is constantly taking place, in effect, in the various civilian branches. Actually, in the post-war years, quite a handful of the Soviet defence industry was associated in the production of civilian goods. The end product was generally of a good quality. Hence, now it calls for a greater utilisation of the defence establishments in the civilian sectors.

All these evidences show that conversion is a viable strategy and would not burden the economy or threaten greater unemployment. Rather * conversion would enable humanity to gradually shed the socio-economic yoke of militarisation and to release the resources, that are presently being squandered, for the benefit of all humanity. * 55 conversion is an economic component of disarmament and, hence, would be essential in the event of reversal of arms race. As regards Soviet Union, it would not be difficult to decide on the types and items of alternative production, given the large market for various industrial goods and services needed by the population. Therefore, overcoming temporary difficulties and outlays likely to be involved, conversion

54 Vladimir Kenobeyev, "Benefits of Converting Arms Production," International Affairs (Moscow), no. 2, February 1968, p. 40.

55 Burgov, n. 50., p. 93.

has to be carried out on a major scale to benefit the
humanity and improving the international climate.

CHAPTER - III

**THE POLITICS OF OUTER SPACE: SOVIET PERCEPTION
OF SBI.**

CHAPTER-IIITHE POLITICS OF OUTER SPACE: SOVIET
PERCEPTION OF SDI

(1)

THE ISSUES:

On 23rd March, 1983, President Ronald Reagan of the United States of America (USA) made a speech that was stunning and portentous, in which " he called on American science to create a total defence against ballistic missiles that would have characteristics and qualities such that it could support a radical change in nuclear strategy. " ¹ This controversial and seemingly science fictional proposal was officially named as 'The Strategic Defence Initiative' (SDI). ² In his speech Reagan observed:

Let me share with you a vision of the future which offers hope. It is that we embark on a program to counter the awesome Soviet missile threat with measures that are defensive... what if free people could live secure in the knowledge that their security did not rest upon the threat of instant US retaliation to deter a Soviet attack, that we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies?

1 Herbert F. York, " 'Star Wars': Origins and Overview in David Carlton and Carlo Schaefer, ed., The Arms Race in the Era of Star Wars (London: 1988). p. 213.

2 Popularly the effort is called 'Star Wars' since "the technical ideas underlying it involve intercepting missile warheads while they are in outer space travelling along the long ballistic trajectories that connect their launchers with their targets..." (ibid).

.... I call upon the scientific community in our country, those who gave us nuclear weapons, to turn their great talents now to the cause of mankind and world peace, to give us the means of rendering these nuclear weapons impotent and obsolete.³

The concept of SDI had come about mainly because of an idea that Edward Teller, popularly known as the 'father of the Hydrogen bomb', put forth before Reagan, wherein " he proposed building a kind of 'death-ray' that could destroy missiles in space. It would use nuclear explosion to produce intense X-rays that could zap Russian missiles heading toward the USA. " ⁴ These were some of the initial proposal which caught the imagination of the American defence department.

THE NATURE OF SDI: The SDI was conceived as a research and development effort carried out by the USA to examine "the technical feasibility and development of hardware systems for an advanced ballistic missile defence(BMD) system primarily oriented against the Soviet Union. " ⁵ This system, when deployed, could be both ground- and space based. It comprises of several layers of defensive

3 Cited in Robert Travis Scott, ed., The Race for Security: Arms and Arms control in the Reagan Years (Lexington, Mass: 1987) p. 39. (emphasis added).

4 Thomas R. McDermough, Space: The Next Twenty Five Years (New York: 1987), p. 51.

5 Ronald G. Humber, The Soviet Space Programme(London: 1988), p. 69.

weapons systems which includes lasers (Nuclear X-ray, excimer, free electron, chemical infra-red), particle-beams (neutral and charged), microwave/radio frequency devices, Kinetic energy weapons and ground-based endo-atmospheric and exo-atmospheric missiles.

The various layers of the system are: " the boost phase when missile velocity reaches its terminal value (6-7 km/s); the post-boost phase where multiple independently-targetable re-entry vehicles (MIRVs) and decoys are deployed; the midcourse phase in which all objects released from the intercontinental ballistic missile (ICBM) bus travel in space on their ballistic trajectories; and the terminal re-entry phase where warheads, decoys and other penetration aids rapidly enter the atmosphere towards the intended targets." ⁶ Each phase would require successful surveillance, target acquisition, tracking, guidance of the weapons and kill mechanisms. Moreover, advanced space-based command, control, communications and intelligence (C³I) will be used. Ultimately, the objective of SDI is to provide for the foundations of a complete and foolproof area defence against Soviet ICBM and submarine-launched ballistic missile (SLBM) attack on the US and its allies.

According to the system's blueprint, the Strategic Defence Initiative Programme (SDIP) consists of five major programme elements (PEs): ⁷

" Surveillance, Acquisition, Tracking and Kill Assessment (SATKA), aims to develop and demonstrate the capabilities required to detect, track and discriminate objects in all phases of the ballistic

⁶ Ibid.

⁷ Rip Bulkeley and Graham Spinardi, Space Weapons: Deterrence or Delusion? (Cambridge: 1986), p. 289.

missile trajectory. "

"Directed Energy Weapons(DEF), aims to develop and demonstrate the technologies for ground-based and space-based laser weapons system, space-based neutral particle beams, and nuclear-bomb-pumped systems for BMD. "

"Kinetic Energy Weapons(KEW), aims to develop and demonstrate technology for kinetic energy weapons, i.e. for interceptor missiles and hypervelocity gun systems which rely on " non-nuclear kill" to destroy the target."

" Systems Concepts and Battle Management/C³, aims to develop survival-enhanced information processors, real-time software systems, advanced communications technology, battle management computational algorithms, and policy-responsive weapons-control-and release capabilities. "

" Survivability, Lethality, and Key Support Technology, aims to develop and demonstrate technologies for space-system survivability, space prime power and conditioning, and space transportation/logistics. "

The analysis of the SDIP makes it clear that SDI is far from being just a defensive system. The programme, it is apparent, involves ICBMs and " is a strategy for war...(because in a situation where nuclear weapons are already extinct and obsolete, or where nations are living together at peace..."⁸ the necessity of a " space fortress" against possible Soviet ballistic missiles is certainly meaningless. If the ABM debates prior to 1983 is any indication, the SDI is envisaged to be used " as a spring board from which to take the strategic offensive arms race over

⁸ Paulus Rex Gregorios, " Not Horn in Stone: Three aspects of the Soviet Response to SDI", in Rakesh Gupta, ed., SDI: Aims, Implications and Responses (New Delhi: 1988), p. 74.

emerged and upward in the latter part of the century. " 9
 When the SDIP is read with the Directive on US Space Policy, 1982, 10 the picture of the " US space thrust in militarisation of space becomes clear. " 11

While the Directive emphasised the necessity of having anti-satellite(ASAT) capability, to negate the attacker's chances of using space-based systems, the 'Star wars' speech mentioned BMD. BMD battle requires " reliable " kill assessment" system to confirm kills and to enable efficient re-targetting of surviving warheads. " 12 Indeed, the system outlined by the President- dubbed by some as a 'black-box war stepping machine.' 13 - is first and foremost a military technology programme. This 'shield' against nuclear attack obviously increases the chances of the threat of the first strike against the adversary in the absence of a collateral reduction of the former's offensive forces.

It is in the light of this militarisation of outer space, the response of the Soviet Union has to be studied. The champions of space-based laser(SBL), viz, the military,

9 Bulkeley and Spirardi, n. 7, p. 80.

10 The Directive stressed the importance inter-alia, of anti-satellite(ASAT) capability to cut off access to use of space based systems by enemy(s).

11 Gupta, ed. (introduction), n. 8, p. viii.

12 Bulkeley and Spirardi, n. 7, p. 106.

13 Deborah Shapley, " Strategic Doctrine, the Militarization and the 'Semi-militarization' of Space," in Bhupendra Jasani, ed., Space Weapons- The Arms Control Dilemma, (SIPRI, London; 1984), p. 66.

the Congress and the civilian defence community, view space as a new military frontier. The ensuing section tries to address the question whether the attempt by the US to dominate the outer space with SBL has provoked the Soviet Union to go in for a stabiliser 'shield'.

(ii)

THE SOVIET UNION AND SDI:

The public reaction of the Soviet Union to the American SDI has been, not unexpectedly, virulent. The then General-Secretary of the Communist Party of the Soviet Union (CPSU), Yuri Andropov, set the tone of Soviet Union's reaction to SDI when, in an interview with pravda, he emphasised that SDI's missile defences were actually aimed at disarming the USSR by "rendering it incapable of dealing a retaliatory strike." ¹⁴ The change of guards at Kreamlin since 1983 has in no way altered the Soviet perception of 'Star Wars', which they regard as an effort by the US "to acquire a first nuclear strike capability." ¹⁵

The following reactions against SDI can be discerned in the Soviet comments; ¹⁶

- 1) The Soviet leadership, as Andropov's comments indicate have no doubt that SDI is by nature offensive in nature (sic) this is so, in their view, both because it aims at disarming the USSR and making it vulnerable to

¹⁴ Cited in David R. Jones, "Soviet Military Doctrine, and Space in the 1980s," in Carl G. Jacobsen, ed., The Uncertain Course: New Weapons, Strategies and Mind-sets (SIPRI, Oxford, 1987), p. 123.

¹⁵ Ibid.

¹⁶ Ibid, pp. 123-4 (emphasis added)

a first strike, and because the SDI weapon systems in themselves would have a capability against targets in space, and possibly against those on earth.

- 2) They also regard SDI as a catalyst for further strategic arms race, both in space and in terms of ballistic missiles, and predict that even if SDI systems prove technically feasible, new offensive missiles will inevitably be deployed with the capability of penetrating the 'peace shield'.
- 3) Since SDI will upset strategic parity and fuel a new arms race, they brand it as essentially destabilizing.

The Soviets also allege that SDI weapons can have the potential to directly attack 'terrestrial targets'. Yegor Ligachev, the conservative, Soviet leader and one time the most powerful member of the CPSU after Gorbachev, regards ".... SDI(to be) a sword rather than a shield... primarily(meant) for developing qualitatively new types of strategic offensive weapons based on new physical principles..."¹⁷ Indeed the Soviets regard SDI to tip the strategic arms balance with the Soviet Union in favour of the USA, thus giving the former no chance to hit back.

Moreover, the American assertion that SDI allegedly guarantees invulnerability from nuclear attack weapons does not carry weight with the Soviet Union. Gorbachev in an interview to Time in 1985, described this assertion to be "sheer fantasy and a pipe dream."¹⁸ Even the former

17 Ronald D. Humble, The Soviet Space Programme, (London: 1988), pp. 69-70.

18 See Mikhail Gorbachev's Answers to Questions put by Time Magazine (Moscow: 1985), p. 6.

leaders of the Pentagon and those associated with the National Security Council points to the danger of an unnecessary and destabilising acceleration of strategic arms race. The 'total asteroid defence' of American population - as the Star Wars has been made out to be the American public - is a "pure technological fantasy",¹⁹ according to the US liberals. Harold Brown and James Schlesinger, both former Defence Secretaries in 1970s, and Brent Scowcroft, former national security adviser to the President, expressed fears of inevitable retaliatory measures by the Soviet Union and expressed concern over the fact that the striving "to build strategic defenses might weaken international stability and pose worse dangers of war."²⁰

The long standing Soviet calculus of argument against SDI centers around the assertion that SDI would not guarantee invulnerability from nuclear weapons and hence will stand in the way of the elimination of nuclear weapons. Gorbachev expressed fears that SDI will "Whip up the arms race in all areas, which means that the threat of war will increase."²¹ In a similar vein Gorbachev stressed that;

The possibility of the militarisation of outer space signified a qualitatively new leap in the arms race which would inevitably result in the disappearance of the very notion of strategic stability - the basis for the preservation of peace in the nuclear age. A situation would develop when fundamentally

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- 19 C. Raja Mohan, "The Tragedy of Nuclear Deterrence and Star Wars", in Gupta, ed. n. 8, p. 50.
- 20 Cited in S. Menshikov, "What is Behind the Star Wars' Debate?", International Affairs (Moscow), no. 6, June 1985, p. 74.
- 21 Cited in Zdenek Kavan, "Gorbachev and the world - the Political side", in David A. Dyker, ed., The Soviet Union Under Gorbachev: Prospects for Reform (New York: 1987), p. 177.

new decisions, irreversible in their consequences, would in fact be undertaken by computers, without participation of human mind and political will, without taking into account the criteria of ethics and morality. Such a development of events could result in a universal catastrophe....²²

Though many western analysts are of the opinion that the exact shape of the SDI may come as a surprise, it is widely perceived as likely to depend mainly on advanced space-based systems. Nonetheless the SDI, notwithstanding the fact it would spiral the arms race, is expected to cause concern to the Soviets on three grounds:²³

- 1) the threat of competition in areas of expensive high technology where the US is at a comparative advantage;
- 2) the risk that certain BMD deployments could erode or even negate established Soviet force advantages in Europe and at the level of the US-Soviet intercontinental balance, and that the SDI could lead to other strategic challenges; and
- 3) the possibility that the SDI could lead to a fundamental shift in western attitudes regarding the value of strategic defence.

It is in the light of these disturbing features of that the attitude of the Soviet Union vis-a-vis the SDI has to be seen. To maintain the parity in nuclear arms, the Soviets would like the US to abandon SDI. In the absence of a ban on the development of the space-strike weapons, an unchecked arms race will start. Moreover, the Soviet

22 Gorbachev in the Report to Supreme Soviet, 27th November, 1985. Cited in *ibid.*

23 David S. Yost, Soviet Gallistic Missile Defence and the Western Alliance (Cambridge, Mass: 1985), p. 202.

Union cannot rest on "peaceful assurances" by the US leader. Adoption of counter-measures ²⁴ on the part of the Soviets will be seen to be justified. But, in spite of the bellicose attitude of the US, Kremlin has displayed uncharacteristic flexibility by taking unprecedented steps in unilateral arms reduction measures. " It is, indeed, in the struggle against SDI the Gorbachev has perhaps displayed most flexibility. The initial line established some time before his succession was to make all arms control agreements conditional on the abandoning of SDI... (in the absence of) the required results, it was somewhat modified soon after. " ²⁵

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~~_____~~ The opposition of the Soviet Union to the 'Star Wars' project stems not from the fear that it would be unable to match the US project, but is in consonance with the new thinking of Gorbachev, which emphasizes looking for a way out of the nuclear dead end not by creating a

24 In an interview to New York Times, December, 1, 1987, Gorbachev observed: " Practically, the Soviet Union is doing all that the US is doing, and I guess we are engaged in research, basic research, which relates to those aspects which are covered by the SDI of the US. But we will not build an SDI, we will not deploy SDI and we call upon the US to act likewise(emphases added).

25 Kavan, n. 21, p. 179.

new "super weapon" but by "keeping weapons out of the outer space. . ." ²⁶ Kuznetsova and Orlov observe, "The Soviet Union has unambiguously expressed its attitude to 'Star Wars' and its advocates, emphasizing that the danger of SDI lies in that it paves the way for the creation of a new generation of strategic weapons which can emerge as a means of aggression even more sinister than nuclear weapon." ²⁷ Strategic stability would be rent asunder if SDI becomes a reality. It would, moreover, create a global disorder, because all decision then would be made by computers thereby negating all ethics of international politics. It would tend to undermine human decisions and, hence override political and other related considerations.

Soviet scholars, like Y.P. Velikhov, ²⁸ allege that the inherent effects of the SDI, viz., the increased risk of a preemptive strike, the likelihood of wrong and fatal decisions in crisis, &c. would lead to serious undermining of strategic stability even if rough parity in strategic forces were preserved. Furthermore, the eventual deployment of strategic "defensive systems" would, most certainly, trigger a chain reaction in the development of new weapon systems. It would lead to unprecedented confusion in the strategic balance, and, ultimately, uncertainty in political-military decision-making. As Somov rightly remarks, "(this) derailed political thinking... is revealed... in the

26 M. Chernyshev, " 'Star Peace' Vs 'Star Wars' ", International Affairs (Moscow), no. 9, September, 1986, p. 89.

27 Irina Kuznetsova and Yuri Orlov, " The Hypocrisy of Washington's ABM Treaty", International Affairs (Moscow), no. 6, May 1987, p. 79.

28 See Yevgeny P. Velikhov, " Space Weapons-Effects on Strategic Stability", Special Section, Bulletin Of The Atomic Scientists, Vol. 40, no. 5, May, 1984 pp. 12-158.

reliance on the force of arms with the use of the latest achievements of science and technology, with the purpose of imposing one's will on others." 29

Given the change in the international politics with the rise of a new period of detente, the presence of tested and deployed elements of space-based systems, even of limited scope, may lead to a paradoxical situation which will undo the INF Treaty and " could considerably hinder the(future) progress of negotiations on strategic arms limitations..." 30 An additional complication in

29 M. Semov, "SDI- Insane Political Thinking In The nuclear and Space Era", International Affairs (Moscow) no. 7, July, 1986, p. 81. Marshall Sergei Akhromeyev, former chief of the General Staff and first deputy minister of defence, in 1986 described the US strategic concept as a means for US leaders " to cover up their aggressive designs" with " deceiving" and " manipulations." Akhromeyev argues that " propaganda aside, the essence of the American Star wars program boils down to the treacherous aim of giving the US the potential to make a first nuclear strike at the Soviet Union with impunity and deprive it, by creating a national antimissile defence, of the opportunity to make a retaliatory strike". (cited in Yast n. 23, p. 226).

30 Valikhov; n. 28, p. 19a. Though the high-priests of anti-denuclearization like Lord Carrington, who warned against the pursuit of " some mythical non-nuclear nirvana", and Henry Kissinger, who feels that " slogans of denuclearization are impossible to fulfil and hence irresponsible", underscore the impossibility of nuclear weapons being dismantled, the fact that the world can do without these weapons is widely accepted. But the Realist school of thought(an international politics) believes that "the intensity of the militarisation of inter-state relations are 'natural'" and hence immutable. This 'realism' is fast becoming unreal. (see C. Raja Mohan, "Perestroika and International Security", Social Scientist(New Delhi), Vol. 17, Nos. 11-12., Nov-Dec 1989, pp. 3-29.

comparison of forces would crop up as the development of space-based anti-missile systems is likely to go in different ways as far as the US and the Soviet Union are concerned, just as in the case of the strategic arms race. Hence, the asymmetries in the strategic potential of the two countries could become increasingly significant as far as the deployment of potential anti space-based anti-missile systems (SBAMS) and counter-systems are concerned.

The American assertion that superpower competition in space would be limited to "defensive weapons systems" is regarded by the Soviets to be highly implausible. Moreover, the argument that military jousting in space was preferable to nuclear war on earth, "relied on the most primitive genre of science fiction and ignored the more probable and cataclysmic scenarios."³¹

Analysing the implications of the SDI from the Soviet angle brings into light one very pertinent point and, that is, the SDI would enable the Americans to recapture the enviable advantage of terrestrial invulnerability that America had enjoyed for the first 60 yrs. of this century.³² It is "just one piece of the

31 Michael McCwire, Military Objectives in Soviet Foreign Policy (Washington: 1987), p. 262.

32 This attempt has been admitted by then US Secretary of Defence, Casper Weinberger, who noted, in a Congressional testimony on February 1, 1984, "If we can get a system which is effective and which we know can render their weapons impotent, we would be back in a situation we were in, e.g. when we were the only nation with nuclear weapons and we did not threaten others with it." (Cited in *ibid*, p. 263). But the calculus of Soviet interest certainly cannot permit the Americans' walking past the Soviets. Andrei Sakharov rightly observed, "... since any strong opponent with a sufficiently high level of technology can always overcome the technical achievements of the other side at all stages and he (the opponent) won't even have to spend as much as the creator of SDI spends".

accumulating evidence that the US was seeking to restore the type of worldwide military preponderance that it had enjoyed for twenty-five years after World War II, including a first-strike nuclear capability. Indeed, US leaders were open in their belief that an American military buildup would constrain Soviet foreign policy behaviour and allow the US once more to operate from a position of strength..."³³

The sine qua non of the SDI is BMD system that would be "a thoroughly reliable defence against incoming Soviet missile."³⁴ Such a system is capable of rendering impotent the existing Soviet deterrent, providing the US with the option of striking at the Soviet Union at any stage of a universal conflagration, without any fear of retaliation. The effectiveness of even a partially working BMD system, when combined with a partial capability to accomplish an incapacitating strike, would make it more likely that the US would launch a nuclear attack on the Soviet Union in an attempt to avert the impending defeat of its forces in the North Atlantic Treaty Organization (NATO).

Given this deadly effectiveness of a possible space-strike weapon, the Soviet Union is not expected to sit quietly. Whether or not the US is successful in establishing a space-based BMD system, the possible Soviet response and its own BMD programme has to be studied along with its 'Star Peace' proposals. Will the Soviets fall in line or will they continue to resist the SDI programme and policy path? This question will be discussed later on in this chapter.

The outburst against the 'Star Wars' project is not just limited to the Soviet Union and its allies. Severe strictures have been passed against the programme

33 Ibid.

34 Ibid.

by some western leaders, scientists and political analysts. "Six thousand and five hundred American scientists, including fifteen Noble Prize winners, have declared that they are going to boycott the SDI and refused to share in strike-space arms research and development studies."³⁵

Similarly, the former US Secretary of State Cyrus Vance has categorically stated that the SDI is neither an "omnipotent" nor "invulnerable shield" but merely an umbrella full of hopes.³⁶

Western analysts, like Sanford Lakoff³⁷ opines that "the effort to find a technological escape from the danger of nuclear war is futile and itself dangerous... because it will destabilize an already dangerous relationship between East and West."³⁸

35 Chernyshev, n. 26, p. 59. They include some scientists who had earlier worked on the famous Manhattan project-the project which was responsible for creating the first atomic bomb, and, of course, lived to see its disastrous consequences.

36 Yevgeni Shashkov, " 'Space-Shield': Myths and Reality", International Affairs(Moscow), no. 3, March, 1987, p. 22.

37 See Sanford Lakoff, " The SDI or Star Wars? An Dulish Perspective ", in F. Wolfram Hartrich, Global Peace and Security: Trends and Challenges (Ogelder, 1987), pp. 171-189.

38 Ibid, p. 181.

furthermore, the supporters of the SDI are politically and morally on a slippery wicket.

On the political ground, the American assertion that a "full-scale SDI" can be administered in such a way as to preserve the arms control regime by cooperating with the Soviets in the deployment of defences is naive, to say the least. Morally, the projects represents at best an illusory effort to overcome the fears of a nuclear holocaust since "there is so little prospect that defensive system could be leakproof, or that the US would share its technology with the Soviets, it is more likely to extend the nuclear arms race, encourage nuclear proliferation, and make arms reduction harder to achieve."³⁹

To use an American boxing cliché the Star War programme is nimble at sparring but rather weak in the clinches. Critics, both within the US and without, agree that the "policy is ill-advised on both technical and strategic grounds....(and that) this appealing mirage will, ironically make us(United States) less rather than more secure..."⁴⁰

The Soviet Union, on its part, has been inconsistent in its description of the program as an offensive weapon. As the Soviets see it, the distinction between strategic offence and defence is largely an artificial one in terms of war-fighting capacity.⁴¹ A principal objective of the

³⁹ Ibid, p. 182

⁴⁰ McDonough, n.4, p. 61.

⁴¹ Yevgeny Velikhov et al, Weaponry in Space: The Dilemma of Security(Moscow, 1986), p. 69.

offence in a nuclear war is to limit the damage the adversary can inflict, and this is also the role of defence. The Soviets also emphasize that "US defensive weapons in space could be used not only to attack Soviet missiles but also to destroy Soviet cities and other ground and air targets; that is, that SDI devices are intended to be offensive 'space-strike' weapons..." 42

SDI AND THE ABM TREATY: The anti-ballistic missile (ABM) Treaty, though ambiguous, in some instances, imposes a number of constraints relating to the development and testing of ABM systems and their components. "Current and planned US ballistic missile and space defence programmes are on a collision course with some of these constraints, and are consciously being designed to exploit the ambiguity of others." 43 The Soviets have complained that a number of the SDI programme's publicly announced test plans may go beyond what is permissible under the treaty and that the SDI research programme represents an intention to deploy large-scale defences that is tantamount to a violation of the ABM Treaty.

There is no doubt that deployment of an ABM system with space-based components would violate the prohibitions contained in Articles III and V. 44 Even a nationwide ABM

42 Alan B. Sherr, The Other Side of Arms Control: Soviet Objectives in the Gorbachev Era (Boston: 1988) p. 225.

43 Christopher Paine, "The ABM Treaty: Looking for the Loopholes," Bulletin of the Atomic Scientists vol. 39, no. 2, August/September, 1983, p. 13.

44 Article III provides that, "Each party undertakes not to deploy ABM systems or their components except that: (a) within one ABM system deployment area having a radius of one hundred and fifty kilometers and centered on the party's national capital, a

system would also violate Article I.⁴⁵ Though the Treaty forbids the development of any ABM systems, " (the) word 'research' is not found in the Treaty or its supporting

party may deploy: (a) no more than one hundred ABM launchers and no more than one hundred ABM interceptor missiles at launch sites, and (2) ABM radars with no more than six ABM radar complexes, the area of each complex being circular and having a diameter of no more than three kilometers; and (b) within one ABM system deployment area having a radius of one hundred and fifty kilometers and containing ICBM silo launchers, a party may deploy: (1) no more than one hundred ABM launchers and no more than one hundred ABM interceptor missiles at launch sites, (2) two large phased-array ABM radars comparable in potential to corresponding ABM radars operational or under construction on the date of signature of the treaty in an ABM system deployment area containing ICBM silo launchers, and (3) no more than eighteen ABM radars each having a potential less than the potential of the smaller of the above-mentioned two large phased-array ABM radars". Under Article V, each party undertakes " not to develop test or deploy ABM systems or components which are sea-based, air based, space based, or mobile land-based" and not to develop, test or deploy ABM launchers capable of firing more than one missile at a time or rapidly reloadable launchers.

45 Article I(2) lays down that the parties undertake not to deploy ABM systems for the purpose of nationwide defence, nor to provide a base for such a defence, and not to deploy a localized ABM defence except in accordance with the treaty.

documents... (and moreover it is) impossible to monitor activity inside laboratories satisfactorily..."⁴⁶ This loophole is a convenient alibi for the US to continue research and development inside the laboratories. Indeed if the ABM Treaty will be stretched to the limit by contemplated test of the SDI systems..."⁴⁷

The Reagan administration maintained " that a broad interpretation of the ABM Treaty would allow the development and testing of space-based BMD systems " based on other physical principles." ⁴⁸ Linguistic ambiguities in the Treaty and the Agreed Statement D of the ABM Treaty which states that " specific limitations" of " such systems and their components would be subject to discussion" and " agreement" in accordance treaty-specified procedures. ⁴⁹

Strict reading of the ABM Treaty certainly does not allow the Star Wars programme much room for manoeuvre. So much so that the US officials have been talking of appropriate modifications to the treaty. ⁵⁰ No wonder the Americans are feeling uneasy with the restrictions put on the space-based weapons, inter-alia, by the Treaty. To cap it all, the Soviets have been rejecting the US position. In Akhromeyev's words, the ABM Treaty is " the basis on which strategic stability and international security rest....

46 Bulkeley and Spinardi, n. 7, p. 215.

47 Lakoff, n. 37, p. 182.

48 Yost, n. 23, p. 215-6.

49 Ibid, p. 216.

50 US position, as set forth by Paul Nitze and Abraham Sofaer. Cited in *ibid*, p. 217.

The USSR is strictly observing all commitments under the treaty and is not doing anything that would contradict its provisions. " 51

The US argue that only " experimental" technologies and " adjuncts" are being tested and developed and not any functional ABM systems. But even this argument " fails to respect the overall objective purpose of the Treaty." 52

Article V forbids the development of all systems or components other than the fixed, land-based variety. Going by this, the violation of the ABM Treaty by the US, as far as the Star Wars programme is concerned, cannot be denied. Hence, even if the SDI were never to be successful (the success or otherwise of the SDI is into the future), the very fact that such a programme is actually underway is sufficient to contravene the ABM Treaty.

PERSPECTIVE OF SOVIET BMD: The supporters of the SDI, both within America and without, are dismayed, perhaps justifiably, at the hullabaloo raised by the Star Wars Programme, whereas, they allege, that the Soviet BMD programme has maintained a low profile and thus kept themselves away from the critical eyes of the world. ⁵³ Sayre Stevens, a former deputy director of the Central Intelligence Agency (CIA) maintains

51 Cited in *ibid*, p. 217. The US tends to disagree with the official Soviet position which denies USSR having violated the ABM treaty and accuses the US of various violations. On the other hand, the US has alleged that the Krasnoyarsk radar is a violation of the ABM Treaty.

52 Bulkeley and Spirzedi, n. 7. p. 221.

53 *Ibid*, p. 142.

that there remain "many uncertainties about the Soviet BMD programme its achievements, technical objectives, and overall intent." 54 Western analysts contend that these "uncertainties" are mainly due to "Soviet secrecy". 55

Those who favour the pursuit of Star Wars justify their stand by pointing to the Soviet Union's existing space weaponry and allegedly static doctrine of 'anti-space defence' (prativokosmicheskaja Oborona or PKO). 56 Soviet Union's alleged capabilities in BMD and space were sufficient for the US to conclude that the former "seems to possess, or seemed on the verge of possessing, a truly formidable defensive system that will reduce seriously the credibility of the US posture of deterrence through assured retaliation." 57

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- 54 Sayre Stevens, "The Soviet BMD Programme", in Ashton B. Carter and David N. Schwartz, ed, Ballistic Missile Defense (Washington, D.C.: 1984), p. 183.
- 55 Rebecca V. Strode, "Strategic Issues and Soviet Foreign Policy", in Gerrit U. Gong, Angele E. Stent and Rebecca V. Strode, eds., Areas of Challenge for Soviet Foreign Policy in the 1980s (Bloomington: 1984), p. 97, allege that the information provided by the US to the USSR in the SALT II negotiations "enhanced the Soviets' ability to jam American electronic equipment used to monitor Soviet ABM tests..."
- 56 Jones, n. 14, p. 93.
- 57 Ibid.

The US calculus of interest, which had a long-standing interest regarding ABM systems, took this as an alibi to develop a so-called defensive system of their own "to preserve our nation and the values it has stood for, so that the course of US history may not end in the smouldering ruin or the emaculated shell of a defeated nation, but in the final triumph of its Judaeo-Christian and democratic ideals." 58

Basic research on BMD by the Soviets began shortly after the end of World War II. 59 It is believed that the Soviet's attention towards BMD was first drawn when they were working on long-range ballistic missiles. 60 Soviets have come a long way from 1958, when the American U-2 reconnaissance pictures of the Soviet BMD research centre showed "primitive" BMD radars under construction. 61 The US Department of Defence (DOD) in 1987 reported that the Soviets are in a position to test components of ground-based lasers for a possible large-scale deployment to begin in the early "the early 1990s" and deployment of an operational ground based BMD laser to follow in "the late 1990s or after the year 2000." 62

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- 58 J.S. Lockwood, The Soviet View of US Strategic Doctrine: Implications for Decision Making (New Brunswick; 1985) pp. 182-3.
- 59 Stevens, n. 54, p. 104.
- 60 Sidney Graybeal and Daniel Goure, "Soviet Ballistic Missile Defense (BMD) Objectives: Past, Present and Future," in US Arms Control Objectives and the Implications for Ballistic Missile Defense, proceedings of a symposium held at the Centre for Science and International Affairs Harvard University, Nov 1-2, 1979 (Cambridge, Mass; 1980), p. 70.
- 61 John Prados, The Soviet Estimate: US Intelligence Analysis and Soviet Strategic Forces (Princeton, N.J.; 1986), p. 152.
- 62 Cited in Yost, n. 23. p. 55.

The US concern is heightened by the equivocal language of the official Soviet position. This is further quashed by unclear pronouncements. Sometimes the Soviets go so far as to claim that they have "attack space weapons". While on other occasions they give out "the impression that weapons might be placed or employed(etc) in space are what really matter..."⁶³ Hence most western analysts agree that the continuing interest of the Soviet Union in BMD is mainly responsible for substantial funding for the research and development on new ABM missile systems.

Some American experts "insist that the Soviet Union is the only nation with a standing space defence capability...by pointing to an existing ASAT system, to one(or two according to the US DOD) ground-based laser with an alleged capability of attacking satellites in various orbits, and to the possible use of the USSR's Galosh ABM system in an anti-satellite role."⁶⁴ The DOD points out that the Soviet Union maintains the world's most elaborate and comprehensive system of early warning and air defence, comprising many radar installations and also operates the only deployed ABM system.

With this allegedly respectable capability, the western analysts fear that the Soviets, in the future, may(given their advanced directed-energy research) develop space systems employing lasers and particle beam weapons, as well as Kinetic energy weapons, in space itself. But at the same time they maintain that the possibility of a Soviet laser weapon tested in space could "in the early 1990s", a comprehensive space-based BMD system would still be far away.⁶⁵

63 Bulkeley and Spierdi, n. 7, p. 155.

64 Jones, n. 14, p. 95.

65 Yost, n. 23, p. 57.

SOVIET SDI RESPONSE: Probably one of the most important political problems surrounded with conjecture, speculation and flagrant disinformation is the problem of the SDI, or in other words, the character and essence of the US plans to militarise outer space. Naturally the Soviets envisage "a major (military challenge, an attempt on the part of of the US to occupy the military high ground and.... a possible bid to achieve a first-strike capability".⁶⁶ Hence, the Soviets are not expected to sit idle, since the success of SDI may completely change the political equation in international affairs.

Will the Soviets develop a similar "system"? or will the present economic crunch compel them to try and stop the Americans from developing SDI? So far the public position of the Soviets has been one of hostility. But despite its hostility, the Soviet Union, as the western analysts maintain, would not like its calculus of interest in the outer space to be jeopardised. Barry R. Schneider and Colin S. Gray outlines some factors which may push the USSR towards competitive response to SDI:⁶⁷

- 1) the fear of eventual US superiority in strategic defence;
- 2) the possible judgement that strategic defences can be more easily countered than made to work effectively;
- 3) the competitive spur of US BFD programmes to Soviet offensive forces;
- 4) the fear of losing deterrence capability in a defensive transition;
- 5) the entrenched bureaucratic power of the short-range forces(SRF) and its allies;
- 6) the present capability of Soviet ICBMs to perform the damage limitation role through pre-emption if necessary.

⁶⁶ Terry McNeil, "The Soviets and SDI", in Stephen Kirby and Gordon Robson, eds., The Militarisation of space(Sussex: 1987), p. 162.

⁶⁷ Barry R. Schneider and Colin S. Gray, "Defending

- 7) the difficulty of securing an arms control agreement regulating an offensive drawdown while orchestrating a mutual defensive buildup.
- 8) the traditional Soviet reliance on massive offensive firepower to solve military problems; and
- 9) the hostile state of US-Soviet political relations.

This configuration of factors may give rise to two types of responses: near-term and long term responses. The near-term response consists of a "build up and diversification of its strategic nuclear arsenal" to withstand the onslaught that is likely to be caused by SDI. While the long term response would require "the reconfiguration of the Soviet strategic nuclear arsenal away from the traditional ICBM and SLBM modes towards cruise missiles."⁶⁸ Besides, the Soviet Union have the option to take up the military challenge offered by SDI and reply it with "direct competition through, for example, its military laser research programme."⁶⁹

But this alternative is pregnant with danger since it could lead to an overall deterioration of the Soviet military position vis-a-vis the US.

A viable Soviet reply might include deployment of its own BFD system or even "develop weapons that would destroy the space-based BFD system..."⁷⁰ The most obvious response would be to upgrade their offensive

Versus Avenging: A Critical Assessment Of SDI And MAD Policies," in Ghupendra Jasani, ed., Space weapons and International Security(SIFRI, Oxford, 1987), p. 125.

68 Council on Economic Priorities, Star Wars: The Economic Fallout(Cambridge, Mass: 1988), pp. 171,183

69 Ibid, p. 172.

70 Cited in Hans Gunter Brauch, "SDI-A Reaction to or a Hedge Against Soviet BFD Projects: Soviet Military Space Activities and European Security", in Hans Gunter Brauch, ed., Star Wars and European Defence-Implication for Europe: Perceptions and Assessment(London: 1987), p. 110.

weapons so as to challenge the adversary's defenses. The extensive Soviet BMD research and development might enable their scientists to achieve technological breakthroughs in the field of ground-and space-based systems. This will enable them to have a credible defensive as well as offensive capability.

Ronald D. Humble has summarized 8 possible Soviet technical counter-measures to SDI, which includes, inter-alia,⁷¹

- 1) Pre-empting the deployment of the BMD system by piecemeal attack on system, components or a full-scale nuclear strike against the US while still possible.
- 2) The development of an opposing 'turn' BMD/ASAT system that could be used to neutralize the opponents' system.
- 3) Destroying ground-based lasers stations, or spraying the space-based fighting mirrors of such systems with light, highly laser absorptive substances.
- 4) Various electronic warfare methods of jamming, spoofing, suppressing, and distorting enemy signals, and equipping decoys with devices which imitate the reflection of laser, radar, and visual signals from warheads.

Economic realities, however, cannot allow the Soviet Union to "force the rate of (its) strategic-force modernization to be stretched out more than in the past."⁷² Even the Soviet leaders acknowledge the fact that SDI can "exhaust the Soviet Union economically."⁷³ In the

71 Humble, n. 5., p. 74.

72 Yost, n. 23, p. 203.

73 Cited in *ibid*, p. 203.

words of Hubert Vedrine, "the Soviets really do want to save and do without this new stage" of military competition.⁷⁴ The modernization of the non-military sectors of the Soviet economy would be hampered if the Soviet Union goes for a competition with the US, notwithstanding the assertion by the Soviet leaders that the USSR is technically competent to develop a cheaper variety of the American SDI. Of course, the "hawks" in the US administration would probably welcome a massive Soviet investment in ABM research since such a move would provide the Americans with an alibi for more US investment in SDI. The enormous expense implied by an SDI like effort makes it appear that the USSR will deny itself the opportunity in developing and deploying advanced technological defenses.

(III)

SOVIET UNION'S "STAR PEACE" PROPOSAL:

In August, 1983, the Soviet Union advanced a proposal⁷⁵ on a complete mutual rejection of anti-satellite systems, suggesting that the sides should not produce new systems and destroy the ones they already have. To facilitate the solution of this problem the USSR unilaterally set a moratorium on test launchings of ASAT systems so long as other powers, including the US, do likewise.

Again, in 1984, the USSR came up with two major

74 Hubert Vedrine interview broadcast on January 30, 1988, in Foreign Broadcast Information Service-Western Europe, daily report, February 1, 1985, p. 18.

75 For a full text of the "Draft Treaty on the prohibition of the use of force in Outer Space and from Space against the Earth," August 19, 1983, see The USSR Proposes Disarmament (1920s-1980s) (Moscow: 1986), pp. 289-92.

space initiatives—proposing to the US to talk on preventing space militarisation. In this connection the USSR suggested that all attack-space weapons, including antisatellite and antimissile ones, no matter where they may be based, should be given up completely. In other words, the Soviet Union proposed that there should be no military threat to the earth from space, and vice-versa.

Unfortunately, Washington displayed no wish to hold negotiations on preventing the militarisation of the outer space and spoke merely of possible "limitations" in this sphere. Negotiations on the vital problem proposed by the USSR— the prohibition of space weapons— were sought to be evaded by the US. The new political thinking unleashed by Gorbachev has taken over from where his predecessors had left. Intrinsicly linked with this new order is the attempt and militarisation of space. Indeed, the new political thinking accepts that the " crucial question of mankind's continued survival is inextricably connected with the question of whether or not the militarisation of space will be prevented." ⁷⁶ As Gorbachev said in his statement of January 15, 1986, outlining a programme for the establishment of a non-nuclear world by the year 2000, " Mankind is at a crucial stage of the new space age. And it is time to abandon the thinking of the stone age, when the chief concern was to have a bigger stick or a heavier stone. " ⁷⁷

This new outlook has prompted the Soviet Union to " counter the insane plans to militarise outer space with

76 Vitali Sevastyanov and Vladimir Pryakhin, Mankind's Road To The Stars (New Delhi: 1988), pp. 2-3.

77 Cited in *ibid*, p. 2.

a programme of space exploration for peaceful purposes, the programme 'Star Peace'. " ⁷⁸ This initiative was advanced by the Soviet Union through the United Nations. It " proposed a three-stage programme of practical joint activities of all countries in the exploration and use of space for peaceful purposes envisaging, among other things, the establishment of a world space Organisation (WSO). The programme covers the period up to the year 2000 and aims at laying solid material, political, legal, and organisational Star Peace foundations. " ⁷⁹

The WSO, as envisaged by the Soviet Union, " should be a highly efficient, dynamic and universal organisation of a new type, one that would be free of bureaucratic structures and demagoguery. " ⁸⁰ It would coordinate scientific and economic activities in outer space while maintaining international political stability. It would also act " as the controlling authority to monitor the observance of agreements on preventing an extension of the arms race to outer space and on the limitation and reduction of armed forces and armaments on earth. " ⁸¹

Encouraging " multifaceted international cooperation " besides helping the developing countries by giving " practical assistance " in order " to participate in space activities " would be the most important of its various functions. ⁸² WSO might also provide help and assistance for " international cooperation in the exploration and peaceful uses of outer space. " ⁸³ The programme foresees " a constructive role "

78 Vladimir Belous, Star Wars or Star Peace? (Bombay: 1988), p. 115.

79 Ibid, p. 134.

80 Sevastyanov and Pryakhin, no 76, pp. 48-49.

81 Ibid, p. 49.

82 Ibid.

83 Ibid.

for WSO " in the mechanism of broad international verification of the compliance with the provisions of arms limitation agreements and control over the military situation in conflict areas. " 84

The usefulness of WSO can be gauged from the fact that 900 participants supported the establishment of such an organization, participating in an international forum "Cooperation in Space for Peace on Earth" held in Moscow at the Soviet Academy of Sciences' Space Research Institute to mark the 30th anniversary of the space age.

THE THREE STAGE PROGRAMME: The 'Star Peace' programme was envisaged as a three-stage schedule: (1) The first stage which was slated to last five years was totally organisational in that it envisaged " study(ing) the requirements of the peoples of the world in using space technology and to hold, not later than 1990, an international conference or a special session of the UN General Assembly on space issues." 85 According to the blueprint of the programme such a special session would approve the programme of action for the 1990s and for the subsequent ten or fifteen years. It would also establish the WSO and also adopt programmes aimed at providing certain joint projects.

To accomplish the goals of socio-economic developments for all countries, Soviet Union, as part of its " Star Peace" proposals, planned that efforts should be concentrated on developing major projects in areas of: 86

- communications, navigation, the rescue of people

84 Ibid, p. 50

85 Sevastyanov and Pryakhin, n. 76, p. 50.

86 Ibid, pp. 134-5.

- on Earth, in the atmosphere and in space;
- remote probing of the Earth for the needs of agriculture and development of the natural resources of the land and the world ocean;
- study and preservation of the Earth's biosphere
- establishments of a global weather forecasting and natural disaster warning system; and
- use of new energy sources, development of new materials and technologies, including those for medicine and biology, the launching of production processes in high vacuum and zero gravity conditions.

The USSR believes that these would be beneficial for all countries, especially the developing countries. Therefore, the bulk of funds to finance such international projects should come from developed and industrialized countries.

2) The second stage or material preparations stage would encompass the second half of the 1990s. This stage would involve "the development and manufacture of space hardware in keeping with agreed projects."⁸⁷ various systems would be put into service as and when they become ready.

This stage would put emphasis on extensive utilization of space facilities for global studies of the earth's biosphere to improve on the practical measures devised for protecting it. This would enable the countries to pool their joint efforts to preserve the Earth. In this stage, the WSO would extend its sphere of activities by coordinating "national space exploration programmes and promoting the exchange of

⁸⁷ Ibid, p. 135.

data obtained in space... (to facilitate) the countries making their first steps in space exploration, (in) getting opportunities for installing their instruments and carrying out experiments in other nation's spacecraft." 88

3) The Third Stage or the implementation stage of the "Star Peace" programme would utilize all fields of cooperation so as to fill the programme with "materially tangible context." Subsequently appropriate space vehicles will be launched and several ground systems will be made operations. Further, various specialised programmes in different fields of space technology application will start operating which in turn would yield practical returns.

Hence, the "organizational and material infrastructure" for a range of related projects would thus be developed, "involving the joint construction of spacecraft, including orbital stations, space-based research-and-production platforms," as well as "interplanetary manned spacecraft" to enable the beginning of the exploration and use of the Moon as early as the first decades of the 21st Century. 89 This would prepare the groundwork for the transformation of our planet into "an interplanetary one at the very beginning of the third millennium." 90

That is the strategy of making a "Star Peace" that the Soviet Union offers to the world's citizens to create. Its firm conviction is that it is the "star peace" strategy, rather than the reckless "star wars" plans, that humanity must take along into the 21st Century, thus getting,

88 Ibid, p. 136.

89 Sevast'yanov and Prysakhin, n. 76, p. 53.

90 Belous, n. 78, p. 136.

as N. Chernyashov observes, "nearer to translating into reality the ideas of the 'great dreamer' from the town of Kaluga, Konstantin Tsiolkovsky."⁹¹ The Soviet Union expects that all interested states would consider this proposal carefully, for its implementation could become an important stage in laying the foundations of "Star Peace".

Perspectively, SDI will force the USSR to make the difficult choice between a ruinously expensive arms race in outer space, or negotiating deep cuts in offensive arms with the US. Given the period of detente, US insistence on the development of Star Wars would be nothing short of disaster. The futility of nuclear war is becoming clear to the people round the world. The flexibility shown by the Soviet Union augurs well for an end to arms race. It is now upto the Americans to reciprocate the Soviet gesture by freezing their Star Wars programme so that the world, at large, can heave a sigh of relief. The million dollar question is whether US will give up its SDI programme or not. The failure of which will spiral the arms race. Not only that, we will then be witness to a new generation of technological warfare.

91 N. Chernyashov, " 'Star Peace' vs 'Star Wars' , International Affairs(Moscow), no. 9, Sept. 1986, p. 74. At the turn of the Century, the founder of the theory of cosmonautics, Konstantin Tsiolkovsky, produced a strategy of space exploration- from creating individual habitation islands in near space to constructing a system of "space settlements" to be stationed around the sun.

CHAPTER - IV

PERSPECTIVE OF THE SOVIET APPROACH TO
NUCLEAR ARMS CONTROL: CONTINUITY AND CHANGE.

CHAPTER-IVPERSPECTIVE OF THE SOVIET APPROACH TO
NUCLEAR ARMS CONTROL: CONTINUITY AND CHANGE.

(I)

INTRODUCTION:

Over the past years, the Soviet Union has made a series of proposals that go far beyond its former arms control positions. Though it would be incorrect to say that the Soviet perception of the nuclear threat, especially of the US nuclear threat, suddenly shifted when Gorbachev came to power, it is, at the same time, apparent that Gorbachev has infused the Soviet arms-control diplomacy with a new dynamism and boldness. The western arms-control critics complained earlier that the Soviet Union generally proceeded very cautiously and introduced modifications to its negotiating positions at infrequent intervals. However, they acknowledge that with the advent of Gorbachev, the USSR has led the US in the number of new arms-control proposals. Not only that, they accept the fact that the sincerity of the Soviet Union vis-a-vis arms-control is now beyond doubt. But, as always, there are also a fair number of "doubting Thomases" who, out of habit, smell rat in anything Soviet. They draw cold comfort by describing Gorbachev as a "refined Leninist in Gucci Carb."

Consequent to these substantive and procedural changes, analysts have speculated that a fundamental change in the Soviet approach to arms control is taking place. Apparently, Soviet Union's range of arms-control regimes, featuring deep cuts in nuclear forces, that previously would have been considered unacceptable, precipitated this judgment. Though, this by itself, does not necessarily suggest that the Soviet approach to arms-control has changed appreciably, unless one assumes that the essence of the Soviet Union's past arms control philosophy has been to avoid, at all costs, imposing significant constraints on

its own nuclear forces. But the Western arms control analysts have been stressing that the Soviet Union has always treated arms control in a very comprehensive fashion unlike the Americans, who tended to deal with arms control in a more discrete manner. The Soviet Union analysts add, always integrated the arms control with the broader spectrum of its foreign policy and defence policy.

Soviet writers also agree with this view, noting that any arms-control policy could be properly developed only by taking into account the evolving calculus of the international situation(s). "Objective scientific analysis of the (international) situation is essential, on the one hand, in order to work out a correct political line. That, for the Communists, is axiomatic."¹ Hence, analysing in this context, makes it evident that the Soviet arms control positions have undergone some changes. These alterations have come about by a combination of factors that affect the Soviet arms control agenda; Soviet foreign and defence policies, and the internal scenario.

As far as the foreign policy is concerned, it is apparent that one of the patent factor confronting Kremlin since 1981 (when Ronald Reagan became the President of the United States) is an American administration devoted to pursuing a more vigorous and assertive foreign policy, with a rapid anti communist tilt. This new American foreign policy, famously called the "Reagan Doctrine", envisaged vigorous support to anti-communist causes and movements around the world. The "Reagan Administration projected a deliberately exaggerated image of Soviet power. (it

1. Vadim Zagladin, "The Working Class Parties and the Anti-war Struggle", in Peace and Disarmament: Academic Studies, 1984 (Moscow: 1984), p. 144.

emphasised that) the Soviet Union had acquired a lead in certain crude quantitative categories of power... (and that) the USSR had also acquired some distant power projection capabilities- air and sea." ²

With regard to defence policy, the Soviet Union faced an emerging but fundamental changes in the strategic nuclear environment, especially the US interest in the Strategic Defense Initiative(SDI). " Laser, high-energy particle beam, anti-ballistic missile and other technologies integral to (multi-layered) space defence visions received priority funding." ³ Moreover, the Reagan Administration's avowed interest for nuclear utilisation theories(NUTS) gave Pentagon an opportunity to procure " programmes explicitly designed to render accumulated Soviet weapons stocks 'obsolete' ." ⁴

Another crucial US strategic move was the " procurement of new carriers and naval task forces assigned to target the established jugular of Soviet defence systems, the Barents and Okhotsk sanctuaries that harbour her submarine-launched ballistic missiles(SLBSs), ..." ⁵ This, in turn has led to a fundamental reassessment of the Soviet military doctrine. ⁶

2 Carl G. Jacobson, " International dynamics: Arms Defiant," in Carl G. Jacobson, ed., The Uncertain Course: New Weapons, Strategies and Mind sets. (Oxford: 1987), pp. 3-4.

3 Ibid, p. 5.

4 Ibid.

5 Ibid.

6 As far as Soviet military sphere is concerned, the term " doctrine" broadly refers to " abstract theories" on military issues, etc. It roughly corresponds to the western version of military " policy" wherein the broad framework is planned by the political and military leadership.

The leadership succession, as well as Gorbachev's domestic reform, have also affected the bureaucratic and institutional setting for arms control decisions.

These calculus of factors have brought forth different responses—in substance and form—in Soviet arms control politics. The Soviet arms control efforts, especially after the announcement of SDI, mainly revolves on the vital point, i.e. "preventing its development, now identified as the biggest threat to the existing military-strategic equilibrium."⁷ It also brings into focus a major dilemma for Soviet arms control planners. The Soviet Union cannot allow the US military and foreign policy measures to go unchecked and, therefore, it has to make some compromises vis-a-vis US arms control policy. At the same time Moscow has to confront the frequent US claims that the former's arms control policies has covered under the so-called American "toughness". American strategic analysts, like Keith B. Payne, believe that "SDI(Has) rekindled Soviet interest in arms control".⁸

Naturally, arms control continues to be at the centre of Gorbachev's approach to East-West relations. But at the same time, Moscow is compelled to show sensitivity with regards to the kind of strategic environment around it. Hence, this factor forms the bedrock of the Soviet arms control planning.

7 Zdenek Nevan, "Gorbachev and the world—the political side," in David A. Dyker, ed., The Soviet Union Under Gorbachev: Prospects for Reform (New York: 1987), p. 176.

8 Keith B. Payne, "Should SDI Be part of a 'Grand Compromise'?", Christian Science Monitor, August 28, 1985.

(11)

SOVIET FOREIGN POLICY AND ARMS CONTROL:

Over the years the Soviet assessment of the international politics has perceptively changed. Soviet writings in the 1970s spoke of the ills of the western economies and discontent in western societies, while emphasizing the continuation of peaceful cooperation with the capitalist countries, the Soviets reasserted their faith in communism, which they believed could solve the fundamental problems of social development, deliver mankind from oppression and exploitation, etc. These theories were reflected in the Soviet attitude towards detente and arms control. Of-course, the consistency in Soviet advocacy of the prohibition of nuclear and other types of mass destruction cannot be underestimated.

But at the same time, Moscow's optimism of a new international political order being dominated by the USSR clearly reflected its approach to arms control. The western analysts argue that the Soviet Union during the mid-1970s, believed that a combination of detente and arms control would thwart any radical efforts by the West, especially the US, to change the correlation of forces against the USSR. As Kavan observes, "Arms Control, in the strategic nuclear arms in particular, thus became the cornerstone of Soviet detente policy." ⁹

The 1980s saw a revision in the Soviet analysis of the emerging correlation of forces. Until the early 1980s,

most of the Soviet arms control writings had unfavourable references to China, accusing it of trying ferment international tensions, and sabotage arms control.¹⁰ Present writings do not dwell on this point anymore. Moreover, it is alleged that though there is a general unanimity among the Soviet leaders as regards the international situation, there is divergence of opinions as far as the question of permanence and severity of threat to the Soviet Union is concerned. The disagreements, it is argued, finds reflection in the Soviet arms control policy.

Some Soviet analysts, like Alexander Yakolev, former Chief of the Propaganda Department of the Central Committee of the Communist Party of Soviet Union and candidate member of the Politburo, assert that the United States is bent on undermining the Soviet system. They even argue that the US, if circumstances prevail, would even unleash a war against the Soviet Union.¹¹ But this pessimism does not find acceptance by other Soviet analysts. Yakolev further claims that the present "hard line" attitude is rooted in US history and that the period of Soviet-American detente was just a temporary aberration, prompted by US efforts to extricate itself from the Vietnam war.¹² Other analysts, however, take

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- 10 See A. Svetlov, New Stage of the Struggle for Disarmament (Moscow: 1982), pp 46-47. This adverse reactions against China can be traced to the ideological differences between the two Communist giants. Rift came to head when Khrushchev launched the process of de-stalinization, which was severely criticized by the Chinese leaders and thus there came a great schism in Communist camp.
- 11 See A.M. Yakolev, "Peace American Style and Modern Realities," in Peace and Disarmament, n.1, pp- 173-89.
- 12 Ibid, p. 183.

the view that, while the influence of "hard line" in US politics should not be underestimated, they do not entirely dominate the American elite, and that a return to a more "constructive" attitude towards the USSR is possible. Hence, they opine that even US hardliners are able, at most, only to delay arms control talks, and do not dare oppose them outright.¹³

In spite of the disagreement among the Soviet leadership vis-a-vis American politics, the former's role in arms control is very marked. The pre-Gorbachev era saw important dimensions of arms control in the 1970s, which led to Strategic Arms Limitation Talk I (SALT-I) and SALT-II. But by then the Soviet Union had more or less "achieved a state of rough parity in strategic nuclear weapons..."¹⁴ The bellicose attitude adopted by the Reagan Administration in the initial years made the Soviet leadership think twice whether they should deal with Reagan or wait for his successor, who might adopt a more benign policy. At times it seemed that Moscow had all but given up its desire to hold meaningful dialogue with the US. Though, ultimately, the Soviet Union realized that even a temporary thaw would be harmful for US-Soviet relations.

The situation became different, however, when the present Soviet leadership took over. It undoubtedly believed that Reagan was committed, to a greater degree than any of his predecessors, to conducting a jingoistic foreign policy and carrying out massive defence build-up. Even though, Reagan's policies and programmes came in for some virulent criticisms at home and in spite of the fact that the US Executive and Congress had a love-hate relationship, Moscow did not assure itself about the policy mix adopted by the Reagan Administration. Indeed the US congressional reaction was most visible after 1986 US-Soviet Summit in Reykjavik.

¹³ A. Svetlov, New Stage Of the Struggle for Disarmament (Moscow: 1982), p. 10.

¹⁴ *Izvestia*, n. 7, p. 174.

The American political pundits argue that the "muscular diplomacy" of the Reagan Administration was necessary. But they are quick to point out the policies were more restrained when compared to the Soviet efforts to intervene in conflicts in the Third world. This alibi apart, the Soviets were not expected to it kindly, which otherwise would have gravely jeopardized the Soviet calculus of interests in international politics.

The usual grouse of the western writers has been that the Soviet Union continues to deny that it has in any way contributed to the deterioration of Soviet-American relations. Moreover, Moscow has always categorically dismissed allegations of treaty violations. It also discounts the western notions that the invasion of Afghanistan sealed the fate of SALT-II and on the apparent shift in US arms control policies under the Reagan Administration. Yet, in private, the Soviet leadership acknowledged its mistakes. Many high-ranking American visitors to Moscow observed the Soviets accepted that it had made a mistake when it rejected Carter's March 1977 proposals for deep cuts in nuclear forces.

The advent of Gorbachev has seen the change in the Soviet thinking. USSR now regards that its interests are best served by exercising caution. This realization is also reflected in Soviet military policy. But "what remains uncertain is the extent to which the Soviet military has signed on to the Gorbachev reforms, especially in light of the belt tightening " that is taking place".¹⁵ Another important aspect in the change is the tenuous signs of a reduction in the growth of the military budget which informed cuts in military manpower, conventional weapons production, and shift of important defence industries into the civilian

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Dennis M. Crowley, Double Zero and Soviet Military Strategy: Implications for Western Security(Philippines, 1988), p. 40.

sector. These changes form the crux of the new thinking in arms control mix.¹⁶ The new Soviet military strategy realises that the continuation of war-fighting capabilities cannot have a positive influence on the US-Soviet relations.

There is an "apparent decreasing role of the military in defence and arms control decision-making."¹⁷ It is in this light that the dramatic change in Soviet arms control policy has to be seen. There is thus a clear and fundamental break with the past. As Gornley observes,¹⁸ no longer did Moscow appear to insist on an extra margin of security to compensate for her long borders and three other nuclear-armed adversaries."¹⁸

The new Soviet arms control negotiating strategy entails such notions as the relative deemphasis of military power as a means of emphasising security, importance of political solutions to security issues, and, the recognition of the fact that true security cannot be unilateral in nature or established at the expense of other parties. Hence, it seems that Gorbachev has an eye for a more broader and more comprehensive detente than before. It remains to be seen whether Moscow's genuine interest for arms control might encourage its sacrificing definite foreign policy gains.

Clearly, Moscow continues to emphasise that arms control can play the most vital role by "fostering predictability" in US-Soviet relations. This does not of course underline arms control negotiations or agreements can permanently tame US policy. Thus, it is claimed that while arms control accord fail to stop the arms race altogether, "without the concomitant efforts and without the(arms control)

16 See Chapter-II for a detailed discussion.

17 Gornley, n. 15, p. 40.

18 Ibid, p. 134.

agreements, the arms race would have developed still more feverishly, and the world would have been less stable and less secure." ¹⁹ Indeed Gorbachev has understood the importance of this fact in the context of the overall dynamics of international politics. His predecessors, though informed of the grave implications of the arms race, clearly lacked the statesmanship and foresightedness to approach arms control strategy with more circumspection.

The puritans among the Soviets still express the fear that arms control has merely provided the Americans with a convenient smokescreen behind which to conduct an aggressive foreign policy designed to check Soviet influence. However, this does not mean that some Soviet commentators decry the arms control negotiations and agreements in toto. Nevertheless, there are certain disagreements among the Soviet analysts on the question of how much arms control mechanism can achieve (in the days of glasnost this is only necessary). But, overall, they tend to accept that arms control can have meaningful benefits to Soviet security.

The Soviets have good reasons to believe the thesis that arms control strategy may be extremely crucial to contain, however, the alleged US aggressive designs. Yakovlev observes that the "most dangerous today are illusions of military-technological superiority, which give rise to aggressive political illusions taking root in the foreign policies of states." ²⁰ He further commented that such illusions can destabilize deterrence; hence, the

19 R.M. Tisarbayev, Control of Arms Limitations and Disarmament, (Moscow 1963), p.5.

20 Yakovlev, n. 11, p. 174.

need to dispel them through all possible means, including patient continuation of arms control process.²¹ This is a nutshell mean that national security is to be sought in international cooperation and not in unilateral action(s). The crux of this thinking found shape before Gorbachev's succession. But, though articulated, the thesis failed to impress upon the public opinion at home, in the pre-Gorbachev era .

Western Sovietologists allege that Moscow's interest in arms control can also be due to its search for superpower legitimacy. They observe that Moscow is permanently suffering from a severe crisis of legitimacy and, hence, looks to the US for recognition as a co-equal power in correlation of forces. This thesis does not agree with the logic of international politics since whatever legitimacy the United States could have conferred on the Soviet Union had already been granted in the 1970s. Moreover, USSR had already got de-facto recognition as one of the two superpowers on " 29 August, 1949, (when) the Soviet Union ended America's brief monopoly of atomic weapons by exploding its own bomb".²² The Soviet decision to commence strategic arms control with the US in 1969 was indication of its superpower status.

In perspective, various emerging changes in Soviet foreign policy have helped to energize the Soviet arms control strategy. The efforts to improve the public image, which received severe batterings after the "invasion" of Afghanistan, have undoubtedly committed the Soviets to give up several arms control positions, that had earlier

21 Ibid.

22 Gwyn Prins, ed, Defended to Death(Middlesex: 1983), p. 71.

blocked progress in negotiations. Moreover, the concept of 'new thinking' negates explicit manifestations of military power and military threats. The present Soviet view is that such manifestations are counter-productive in international relations. Hence, asymmetric cuts in the nuclear weapons is the most viable alternative.

The Soviet arms control mechanism has also in mind the west European considerations. Moscow is interested in "decreas(ing) the likelihood(of) Britain and France aggressively pursu(ing) nuclear modernization programmes,.. decreas(ing) incentives for the creation of an independent West European nuclear force structure... eliminating nuclear weapons from Europe, and... paving the way for cost-saving reductions in non nuclear European forces."²³ Motivating the Soviet arms control agenda is the fact that Moscow is interested in framing its proposals in order to make them attractive to European audiences. It is also interested in showing that it is willing to contribute to relaxation of tensions in Europe. It is in this perspective that Gorbachev's interest in "European home" has to be seen. In a series of speeches.. he stressed the European heritage and character of the USSR and accentuated the ties between his country and western Europe."²⁴ Gorbachev told the conservative leadership in Czechoslovakia in April 1987 that " new political thinking led us to propose the idea of the European home we all share. It isn't simply a beautiful fantasy. It stems from painstaking analyses of the European situation. The concept of a European home suppose a degree of integrity, even if

23 Alan B. Sharr, The Other Side of Arms Control: Soviet Objectives in the Gorbachev Era (Boston:1988), p. 166.

24 Ibid, p. 29.

European states belongs to different social systems and opposing military-political blocs".²⁵

All this suggests that Moscow is interested in improving its relations with western Europe. Arguably, this interest can be linked to threat posed by the modernization of European nuclear forces. Though, these forces are "peanuts" when compared to gigantic Soviet nuclear arsenal, it could still tilt the balance of power against the USSR in the event of a crisis. Not only that, Moscow's political power could also erode in western Europe. The Soviet gamplan cannot rule out its interest in the removal of American nuclear weapons from the European theatre. This, in a way, would lessen the threat to Soviet Union.

Arguably, the Soviets' genuine interest in arms control mechanism could have been spurred by the negative responses by Europe to the "denuclearization" proposals offered in Reykjavik and to the "double-zero" INF deal. Reportedly, the Soviets evinced keen interest in West Germany's proposal to give up its Pershing Ia missiles so as not to block the "double-zero" deal. Besides, the development of long-range INF (LRINF) in western Europe "created a new strategic situation and required Moscow to rethink all arms control issues."²⁶

The west European factor in the Soviet arms control policy have sparked considerable debate in the west. There are two schools of thought expressing different opinions.

25 M.S. Gorbachev, "Speech at the Rally of Czechoslovak-Soviet Friendship, Prague," News and Views from the USSR, April 13, 1987. Also see M.S. Gorbachev, Perestroika: New Thinking for Our Country and the World (New York : 1987) pp. 194-5.

26 U.P. Abernkov, et al, Militarism and Disarmament (Moscow: 1984) p. 89.

One school of thought argues that Moscow is trying to use arms control to split the North Atlantic Treaty Organisation (NATO) alliance, while other analysts express the opinion that the USSR is using western Europe as a tool to pressurise the American into making arms control concessions. Both these hypotheses are unlikely to be true since the Soviets are not blind to the fact that even the Warsaw Pact members are not totally united as they were earlier. Indeed, the breaking up of NATO alliance cannot serve the interests of the Soviets and its alliance partners, given the radical changes in the Eastern Europe. Moreover, the general public opinion in western Europe against proliferation of nuclear weapons have been gaining strength even before the INF Treaty, though the impact of the treaty on anti-nuke demonstrations cannot be totally ruled out.

Another foreign policy aspect of the Soviet nuclear arms control is the attempt on the part of Gorbachev " to forge new economic and political relationships with the capitalist states."²⁷ True the concept of 'deideologization' has gripped 'New Thinking' where class struggles or confrontation between states as opposing social systems has been given up totally. Through the arms control mechanism Gorbachev wants to convey the message that the relationship between the two systems- socialism and capitalism- can remain agreeable and stable in the long term. Intensive cooperation with the developed capitalist world will ensure lasting benefits for the Soviet's besides, access to western technology and markets.²⁸ But such economic ties presupposes friendly political atmosphere. Hence, nuclear arms control as Sherr observes, " is a crucial factor..."²⁹ Therefore, the new political thinking emphasises the importance

27 Sherr, n. 25, p. 30.

28 Ibid.

29 Ibid, p. 31.

of reductions in both conventional and nuclear weapons, followed by verification measures.

From the Soviet point, "arms control (can) play a role in encouraging the 'progressive' forces in capitalist society and blunting the impact of 'militaristic' forces."³⁰ Because, as Gorbachev believes, the US "militarists" are specially worried both about a loss of profits due to disarmament and the possibility that perestroika would lead to "a rebirth of the appeal of socialist ideas and an upsurge in the prestige of socialism as a society of working people."³¹ These views, contemplating the importance of pluralistic US politics, and an abiding conviction in the strength of the military-industrial complex and militarist elements in western society, has led Gorbachev and his colleagues toward an arms control policy finely tuned to the competing forces in US politics.³² Gorbachev believes that even anti-Soviet capitalists could be turned from their militaristic course if they could be informed of the fact that perestroika is not a threat but, rather opens the way to mutually advantageous economic relations.³³ Thus Gorbachev's attempt on confidence building measures (CBM) to ensure simultaneous development of disarmament and trade relations.

31 M. S. Gorbachev, "Revolutionary Restructuring Requires Ideology of Renewal. Speech by Gorbachev at CPSU Central Committee Plenum 18 February, 1988," Pravda, February 19, 1988, in FBIS-SU, February 19, 1988, p. 55.

32 Sherr, n. 23., p. 32.

33 Gorbachev, n. 31, p. 56.

(III)

SOVIET DOMESTIC ISSUES AND ARMS CONTROL:

The Soviet political structure is different from that of the US. Differences that might arise between the US Executive and Congress is conspicuous by its absence in the Soviet political system. Even then, the Soviet leadership have to act rationally in the arms control arena. Naturally, the question of national security is an overwhelming factor in Soviet domestic politics; differences do occur occasionally among the members of the Soviet decision-making bodies concerning defence and arms control matters. The Soviet leaders while devising arms control proposals have to take into consideration the KGB and the military establishment. As elsewhere, decisions " are the products of such complex and diverse factors as individual cognitive processes, group dynamics, and political manoeuvring. " ³⁴ This is more so in the period of glasnost and political pluralism.

Ideology plays an important role in arms control process in Soviet Union. Ideologically, Soviet Union views US interests in terms of economic objectives and class-struggle. While Gorbachev has to work within such parameters, " he is also aware of the substantial political constraints on the US presidency and of the diverse in-fighting that characterized the handling of nuclear arms control policy during the Reagan presidency in particular. " ³⁵

The decision making process, besides following the ideological precepts, includes a whole group of important peoples, extending from the Politburo down to the negotiating team at the arms control talks. Thus, it includes Communist

34 Sherr, n. 23, p. 107.

35 Ibid, p. 109.

party and government organizations, besides the defence and foreign affairs establishments.³⁶ The decision-making structure under Gorbachev remains the same, save that he has taken radical steps to ensure increase flexibility and responsiveness.

Unlike Brezhnev, who sought to solve civil-military tensions during the 1960s and 1970s by giving his "marshalls" virtually all the resources they asked for, Gorbachev cannot satisfy all of their resource demands for fear of derailing his ambitious economic plans. Thus, Gorbachev while not ignoring his military has to put a check on spiralling defence expenditure. Hence, there is bound to be some opposition among the Soviet military elite, mostly conservatives, who feel that enhanced Soviet defence spending is necessary to confront changes in military technology. Therefore, it was necessary for Gorbachev to demonstrate some tangible successes in his arms control dealing with the US to silence his critics at home. It is also mandated to prove his worth where his predecessors failed, and to argue that his arms control initiatives has been able to check the US threat within reasonable limits.

One of the important impacts of the advent of Gorbachev on the arms control decision making has been that the military influence has been balanced by the prominence of a number of academicians of the prestigious Soviet Academy of Sciences. Moreover, Gorbachev's now famous doctrine of reasonable sufficiency has been able to affirm the supremacy of civilian decision makers over the military.³⁷ The overall effect has been very much evident in the way the new leadership has been conducting nuclear arms control talks.

36 Ibid, p. 113.

37 Ibid, p. 130.

More often than not, Gorbachev has been able to turn the tables on his adversaries with some radical measures. The latest Soviet positions successfully put the US and Western Europe on the defensive. It contrasts sharply with the Brezhnev Era when the Soviets took its own time in formulating responses to the US proposals. Gorbachev's initiatives are "expensive and finely tuned to political conditions in the West,"³⁸ and are successful in creating illusions of movement and flexibility and scoring enormous public relations successes.

(IV)

SOVIET MILITARY THINKING AND ARMS CONTROL:

As is true of foreign policy intentions, military thinking is not static. At the outset, it would be pertinent to point out that Moscow has been seeking to deter military confrontation with the West, especially the US. The western analysts observe that Soviet military forces in general and nuclear forces in particular are supposed to provide powerful political leverage to be used in the pursuit of various Soviet foreign policy objectives. As is well-known, that "military power has a unique significance in the deliberations of the Politburo."³⁹

The Soviet military policy has remained largely unchanged, though the Soviet approach to attaining them has

38 Ibid, p. 131.

39 Derek Leebaert, ed., Soviet Military Thinking. (London: 1981), p.3.

varied over time. Presently, Soviet military thinking appears to be undergoing major revisions described as the "third revolution in Soviet Military affairs."⁴⁰ Recent Soviet arms control proposals provide some insight into the evolving Soviet nuclear planning. Given that Gorbachev was serious, at least about the initial phase of his January, 1986 proposals, which featured the concept of a 50% cut in deployed nuclear forces, this would have major implications for Moscow's nuclear targetting.

Prior to the advent of SDI, the USSR indicated concern about the proliferation of US sea-launched ballistic missiles with hard target kill capacity and cruise missiles on numerous platforms-- a development capable of complicating Soviet pre-emptive options. They have also been concerned about the potential growth in third country nuclear forces. This view is clearly reflected in a study by a well-known Soviet military theoretician, Deputy Chief of the Ministry of Defence, Colonel-General Gareyev, that specifically criticized the past Soviet emphasis on nuclear weapons in general and on massive strikes during the initial period of conflict in particular.⁴¹

Soviet arms control planning has been, it is argued, eased by the "deep cuts" in offensive nuclear arsenals proposed by Moscow, though it does not necessarily mean that it has to give up all nuclear war-fighting plans. Traditionally, as far as the question of military policy is concerned, the primary Soviet arms control objective has been to secure strategic predictability through the establishment of specific arms control regimes, and continuing

40 See William E. Odon, "Soviet Force Posture: Dilemma and Directions", Problems of Communism (Washington D.C.) July-August, 1985, Vol. XXXIV, no. 4, pp. 1-14.

41 N.V. Gareyev, N.V. Frunze- Military Theoretician: Views of Frunze and Contemporary Military Theory (Moscow: 1985), pp. 239-41.

negotiations. It is clear that the equivocation in Gorbachev's statements on nuclear disarmament seems to be concerned with the Soviet military as much as to scepticism in the West. On the whole the Soviet military doctrine under Gorbachev recognizes that nuclear weapons do not provide security and that it is impossible to win a nuclear war.

(V)

CHANGES AND CONTINUITY IN SOVIET ARMS CONTROL POLICIES:

On many counts, the present Soviet arms control positions exhibit many of the traditional Soviet arms control stand-bys. In keeping with the Soviet tradition, Moscow continues to propose a plethora of various arms control proposals for the total elimination of nuclear weapons, freezes and various bans, etc. "Gorbachev opened a new public relations campaign of arms control in January 1986, with a call to eliminate all nuclear weapons by A.D. 2000."⁴² A similar Soviet proposal was presented to the Second Special United Nations General Assembly Session on Disarmament in 1982.

The conceptual under-pinnings of Soviet arms control policy more or less remain unchanged. But there is a visible shift " in his new ways of thinking from 'equality and equal security' to the broader concept of 'mutual security', which includes the notion that the adversary's insecurity work

42 William S. Vogele, " Tough Bargaining and Arms Control: Lessons from the INF Treaty, " The Journal of Strategic Studies(London), Vol. 12, no. 3, September, 1989, p. 262.

to one's disadvantage." ⁴³ It is argued that Soviet arms control goals rests fundamentally on the desire to attain and formalize, both political and military parity. Soviet commitment to agreements serving these goals is expected to be maintained. Further, the Soviets are not expected to agree to military inferiority as the price for an agreement.

Nery FitzGerald observed that Gorbachev's proposal for radical arms control can be justified within current Soviet military doctrine which now regards nuclear weapons as having very little, if any, military utility. ⁴⁴

Western critics allege that Gorbachev's arms control diplomacy notwithstanding, the Soviet arms control gambite remain unchanged. But amidst this continuity, certain substantive changes can be discerned in various areas, especially concerning INF. The earlier Soviet positions on INF was rather ambiguous. Moscow, in the pre-Gorbachev era, insisted that there was rough parity in theatre nuclear forces in Europe. The advent of Gorbachev has changed all these assumptions - the Soviet acceptance of Reagan's so-called "zero option" is an index of change in Soviet attitude towards arms control.

Radical change can be perceived in the context of verification. The earlier position was that arms control verification does not constitute an independent objective in itself, rather it was an instrument to ensure strict compliance with existing agreements. Of late, Soviet Union has shown enough maturity by agreeing to verification measures. Not

43 Sherr, n. 23, p. 170.

44 Cited in Vogele, n. 42, p. 269.

only are they ready to accept national technical means of verification, but also adopt other suitable means of verification measures so as to guarantee compliance with arms control agreements. Overall, this represents a definite change in Soviet approach to arms control. Also, Gorbachev's arms control policy has shown greater energy and flexibility than his predecessors. As is rightly observed, "Gorbachev has so far made arms control the focus of his foreign policy..."⁴⁵

To invigorate the arms control planning in the Soviet he appointed Anatoly Dobrynin- veteran of SALT-I and SALT-II - to look after the powerful International Department in the Communist Party apparatus and established a new arms-control section within the department. Gorbachev also set up, in the Soviet foreign Ministry, a corresponding organization to deal with arms control, thereby adding to the civilian expertise available on the subject.⁴⁶

The Soviet arms control policy has to confront not just the US, but also Great Britain, France and China who "still have independent strategic nuclear forces, and some smaller states(who) might also join the nuclear club."⁴⁷ With this reality in mind, Gorbachev will have to manoeuvre the Soviet arms control mechanism because ultimately arms

45 Morris McCain, "Allocation Politics and the Arms Race: A Soviet Constituency for Arms Control", in Thomas F. Remington, ed., Politics and the Soviet System(London: 1989), p. 135.

46 Ibid.

47 Peter Zwick, Soviet Foreign Relations: Process and Policy(New Jersey: 1990), p. 254.

control agreements will result in fewer nuclear weapons but not their elimination. His novoye myshleniye or new thinking, which is said to be a re-evaluation of the theory of Soviet foreign policy in the nuclear age, will ultimately have to prove its worth in the arena of politics. Because, after all it is politics and diplomacy that can clinch the issue in favour of arms control. Failure of it will witness the subordination of politics to the interests of militarism.

CONCLUSION, FINDINGS AND PERSPECTIVE

CONCLUSION: FINDINGS AND PERSPECTIVE

"A journey of a thousand miles must begin with a single step," thus speaks an ancient Chinese proverb. Here it would be pertinent to point out the first step in the journey towards global disarmament has already been taken with the signing of the historic INF Treaty in 1987. The role of the Soviet Union towards this is indeed of utmost importance. An attempt is made in this concluding chapter to recapitulate the major findings of the present study and offer a perspective of Gorbachev's new world order.

(I)

FINDINGS:

The sincerity of Soviet Union vis-a-vis disarmament stands vindicated. Today, there is general feeling that nuclear weapons cannot act as deterrence but as instruments of death and destruction; the "hawks" in the US Administration may agree to disagree with this observation. The role of Moscow in honing this point is not too far to seek, given the findings of the present study which may be summarized thus:

- 1) The Soviet Union has been consistent in its opposition to nuclear war. It has said in no uncertain terms that nuclear war cannot be won and should not be fought.
- 2) Soviet Union has been a leading advocate of disarmament and arms control. It has consistently advocated the prohibition of the nuclear and other types of weapons of mass destruction. However given its strategic position in the

post world war II phase, the Soviet Union was caught in the spiral of the arms race.

3) Gorbachev's new political thinking have made it possible to enhance confidence and improve the international situation besides, encouraging drastic progress in the strengthening of global security in its principal area, that of disarmament.

4) Hence, we are all witness to an unique and new model that has been built, through arms reductions on a mutually acceptable basis, which is in direct contrast to previous security model that centred around military build up and military blocs.

5) The rut of nuclear armaments has been rent asunder by the series of arms control proposals unleashed by Soviet Union under Gorbachev's leadership.

6) Therefore, in our own times we are witness to two distinct eras- one which almost brought us to the edge of the precipice of a nuclear holocaust, and the other, in contrast, dawned a period of peace and stability. This has given rise to a new historical reality, that of a switch-over from overarmament to reasonable sufficiency thereby limiting the scope of the armed forces through clearly defined defence needs.

7) The Soviet economy is in a pretty bad shape. Diversion of scarce resources from the civilian sector to the defence has had an adverse effect on the Soviet economy.

8) This has necessitated a check on Soviet defence expenditures, which is quite substantive.

9) The organic link between disarmament and development has been recognised by the mandarins at Kremlin. The focus is now on development of the economy, in general, rather than on armaments.

10) Release of additional material and intellectual opportunities for accelerating social and economic development via disarmament is regarded as fait accompli.

- 11) The Soviet leadership regard SDI to be offensive by nature and hence, it is aimed at disarming USSR and making it vulnerable to a first strike.
- 12) The Star wars impede arms control negotiations. It has the potential to initiate a fierce arms race leading to new heights in high-technology warfare in outer space.
- 13) Though conceptually the Soviet arms control policy has remained the same, it has shown more flexibility by recognizing the concept of "mutual security".
- 14) No wonder, therefore, it can help emphasize systems which increase stability over destabilizing ones; it can help reduce the risk of crises degenerating into war. It can help restrain the spread and development of nuclear weapons, though it cannot disarm them.
- 15) Though the set of initiatives in arms control and disarmament unleashed by Gorbachev has set in motion the process of rethinking in the field of arms control, it cannot be regarded as the final recipe for solving the whole gamut of armaments problem. It can be the basis for future arms control negotiations.

PERSPECTIVE:

All said and done, arms control mechanism has entered a new era- a period where mistrust has given place to sincerity. It is not merely wishful thinking but the reality. Gone are the days when that classic of militarism; Karl Von Clausewitz, wryly commented that "war is the continuation of politics by other means." Today the world is convinced of the fact that peace will be destabilized while there are strategic offensive arms to be contend with. The arms race if extended to outer space will not give the

planet earth a respite from the fear of nuclear weapons but will usher in an epoch of dangerous march towards armaments de novo. This calls for, as the Soviet Union has correctly urged, a step-by-step solution to all disarmament problems, viz, strategic nuclear weapons, conventional weapons, chemical weapons and biological weapons.

Such an action can take us to the third millennium where the world would be nuclear-free and non-violent.

As is clear, there is almost an air of incredulity in the west, in particular, and the world, in general, at the radical and unthinkable pronouncements by Gorbachev. His unceasing plea for sanity and commonsense in the conduct of international affairs, with special emphasis on nuclear arms control, has been consistent with his own actions, ever since he took over the reins of power at Kremlin. No wonder, therefore, the west no longer regard Soviet Union as an "evil empire". He has been successful in wriggling out the Soviet Union from the Brezhnevite era of doubt and uncertainty to a period of lasting world peace, which is unprecedented in the history of modern times. In a world of rapid changes he has ushered a new political thinking that renounces war and armed conflicts of any sort, however "limited" it might be. Posterity will judge his new world order which he wants to bring about with "a new philosophy of world politics" whose foundation rests on a world of lasting peace.

GLOSSARY OF SPECIALISED TERMS

AIR-LAUNCHED BALLISTIC MISSILE (ALBM): A class of long range air-to-ground missiles which were under development in the late 1950s.

ANTIBALLISTIC MISSILE (ABM): A rocket interception capable of negating an enemy ballistic missile above the atmosphere or within the atmosphere.

ABM TREATY: Signed concurrently with the SALT-I Treaty, this treaty specifically bans the development, testing and deployment of space-based ABM systems.

ARMS CONTROL: It is a co-operative or multilateral approach to armament policy, where armament policy includes amount and kinds of weapons, forces, development and utilization in periods of relaxation or tension. It aims at improving national security by the adjustment of armament capabilities.

ANTI-SATELLITE (ASAT): Any system or device whose purpose is to negate the mission of an operational satellite. Negation may be physical destruction or interference with communications and/or sensor systems.

ASAT TREATY: A Soviet draft treaty deposited with United Nations in 1981 and 1982. Provisions of the treaty would prohibit the introduction of weapons of any kind into orbit about the Earth and would prevent any state from interfering with or damaging a satellite of another state.

APOGEE: The highest point (farthest distance from the earth) in a satellite's orbit. Typical apogees for operational satellites range from 200 km. to 40,000 km.

ASSURED DESTRUCTION: The ability to inflict unacceptable damage upon an adversary in any circumstances (including after a surprise first strike). It was associated with US second-strike deterrent until the early 1970s, when it acquired the (sometimes pejorative) acronym MAD (mutual assured destruction).

ATOM BOMB: A bomb whose energy comes from the fusion of heavy elements, such as Uranium or plutonium.

BALLISTIC MISSILE: Missile with non-air-breathing engine that uses thrust alone for lift. Once thrust has stopped, its trajectory is determined by gravity and aerodynamic drag.

BALLISTIC MISSILE DEFENCE(BMD): The general technique of negating enemy ballistic missiles before they reach their targets. Deployment was severely limited by SALT-I, but general interest was maintained by both superpowers and received new emphasis in the late 1970s and 1980s with technological developments (including American fears of a Soviet breakthrough) and America's requirement for a survivable ICBM basing mode.

BIOLOGICAL WEAPONS: Living organisms or infective material derived from them, which are intended for use in warfare to cause disease or death in man, animals or plants, and the means of their delivery.

BOOST PHASE: The phase of a missile trajectory from launch to burnout of the final stage; for ICBMs, this phase typically lasts from 180-300 seconds but could be reduced to as low as 60 seconds.

CENTRAL PLANNING: It refers to that system of economic planning where the state determines, what shall be produced, how much shall be produced and how shall it be produced. It is the state which allocates factors of production to the various industries for productive purposes.

CHEMICAL WEAPONS: Chemical substances—whether gaseous, liquid or solid— which might be employed as weapons in combat because of their direct toxic effects on man, animals, or plants, and the means of their delivery.

COLD WAR: The extreme state of tension and hostility that developed between the western powers and the Communist bloc of Eastern Europe after World War II. The Cold war has been characterized by political manoeuvring, diplomatic wrangling, psychological warfare, ideological hostility, economic warfare, arms race and other power contests falling short of an all out "hot war."

C³ COMMAND, CONTROL AND COMMUNICATIONS: Also C³I(C³ and intelligence) It is the intricate electronic network, which oversees, manages and directs the globally distributed support and combat forces.

COMMAND ECONOMY: It is that economy in which all decisions regarding production- what shall be produced- are made by the Central Government. Soviet Union, China and the East European countries are examples of command economies.

COMMUNIST PARTY OF THE SOVIET UNION(CPSU): It is the ruling party of the Soviet Union- its ideological foundation is Marxism-Leninism. Founded at the turn this century, it led the triumphant Great October Socialist Revolution.

CONVENTIONAL WAR: Generally refers to a war below the level of a nuclear conflict, but above that of guerrilla warfare, or terrorism. The phrase has also been used to refer to non chemical, nonbiological and nonbacteriological war.

COUNTERMEASURES: Actions taken to cancel enemy weapons or actions. e.g. a missile which homes in on its prey by using an active radar or an infra-red sensors can be confused and defeated by jamming or heat-generating decoys, respectively.

CRUISE MISSILE: Missile with an air-breathing engine and using aerodynamic surfaces for lift.

DECOY: An object that is designed to deceive an observer; after a light object designed to look like a satellite or a nuclear warhead.

DETENTE: A diplomatic term indicating a situation of lessened strain or tension in the relations between two or more countries. A period of detente may be established by formal treaty or may evolve out of changes in national strategies and tactics over several years.

DETERRENCE: The prevention of military action by the threat of punishment (e.g., unacceptable retaliation) or by denying the potential adversary his goals.

DIRECTED- ENERGY WEAPON (DEW): A weapon such as Laser which destroys its target by delivering energy to it, at or near the speed of light.

DISARMAMENT: It is a plan or a system for the limitation, reduction or abolition of armed forces, including their arms and equipment and other related items like military bases and budgets.

EARLY WARNING (EW) SATELLITES: Satellites designed to detect the launch of enemy ballistic missiles and provide warning to national strategic forces. US early warning satellites are placed in geostationary orbits, whereas Soviet early warning satellites travel in highly elliptical orbits.

ENDO-ATMOSPHERIC: within the atmosphere.

EXCIMER: A pair of atoms that are bound together only when the molecule is in an excited energy level.

FIRST STRIKE: Initial offensive move in a war.

FIRST USE: The initial use of nuclear weapons. In the NATO context it frequently refers to the deliberate escalation of from conventional to tactical nuclear war in accordance with the doctrine of flexible response. While no first use refers to policy or agreement not to use weapons unless one's opponent has already escalated to that level.

FISSION: The splitting of a heavy nucleus into two approximately equal parts, accompanied by the release of a relatively large amount of energy and generally one or two more neutrons.

FREE ELECTRON LASER(FEL): A type of laser which does not use ordinary matters as a lasant but instead generates radiation by the interaction of an electron beam with a static magnetic or electric field.

FUSION: The formation of a heavier nucleus from two lighter ones(such as hydrogen isotopes), with the attendant release of energy(as in a hydrogen bomb).

GALOSH: The operational ABM system currently deployed around Moscow. Also known as ABM-1B, this system currently employs only 32 interceptors of the 100 permitted by Treaty.

GEOSTATIONARY ORBIT(GSO): An orbit at an altitude of 35,000 kms. above the earth's equator, a satellite placed in this orbit revolves around the earth once per day, thus appearing to be stationary relative to the surface of the earth.

GEOSTATIONARY SATELLITE: A satellite located above the Earth's equator at an altitude of 35,000 kms.

COSPLAN: Soviet State Planning Commission, attached to govt.

GROSS NATIONAL PRODUCT(GDP): It is an alternative term for " national income". It is a key-measure of the overall performance of the national economy. It also helps to measure the contributions of the important sectors of the economy.

HYDROGEN BOMB: A nuclear weapon that derives its energy largely from fusion.

INFLATION: A persistent upward movement in the general price-level, leading to a decline in the purchasing power of the monetary unit. Inflation invariably takes place when the money supply rises faster than the increase in the output.

INTERCONTINENTAL BALLISTIC MISSILE (ICBM): A rocket weapon system which flies along a highly arched trajectory through space but does not enter it. ICBMs are highly accurate when compared with other ballistic missiles.

INTERMEDIATE NUCLEAR FORCES (INF): 1980s designation for long-range theatre nuclear forces, e.g. ground-launched cruise missiles (GLCMs).

KRASNOYARSK: It is the construction site in Central USSR of a new large phased-array radar.

LASER: Light amplification by stimulated emission of radiation - a device for generating, amplifying and concentrating light waves into an intense beam in one specific direction.

LAYERED DEFENCE: The use of several layers of ballistic missile defence at different phases of the missile trajectory.

LIMITED WAR: A war limited in its geographic scope, military scale, and/or weapons used.

MARKET ECONOMY: It refers to that economy in which the forces of demand and supply are relied upon to solve the problems of selection of commodities to be produced and the methods of producing them. The US economy, for example, is an exclusively market economy.

MID-COURSE PHASE: The phase of a ballistic missile trajectory in which the reentry vehicles travel through space on ballistic course towards their targets. This phase lasts upto 1200 seconds.

MUTUALLY ASSURED DESTRUCTION (MAD): A strategic deterrent philosophy which assumes that if neither superpower possesses a credible ballistic missile defensive system, neither side will launch a nuclear strike because large portions of both countries will inevitably be destroyed. MAD was a cornerstone behind the US approval of ABM Treaty, which severely limited ballistic missile defences, but it has recently fallen out of favour in the US and there is no evidence that the Soviets ever ascribed to its tenets.

NATIONAL INCOME: It can be regarded either as the money value of the total volume of production of goods and services or the total of all incomes derived from economic activity during a specified period, generally one year.

NUCLEAR WEAPON: A collective term for atom bombs, and hydrogen bombs or any weapon based on a nuclear explosive.

OPPORTUNITY COSTS: They are also known as alternative costs. Sometimes people must choose between one thing and another, so that the satisfaction of one want involves the sacrifice of another. The opportunity cost of anything is the alternative that is foregone.

OUTER SPACE TREATY: Officially known as the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies; signed in January 1967. It prohibits the orbiting of any objects carrying nuclear weapons or any other kinds of weapons of mass destruction.

PARITY (STRATEGIC NUCLEAR): American term used particularly in SALT-I referring to rough numerical equality in central strategic systems.

PARTICLE BEAM WEAPONS: Devices which generate, accelerate, and direct high-velocity particles in a narrow beam, usually to a target at an extreme distance. The particles employed can be either sub-atomic or the nuclei of simple elements.

PREEMPTIVE STRIKE: An attack launched in anticipation of an opponent's attack and intended to minimize the effects of an opponent's action.

PROLIFERATION(NUCLEAR): The spread of nuclear weapons. It can either be quantitative increase in existing arsenals or the acquisition of nuclear weapons by states without such arsenals.

RADAR: Radio detection and ranging- a technique for detecting targets in the atmosphere or in space by transmitting radio waves(e.g. microwaves) and sensing the waves reflected by objects.

RE-ENTRY VEHICLE(RV): A small container holding a nuclear warhead.

STRATEGIC ARMS LIMITATION TALKS(SALT): Negotiations carried on between the US and the Soviet Union with the objective of reaching agreement on the control of strategic nuclear weapons, delivery systems and related offensive and defensive weapons systems. SALT negotiations were first undertaken in Helsinki in 1969. In SALT-I(1969-72), agreement was reached to limit the number of ABM defence systems to two in each country. SALT-II guidelines were worked at the Nixon-Brezhnev Summit Meeting in Washington in 1973. By 1979, a SALT-II Treaty was signed in Vienna by Carter and Brezhnev, and was submitted by Carter to the Senate ratification, which was never done due to the Soviet intervention of Afghanistan.

STRATEGIC WEAPONS(NUCLEAR): Usually it is referred to long-range weapons targetted against an enemy's homeland, while tactical nuclear weapons had a shorter range and greater accuracy for use on the battlefield.

SUBMARINE LAUNCHED BALLISTIC MISSILE(SLBM): A rocket weapon system of intercontinental range but launched from a submarine platform. SLBMs have shorter flight times than ICBMs although they are presently less accurate.

TRACKING: The monitoring of the course of a moving target.

WARHEAD: A weapon, usually a nuclear weapon, contained in the payload of a missile.

X-RAYS: Electromagnetic radiation having wavelengths shorter than 10 nanometres (10 billionths of a metre)

X-RAYS LASERS: A laser which generates a beam or beams of X-rays. Also called an "X-ray laser" or "XRL".



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SELECT BIBLIOGRAPHY

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Gorbachev, Mikhail Answers to Questions Put By Time Magazine (Moscow: Novosti Press, 1985).

Gorbachev, M.S., A Time for Peace (New York: Richardson and Stearns, 1985).

_____, The Meratorium (Moscow: Novosti Press, 1986)

_____, Peace Has No Alternative (New Delhi: Patriot Publishers, 1986).

_____, Speeches and writings, Vol. I (Oxford: Pergamon Press, 1986).

_____, Speeches and writings, Vol. II (Oxford: Pergamon Press, 1987).

_____, Towards a Better world (London: Hutchinson, 1987).

Statement by M.S. Gorbachev, General Secretary of the CPSU Central Committee on Soviet Television, Aug 18, 1986 (Moscow: Novosti Press, 1986)

Gromyko, A.A. Peace Now, Peace for the future (Oxford: Pergamon Press, 1984).

Documents and Materials of the 19th All-Union Conference, (Moscow: Novosti Press, 1988).

XXVII CPSU Congress: Documents and Resolutions (New Delhi: Allied Publishers, 1986).

The USSR Proposes Disarmament (1920s-1980s) (Moscow: Progress Publishers, 1986).

USSR-USA Summit Moscow, May 29-June 2, 1988: Documents and Materials (Moscow: Novosti Press, 1988).

Visit of Mikhail Gorbachev to Italy, Nov. 29-Dec. 1, 1989: Documents and Materials (Moscow: Novosti Press, 1989).

SECONDARY SOURCESBOOKS:

Alford, Jonathon, ed., The Soviet Union: Security Policies and Constraints (Aldershot: Gower Publishing Company Ltd, 1985).

Arbatov, G.A., and Oltmans, W., Gold War or Detente? Soviet Viewpoint (London: Zed Books, 1983).

Gall, Desmond and Pack, Andrew, ed., The Future of Arms Control (Canberra: Australian National University Press, 1987).

Baskakov, Edward, Clearest and International Relations(New Delhi: Allied Publishers, 1988).

Becker, Abraham, S., The Burden of Soviet Defense: A Political-Economic Essay (Santa Monica, California: The Rand Corporation, 1981).

Beloue, Vladimir, Star Wars or Star Peace?(New Delhi: Allied Publishers, 1988).

Bialer, Seweryn and Mandelbaum, M., eds., Gorbachev's Russia and American Foreign Policy. (Boulder, Colorado: Westview Press, 1988).

Blacker, Coit D., and Duffy, Gloria, eds., International Arms Control: Issues and Agreements (Stanford: Stanford University Press, 1984).

Brauch, Hans Gunter, ed., Star Wars and European Defence-Implications for Europe: Perceptions and Assessments (London: Macmillan, 1987).

Bulkeley, Rip and Spinardi, Graham, Space Weapons: Deterrence or Delusions? (Cambridge: Polity Press, 1986).

Burlatsky, Fyodor, From Geneva to Reykjavik(Moscow: Progress Publishers, 1987).

Burt, Richard, ed. , Arms Control and Defense Postures in the 1980s (Boulder, Colorado: Westview Press, 1982).

Buzan, Barry, The International Politics of Deterrence(London: Frances Pinter, 1987).

Carlton, David and Schaefer, Carlo, eds., Arms Control and Technological Innovation(London: Macmillan, 1978).

- _____, Reassessing Arms Control (London; Macmillan, 1985)
- Carter, Ashton B., and Schwartz, David B., eds., Ballistic Missile Defense (Washington D.C.; Brookings Institution, 1984).
- Carter, Ashton B., Steinbruner, John D., and Zerket, Charles A., eds., Managing Nuclear Operations (Washington D.C.; Brookings Institution, 1987).
- Chalfant, Alan, Star Wars: Suicide or Survival (London; Mordenfeld and Nicolson, 1985).
- Chopra, V.D. ed., Mikhail Gorbachev's New Thinking: Asia-Pacific: A Critical Assessment (New Delhi; Continental Publishing House, 1988).
- Cooper, Leo, The Political Economy of Soviet Military Power (London; Macmillan, 1989).
- Council on Economic Priorities, Star Wars: The Economic Fallout (Cambridge, Mass; Ballinger Publishing Company, 1988).
- Dahlitz, Julie, Nuclear Arms Control: with Effective International Agreements (London; George Allen and Unwin, 1983).
- Desai, Padma, The Soviet Economy: Problems and Prospects (Oxford; Basil Blackwell, 1988).
- _____, Perestroika in Perspective: The Design and Dilemmas of Soviet Reform (London; I.B. Taurin, 1989).
- Orell Sidney D., Farley, Philip J., and Holloway, David, The Reagan Strategic Defense Initiative: A Technical, Political and Arms Control Assessment (Cambridge, Mass; Ballinger Publishing, 1985).
- Dumas, Lloyd J., ed., The Political Economy of Arms Reductions: Reversing Economic Decay (Boulder, Colorado; Westview Press, 1982).
- Dyker, David A., ed., The Soviet Union Under Gorbachev: Prospects for Reform (New York; Crown Helm, 1987).
- Finnis, John; Boyle, Joseph M., and Grisez, Germain, Nuclear Deterrence, Morality and Realism (Oxford; Clarendon Press, 1987).
- Freedman, Lawrence, Arms Control Management or Reform? (London; Routledge and Kegan Paul, 1986).
- Garfinkle, Adam M., ed., Global Perspective on Arms Control (New York; Praeger Publishers, 1984).
- Garthoff, Raymond L., Policy versus the Law: The Re-interpretation of the ABM Treaty (Washington D.C.; The Brookings Institution, 1987).

Gasteyer, Curt, Searching for World Security: Understanding Global Armament and Disarmament. (London: Frances Pinter, 1985).

Gerasimov, Gennadi, Keep Space Weapon-Free (Moscow: Novosti Press, 1984).

Goldblat, Jozef, Agreements for Arms Control: A Critical Survey (London: Taylor and Francis, 1982).

Gorbachev, Mikhail, Perestroika: New Thinking for Our Country and the World (London: Collins 1987).

Gornley, Dennis M., Double Zero and Soviet Military Strategy: Implications for Western Security (Philippines: Jane's 1988).

Gupta, Rakesh, ed., SDI: Aims, Implications and Response (New Delhi: Panchsheel Publishers, 1988).

Harrieder, Wolfram F., ed., Global Peace and Security: Trends and Challenges (Boulder, Colorado: Westview Press, 1987).

Hartung, William D., et al, The Strategic Defense Initiative: Costs, Contractors and Consequences (New York: Council on Economic Priorities, 1985).

Haslan, Jonathan, The Soviet Union and the Politics of Nuclear Weapons in Europe, 1969-87 (London: Macmillan and Cornell University Press, 1989).

Hess, Richard N., Beyond the INF Treaty, Arms Control and the Atlantic Alliance (Iarham, MD: University Press of America, 1988).

Holloway, David, The Soviet Union and the Arms race (New Haven: Yale University Press, 1983).

Hough, Jerry F., Opening Up the Soviet Economy (Washington: D.C: Brookings Institution, 1988).

Hudson, George E., ed., Soviet National Security Policy Under Perestroika (Boston: Unwin Hyman, 1990).

Humble, Ronald D., The Soviet Space Programme (London: Routledge, 1988).

Hunter, E.D., ed., The future of the Soviet Economy, 1978-1985 (Boulder, Colorado: Westview Press, 1978).

Jacobsen, Carl G. ed., The Uncertain Course: New Weapons, Strategies and Mindssets (Oxford: Oxford University Press, 1987).

_____ , ed., The Soviet Defence Enigma: Estimating Costs and Burden (Oxford: Oxford University Press, 1987).

Jasani, Bhupendra, ed., Outer Space- A New Dimension of the Arms Race (London: Taylor and Francis, 1982).

_____, ed., Space Weapons- The Arms Control Dilemma (London: Taylor and Francis, 1984).

_____, ed., Space Weapons and International Security (Oxford: Oxford University Press, 1987)

Jasani, Bhupendra and Sakata, Toshibomi, eds., Satellites for Arms Control and Crisis Monitoring(Oxford: Oxford University Press, 1987).

Johnson, Nicholas L., Soviet Military Strategy in Space (London: Jane's 1987).

Kasser, M., Soviet Economics (New York: McGraw Hills, 1970).

Kirby, Stephen and Robson, Gordon, eds., The Militarisation of Space(Sussex: Wheatsheaf Books, 1987).

Kovalevko, Ivan and Touzomhammadov, Rais, eds., Disarmament for Development(New Delhi: Allied Publishers, 1989).

Krestianianov V., New Political Thinking and Regional Conflicts (New Delhi- Allied Publishers, 1988).

Lambeth, Benjamin S., and Lewis, Kevin N., The Strategic Defense Initiative In Soviet Planning Policy(Santa Monica, California: The Rand Corporation, 1988).

Lane, David, Soviet Economy and Society(Oxford: Basil Blackwell, 1985).

Lee, William T., The Estimation of Soviet Defense Expenditures, 1955-75; An Unconventional Approach (New York: Praeger Publishers, 1977).

Loebbert, G, ed., Soviet Military Thinking (London: George Allen and Unwin, 1985)

McCurre, Michael, Military Objective In Soviet Foreign Policy (Washington D.C.: Brookings Institution, 1987).

McDonough, Thomas R., Space: The Next Twenty Five Years (New York: John Wiley and Sons, 1987).

Medvedev, Zhores, Gorbachev(Oxford: Basil Blackwell, 1986).

Menshikov, Rudolf, New Political Thinking and Asia-Pacific (New Delhi: Allied Publishers, 1988).

Miller, R.F. et al, Gorbachev At the Helm: A New Era in Soviet Politics? (London: Croom Helm, 1987).

Miller, Steven E., ed., The Nuclear Weapons Freeze and Arms Control (Cambridge, Mass: Ballinger Publishing company, 1984)

Morozov, Vasilii, Strategic Offensive Arms and Asian Security (New Delhi: Allied Publishers, 1988).

Nikolsky, Nikolai, The Philosophy of New Thinking and the Soviet Initiative (New Delhi: Allied Publishers, 1988).

Nave, Alec, The Soviet Economic System (Boston: Allen and Unwin, 1986).

Obminsky, Ernest and Bugrov, Andrei, International Economic Security: A Major Factor Of Peace (New Delhi: Allied Publishers, 1988).

Rayne, Keith B., ed., Strategic Defense: 'Star Wars' in Perspective (Boulder, Colorado: Westview Press, 1983).

Peace and Disarmament Academic Studies, 1984 (Moscow: Progress Publishers, 1984).

Petrovsky, V., Soviet Security Concept (Moscow: Nauka Publishers, 1986).

Popov, Yuri, and Ziegler, J., The Year 2000: End of the Human Race? (Moscow: Progress Publishers, 1986).

Prados, John, The Soviet Estimate: US Intelligence Analysis and Soviet Strategic Forces (Princeton, N.J. Princeton University Press, 1988).

Prins, Gwyn, ed., Defended To Death (Middlesex: Penguin Books, 1983).
Remington

Remington, Thomas F., ed., Politics and the Soviet System (London: Macmillan, 1989).

Rotblat, Joseph and Holdren, J., eds., Strategic Defense and the Future of the Arms Race: A Pugwash Symposium (London: Macmillan, 1987).

Schell, Jonathan, The Fate of the Earth (London: Picador, 1982).

Scott, Robert Travis, ed., The Race for Security: Arms and Arms Control in the Reagan Years (Lexington: Lexington Books, 1987).

Sovestyanov, Vitall and Fryskhin, Vladimir, Mankind's Road to the Stars(New Delhi: Allied Publishers, 1988).

Sheshan, Michael J., Arms Control: Theory and Practice(Oxford: Basil Blackwell, 1988).

Sherr, Alan B., The Other Side of Arms Control: Soviet Objectives in the Gorbachev Era(Boston: Unwin Hyman, 1988).

Shmelyov, Mikhail, Soviet Peace Initiatives, 1946-1987. (New Delhi: Allied Publishers, 1987).

Sokoloff, Georges, The Economy of Detente: The Soviet Union and Western Capital(Leamington Spa: BERC Publications, 1987).

Sokolov, P.V., Political Economy(Moscow: Voenizdat, 1974).

Sonnenfeldt, Helmut, ed., Soviet Politics in the 1980s (Boulder, Colorado: Westview Press, 1985).

Spiesmann, K.F., Analyzing Soviet Strategic Arms Decisions (Boulder, Colorado: Westview Press, 1978).

Star Wars: Delusions and Dangers(Moscow: Progress Publishers, 1985).

Suvorov, V., Inside Soviet Military Intelligence(New York: Macmillan, 1984).

Thompson, E.P., ed., Star Wars(London: Penguin, 1985).

Voshadze, Grigory, Perestroika and Demarcation of International Relations(New Delhi: Allied Publishers, 1988).

Velikhov, Yevgeny, Sagdeev, Roald, and Koloschin, Andrei, Weapons in Space: The Dilemma of Security(Moscow: Mir Publishers, 1986).

Vigor, P.H., Soviet View of Disarmament(London: Macmillan, 1986).

Wolf Jr., Charles and Rowen, Henry S., eds., The Impoverished Superpowers: Perestroika and the Soviet Military Burden(Santa Monica: Rand Corporation, 1990).

Yost, David S., Soviet Ballistic Missile Defense and the Western Alliance(Cambridge, Mass: Harvard University Press, 1988).

Zagladin, Vadim, Peace: The Only Option(New Delhi: Allied Publishers, 1987).

Zuckerman, Lord, Star Wars in a Nuclear World (London: William Kimber, 1986).

Zwick, Peter, Soviet Foreign Relations: Process and Policy (New Jersey: Prentice Hall, 1990).

(II)

ARTICLES:

Acland-Hood, R., "Military Research and Development: Resource Use and Arms", SIPRI Yearbook, 1985: World Armaments and Disarmament (Oxford: Oxford University Press, 1985), pp.

Anderton, Charles H., "Arms Race Modelling: Problems and Prospects", Journal of Conflict Resolution (Newbury Park), vol. 33, no. 2, June 1989, pp. 346-67.

Brown, Harold, "Is SDI Technically Feasible?", Foreign Affairs (New York), vol. 64, no. 3, 1986, pp. 438-54.

Bundy, R., et al., "The President's Choice: Star Wars or Arms Control", Foreign Affairs (New York), vol. 62, no. 4, 1984, pp. 264-79.

Burton D.F., "Estimating Soviet Defense Spending", Problems Of Communism (Washington D.C.), no. 3-4, 1983, pp. 85-93.

Byers, J.D., and Peel, D.A., "The Determinants of Arms Expenditures of NATO and the WARSAW PACT: Some Further Evidence", Journal of Peace Research (London), vol. 26, no. 1, Feb. 1989, pp. 66-77.

Chadda, Maya, "Rightwing Hostility To INF in US", Times Of India (New Delhi), Feb. 22, 1988.

Chakravarty, Nikhil, "Continued Dialogue- The Message of Moscow Summit", The Telegraph (Calcutta), June, 10, 1988.

Chernyshev, N., "Star Peace vs Star Wars", International Affairs (Moscow), no. 9, September 1986, pp. 53-59, 74.

Damodaran, A.K., "Positive Response in International Affairs", World Focus (New Delhi), vol. 9, nos. 10-11-12, Oct-Nov-Dec 1988, pp. 19-23.

Das, Tapan, "US-USSR Summits: A Historical Perspective", Mainstream (New Delhi), vol. XXVI, no. 33, May 28, 1988, pp. 7, 26.

_____, "After the INF Treaty", Hindustan Times (New Delhi) Oct. 9, 1988.

_____, "Spanners in START Negotiations", The Patriot (New Delhi), Oct. 14, 1988.

Dasgupta, Amalendu, "Myth Of Arm Cut: But Better Climate for Curbs", The Statesman (New Delhi), Oct. 12, 1989.

Garfinkle, Adam M., "The Politics Of Space Defense," Orbis, (Pennsylvania), Vol. 28, no. 2, Summer 1984, pp. 240-57.

Garwin, Richard L., "Star Wars: Shield or Threat?", Journal Of International Affairs(New York), vol. 39, no. 1 Summer 1985, pp. 31-44.

Glikeman, Alex, "Trading Nukes For Conventional Weapons," Christian Science Monitor, Dec 3, 1987, p. 13.

_____, "Moscow's Real Fears on 'Star Wars'," International Herald Tribune(Paris), Feb. 14, 1986.

_____, "Deterrence without Nukes," New York Times, May 16, 1987.

Gonzales, Eric, "USSR Initiates A New world Order," World Focus(New Delhi), Vol. 9, no. 10-11-12, Oct-Nov-Dec. 1988, pp. 24-25, 29.

Goyal, D. R., "Moscow Summit In Perspective," Mainstream (New Delhi), vol. XXVI, no. 33, May 28, 1988, pp 5-6, 38.

Gupta, Rakesh, "Disarmament Meets: US Thwarts Consensus," Mainstream(New Delhi), vol. XXVI, no. 36, July 2, 1988, pp 5, 30.

Halsted, Thomas F., "On-Site Inspection Provision May Be The Pact's Main Flow," International Herald Tribune(Paris) Jan. 26, 1988.

Haslam, Jonathan, "The UN and the Soviet Union: A New Thinking?" International Affairs(London), vol. 65, no. 4, Autumn 1989, pp. 677-84.

Howard, Michael, "1989: A Farewell To Arms? ", International Affairs(London), vol. 65, no. 3, Summer 1989, pp. 487-13.

Ivanov, Nikolai, "USSR Business Advocates and the Economic Realities of Disarmament," International Affairs(Moscow), no. 11, Nov 1986, pp. 40-48.

Jacobsen, Carl G., "Soviet Military Expenditures and the Soviet Defence Burden," SIPRI Yearbook 1986: World Armaments and Disarmament (Oxford: Oxford University Press, 1986), pp. 263-74.

Joishi, Manoj, "ABM Treaty: US Out to Wrest Soviet Compliance", The Hindu(Madras), Aug. 24, 1988.

Kaufman, Richard F., "Causes Of the Slowdown in Soviet Defense," Survival(London), vol. XXVII, no. 4, July/August 1985, pp. 179-92.

Kaushik, Devendra, "Political Reforms- A Balance-Sheet," World Focus(New Delhi), vol. 9, no. 10-11-12, Oct-Nov-Dec. 1988, pp. 13-17, 29.

Khan, Rasheeduddin, "Perestroika: An Overview," World Focus

(New Delhi), vol. 9, no. 10-11-12, Oct-Nov-Dec. 1988, pp. 3-6, 23.

Kireyev, Aleksei, "Mysteries Of the Military Budget," Soviet Military Review(Moscow), no. 11, Nov. 1987, pp. 28-29.

Konobeyev, Vladimir, "Benefits of Converting Arms Production," International Affairs(Moscow), no. 2, Feb. 1988, pp. 33-40, 58.

Kuznetsova, Irina and Orlov, Yuri, "The Hypocrisy Of Washington's ABM Treaty Exponents," International Affairs (Moscow), no. 5, May 1987, pp. 79-86.

Lebedev, Yuri and Podberazkin, Aleksei, "SDI- A New Stage Of the Arms Race," International Affairs(Moscow) no. 2, Feb. 1987, pp. 60-67.

Lebow, Richard Ned, "Assured Strategic Stupidity: The quest for Ballistic Missile Defense," Journal of International Affairs(New York), vol. 39, no. 1, Summer 1985, pp. 57-80.

Pieron, N. C., "Communism will fall," Hindustan Times (New Delhi) Feb. 26, 1990.

Pleshnikov, S., "What is Behind the 'Star Wars' Debate?," International Affairs(Moscow), no. 6, June 1985, pp. 67-77.

Meyer, Stephen W., "Soviet Views on SDI," Survival(London) vol. XXVII, no. 6, Nov/Dec. 1985, pp. 274-92.

Pohan C. Raja, "Rediscovery Of Asia-Pacific," World Focus (New Delhi), vol. 9, no. 10-11-12, Oct-Nov-Dec 1988, pp. 55-68.

_____, "Dismantling Cold War," The Hindu(Madras), Jan. 2, 1989.

_____, "Perestroika and International Security," Social Scientist(New Delhi), vol. 17, nos 11-12, Nov-Dec 1989, pp. 3-29

Rukherjee, Sachin, "Changes in Socialist Economy," World Focus(New Delhi), vol. 9, no. 10-11-12, Oct-Nov-Dec. 1988, pp. 26-29.

Ryere, Ware, "The Star Wars Software Debate," Bulletin Of the Atomic Scientists(Chicago), Vol. 42, no. 2 Feb. 1986, pp. 31-36.

Narayanasamy, Ramnath, "Soviet and East European Indebtedness," Economic and Political Weekly(Bombay), vol. XXV, no. 1, Jan. 6, 1990, pp. 21-24.

Ovinnikov, R., "'Star Wars' Programme- A New Phase in Washington's Military Policy" International Affairs(Moscow)? no. 8, Aug 1985, pp. 13-22.

paine, Christopher, " The ABM Treaty: Looking For the Loopholes, " Bulletin of the Atomic Scientists, vol. 39, no. 2, Aug/Sept 1983, pp. 13-16.

Payne, Keith B., " Should SDI Be Part Of a 'Grand Compromise?' ", Christian Science Monitor, Thursday, Aug. 20, 1986, p. 16.

Perle, Richard M., " The Strategic Defense Initiative: Addressing Some Misconceptions, " Journal of International Affairs(New York), vol. 39, no. 1, Summer 1985, pp. 23-30.

Platonov, A., " Militarization of Outer Space- A Threat to Mankind, " International Affairs(Moscow), no. 2, Feb. 1985, pp. 28-36.

Report By Committee Of Soviet Scientists, " Space-Based Defenses: A Soviet Study, " Survival(London) vol. XXVII no. 2, March/April, 1985, pp. 83-90.

Richardson, Jeffery T., " USA Intelligence and Soviet Star Wars, Bulletin of the Atomic Scientists(Chicago) vol. 42, no. 5, May 1986, pp. 12-14.

Rivkin, David B., " What Does Moscow Think?", Foreign Policy(Washington D.C.) no. 59, Summer 1985, pp. 85-105.

Rostow, Eugene V., " Caution; Go Slow in Ratifying the Treaty, " International Herald Tribune(Paris), Jan 6, 1988.

Sardesai, S.G., " A Turning Point In History", New Age, (New Delhi), Jan. 3, 1988.

Schmitter, George R., " Implications of the Strategic Defense Initiative for the ABM Treaty, " Survival(London) vol. XXVII, no. 5, Sept/Oct. 1985, pp. 213-25.

Sevastyanov, Vitely and Prysikhin Vladimir, " Space Exploration and New Thinking, " International Affairs (Moscow), no. 5, May 1987, pp. 21-29.

Shakhmazarov, Georgi, " The East and the West; Deideologization of Inter-State Relations, " Kommunist(Supplement) (Moscow) no. 5, Issue 11, pp. 3-21.

Shanin, Teodor, "Soviet Economic Crisis; The Most Immediate Stumbling Block and the Next Step, " Monthly Review(New York) vol. 41, no. 5, Oct 1989, pp. 18-21.

Shaahkov, Yevgeni, " 'Space Shield'; Myths and Reality, " International Affairs(Moscow), no. 3, March 1987, pp. 22-29.

Singh, Jasjit, "The Strategic Dimension," World Focus (New Delhi), vol. 9, no. 10-11-12, Oct-Nov-Dec 1988, pp. 47-50.

Somov, R., "Soviets' Political Thinking in The Nuclear and Space Era," International Affairs(Moscow), no. 7, July 1986, pp. 81-89, 107.

_____, "Star Peace, Not Star Wars," International Affairs(Moscow), no. 3, March 1986, pp. 54-62.

Subrahmanyam, K., "Logic of Disarmament," World Focus (New Delhi), vol. 9, no. 10-11-12, Oct-Nov-Dec 1988 pp. 42-45.

_____, "Alternative Security Doctrines," Review of International Affairs(Belgrade), Vol. XLI, no. 954, Jan. 5, 1990, pp. 18-30.

Tulberg, B., and Hagneyer-Gaverus, G., "SIPRI Military Expenditure Data," SIPRI Yearbook, 1988, World Armaments and Disarmaments(Oxford; Oxford University Press, 1988), pp. 129-57.

Velikhov, Yevgeny, "Space Weapons—Effects on Strategic Stability," Special Section, Bulletin of the Atomic Scientists, vol. 40, no. 5, May 1984, pp. 120-158.

Vogale, William B., "Tough Bargaining and Arms Control: Lessons from the INF Treaty," Journal of Strategic Studies (London), vol. 12, no. 3, Sept 1989, pp. 257-72.

Vohra, A.M., "The Historic INF Treaty," Hindustan Times (New Delhi), Feb. 10, 1988.

Williams, Phil, "US-Soviet Relations: Beyond the Cold War?", International Affairs(London), vol. 65, no. 2, Spring 1989, pp 273-88.

Wilkinson, Christopher, "Soviet Defense Expenditures: Past Trends and Prospects," NIJ Review(Washington D.C.), vol. 37, no. 2, April 1989, pp. 16-22.

Zuberi, M., "Peace Security and Delhi Declaration," World Focus (New Delhi), vol. 9, no. 10-11-12, Oct-Nov-Dec. 1988, pp. 51-54-71.

(III)

DICTIONARIES, YEARBOOKS:

Military Encyclopaedic Dictionary(Moscow; Military Publishing House, 1983.).

Plano, Jack C., and Roylton, The International Relations Dictionary, 3rd. ed. (Santa Barbara, California; ABC-CLIO, 1980).

Taylor, Philip A.S., A New Dictionary of Economics. (London: Routledge and Kegan Paul, 1969).

SIPRI Yearbook, 1985: World Armaments and Disarmaments (Oxford: Oxford University Press, 1985).

SIPRI Yearbook, 1986: World Armaments and Disarmaments (Oxford: Oxford University Press, 1986).

SIPRI Yearbook, 1987: World Armaments and Disarmaments (Oxford: Oxford University Press, 1987).

SIPRI Yearbook, 1988: World Armaments and Disarmaments (Oxford: Oxford University Press, 1988).

SIPRI Yearbook, 1989: World Armaments and Disarmaments (Oxford: Oxford University Press, 1989).

SIPRI Yearbook, 1990: World Armaments and Disarmaments (Oxford: Oxford University Press, 1990).

Strategic Survey, 1988-89 (London: International Institute for Strategic Studies, 1989).

USSR Yearbook, 1988 (Moscow: Novosti Press, 1988).