STRATEGIC DEFENCE INITIATIVE AND NUCLEAR ARMS CONTROL

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CERTIFICATE

Certified that the dissertation entitled "STRATEGIC DEFENCE INITIATIVE AND NUCLEAR ARMS CONTROL" submitted by Mr. Partha Sarathi Mishra in Partial fulfilment for the award of the degree of MASTER OF PHILOSOPHY has not been previously submitted for any other degree of this University or any other University. To the best of our knowledge this is a bonafide work.

We recommend this dissertation be placed before the examiners for evaluation.

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CHAIRMAN.

A C K N O W L E D G E M E N T

The completion of this dissertation has been an extremely stimulating experience. My interest in working on this topic was because of the urgent and critical need to comprehend this issue in terms of the global dangers implicit in a programme of this type. It was possible to convert this inclination into a concrete research work due to my academic association with Prof. Zuberi whose constant and meticulous supervision can not be exaggerated.

I am, therefore, extremely indebted to Prof. Zuberi. His supervision and guidance have not only been academically substantial, but also intellectually inspiring. The discussions I have had with him have left a deep methodical imprint on my mind. The process of completing this dissertation has, thus, been thoroughly involving and reasonably pleasurable.

I must also acknowledge the sustained co-operation and intense inspiration provided by my friends. I preserve with special care the love and encouragement

that I received from all of them. And at a more personal level, I am deeply indebted to my parents who always encouraged me to creatively associate myself with my discipline.

The Disarmament Studies Division, the School of International Studies and more comprehensively, the Jawaharlal Nehru University itself have combined to create an environment that has been extremely conducive to my research. With all sincerity, I acknowledge this fact.

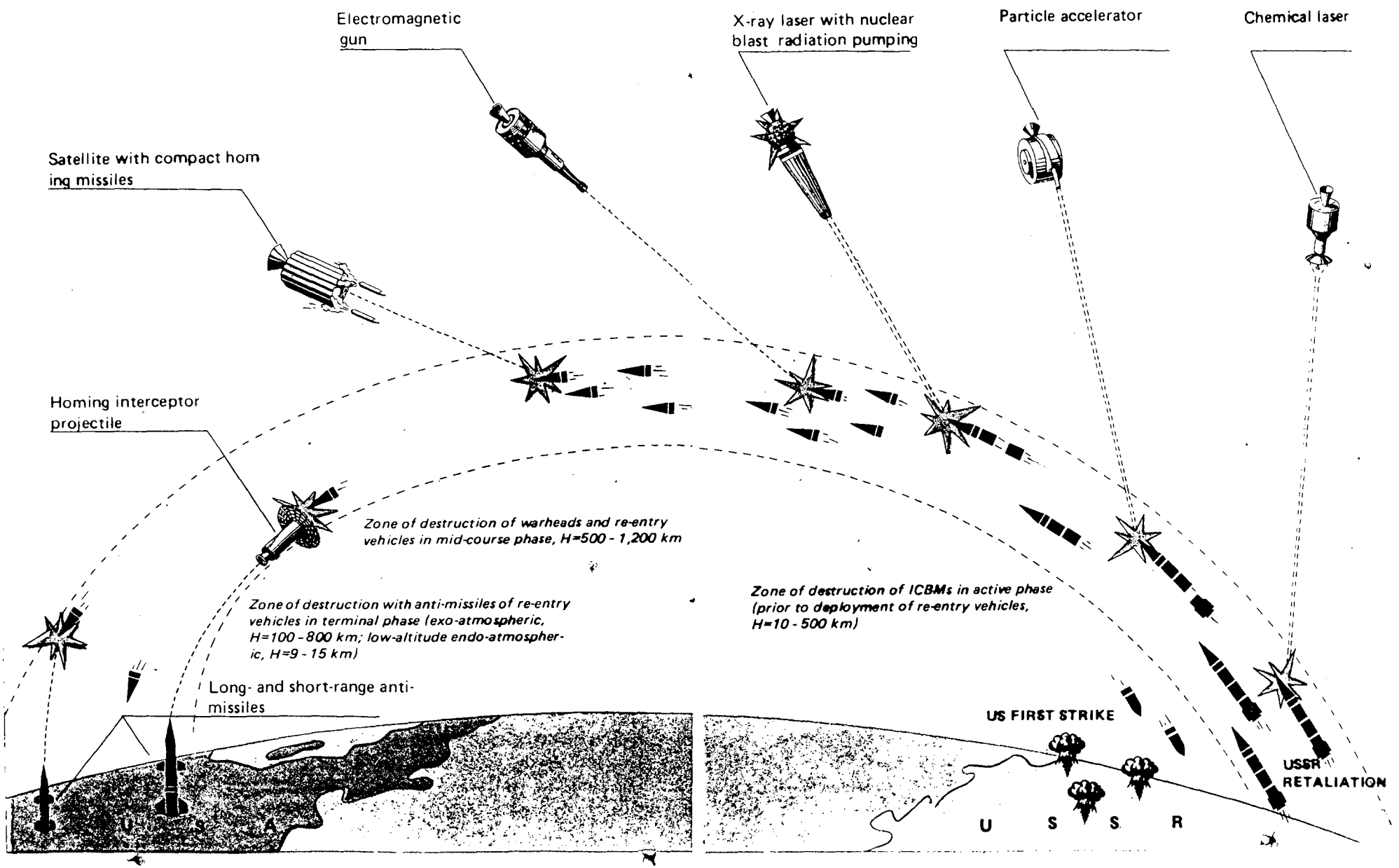
Partha Sarathi Mishra

Partha Sarathi Mishra

" There will never be an impermeable shield against nuclear evil. There is and there has been for forty years, only one shield against chaos : that pitifully weak and yet somehow indestructible shield - the human conscience."

- E.P. Thompson

Version of "Nation-wide" ABM System Now Being Developed by USA as Part of Nuclear First-Strike Capability



CONTENTS

INTRODUCTION

In the history of warfare, there has been a continuing contest for supremacy between offensive and defensive weapons. Advances in technology or military art have at various times made either the offence or the defence temporarily dominant, but sooner or later the pendulum has swung back the other way. It has, thus, become an axiom of warfare that for every weapon or tactic, a counter-weapon or counter-tactic is designed.

It is in this dialectical process that Strategic Defence Initiative has been launched by the Reagan Administration as a defence-mechanism to arrest ballistic missile attack. It marks a significant break in nuclear strategic thinking and it is the central strategic issue of the contemporary nuclear age. It is designed to be the most sophisticated military system of strategic magnitude, trying to bridge the gap between the imaginable and the possible.

Strategic Defence Initiative, both as a technological innovation and strategic proposition, reflects the Reaganite vision for a future world invulnerable to nuclear attacks. It aims for a "defensive transition" which will replace the philosophy and strategy of "Mutual Assured Destruction" by "Mutual Assured Survival". It hopes that the balance of terror will be subject to easement not through the chimera of disarmament, but through the dynamics of military technology itself.

Though Strategic Defence Initiative, which is fashionably dubbed by the media as Star Wars, was originally a product of President Reagan's personal vision, it caught the imagination of personalities and institutions thereafter. The military-industrial-academic complex took this concept as a que towards establishing a more mythical identity. It was for them, as if by some stroke of chance or providential design that the President has unfolded a drama which transformed them from the villians of peace to the heroes of destiny. Apart from the ascedency of personal prestige , the scientists, the capitalists, the power brokers, the arms investors and military

strategists - all came to consider themselves as the recognised custodians of American security. Thus, Strategic Defence Initiative from a scientific fantasy has become a concrete technological - strategic design. Today, it has acquired an institutional momentum of its own.

The revival of the idea of ballistic missile defence which was suspended temporarily with the signing of Anti-Ballistic Missile Treaty of 1972, was not the result of a careful reappraisal of strategic nuclear trends. It did not emerge from a process of inter-agency consultation within the US bureaucratic and defence circles. The enthusiasm of the scientific community for evolving ballistic missile defence, the Western Alliance's concern for the growing popularity of Nuclear Freeze Movement in America and Nuclear Peace Movement in Western Europe, the protracted search for a 'survivable' basing mode for MX missiles and the apprehensions regarding the Soviet Union's Intercontinental Ballistic Missile capacity - all these factors clubbed together to influence President Reagan to launch this ballistic missile defence programme.

The programme has caused two significant developments. Firstly, it launched a major policy and technology review and, secondly, it initiated a global debate concerning the problems and prospects of nuclear deterrence. It has also resulted in a widening asymmetry in American and Russian strategic postures. More importantly, it has become the current "Bargaining Chip" in all arms control initiatives. Even since the unveiling of the programme, it has generated much controversy regarding its technical feasibility, potential relevance and, above all, its' implications for world peace.

In view of the important technological, military, strategic and political implications of this ballistic missile defence programme, this dissertation will focus upon the strategic nuclear policy, the technological capacity and the politics of national security involved in it.

Research on a current issue is always a difficult task. A dissertation on Strategic Defence Initiative which is acquiring new dimensions everyday, the task is more arduous. Still, an attempt has been made to conceptualise and analyse this scientific and strategic undertaking by examining it in a

broader strategic context and by probing some of the policy issues raised by it. An analysis of nuclear strategic trends and politics of defence-decision-making in United States is done with a view to revealing the inner-dynamics of the programme. Since the programme is still at the research level, this dissertation does not study the technology of it; rather it examines the politics of it. It is not a technological feasibility survey, but a conceptual and analytical assessment of the programme.

The structure of the dissertation is designed in the following way. It is divided into three chapters. Each chapter is a complete whole in itself. Though the dissertation concentrates on Strategic Defence Initiative and Nuclear Arms Control, it examines the other dimensions of the programme. Because an analysis of any strategic issue will be complete only when it is examined in a broader strategic context.

Chapter I attempts to explain the doctrine, technology and strategy of the Strategic Defence Initiative. The main focus is to introduce the programme in conceptual terms.

Chapter II confines itself to a survey of politico-strategic and military implications of the programme. It records its implications for deterrence, crisis stability, superpower relations, western alliance system and the third world. It examines the programme in a broader strategic perspective.

Chapter III examines the impact of the programme on nuclear arms control. It analyses different international agreements and measures preventing militarization of outerspace.

In this research project, a deductive-investigative and analytical methodology has been followed. The deductive method helps in evolving a general picture of the programme; the investigative method explores its inner-dynamics, while the analytical method reveals its military, strategic and political impllcations. Content Analysis, which scientifically records the speeches and attitudes of political and defence elites, has been used to make the assessment of the programme more accurate, objective and comprehensive.

This conceptual and analytic survey of Strategic Defence Initiative is both event-specific and process-specific. It records the strategic and political events concerning the programme and examines its' development in the processes of arms race, deterrence and arms control.

CHAPTER - I

STRATEGIC DEFENCE INITIATIVE : DOCTRINE, TECHNOLOGY AND STRATEGY

STRATEGIC DEFENCE INITIATIVE, a space-based anti-ballistic missile defence programme, was launched by President Ronald Reagan on 23rd March 1983, in which he initiated a potentially radical departure in U.S. strategic policy. Rejecting the strategy of Mutual Assured Destruction as morally dubious and strategically risky, he urged the American scientific and technical community to contrive a strategic defence system that would create a nuclear free world:-

> " I call upon the Scientific Community in our country, those who gave us nuclear weapons, to turn their talents now to the cause of mankind and world peace, to give us the means of rendering these nuclear weapons impotent and obsolete".[1]

Thus, President Reagan called for an effort to develop a defence against ballistic missile which would change the basis of national security policy in a fundamental way. He sketched a picture of a future world in which security would be based on defensive capabilities rather than on the threat of nuclear war. He acknowledged the achievement of a strategy based on nuclear retaliation (Mutual Assured Destruction) in preserving peace and security for the last forty years, but

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1. President Ronald Reagan, Address to the Nation, March 23, 1983. See Appendix 'A'.

expressed the concern that to continue to rely on that strategy was, at best, a bleak prospect and a sad commentry on the human condition and, at worst, a recipe for eventual nuclear conflict.[2]

Strategic Defence Initiative, thus, reflects the Reaganite vision for a future world invulnerable to nuclear attacks. It not only challenged the technical community explicitly to perfect a strategic defence, but also implicitly expressed the need for a wholesale re-examination of the strategic tenents that have guided the evolution of western nuclear defence policy for decades.

Following President Reagan's national address on 23rd March 1983, the U.S. government ordered an intensive research and development effort with the "ultimate goal of eliminating the threat posed by nuclear ballistic missiles" and initiated two independent, but related studies: One panel under the direction of Dr. James C. Fletcher to map out a technical strategy for reaching that goal; the second panel chaired by Dr. Fred Hoffman was directed to study the political and strategic ramifications of the programme. Both the panels reported to the White House with relatively optimistic assessments.

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2. Ibid.

Based on the reports of the Fletcher Panel and Hoffman Panel, the President issued a presidential directive and proposed a budget to launch the Strategic Defence Initiative. A new office of Strategic Defence Initiative Organization was set up under the directorship of Lt. General James A.Abrahamson. An expenditure of $ 26 billion was estimated over five years to "provide the evidentiary basis for an informed decision on whether and how to proceed into system development" by the early 1990's.

This scientific undertaking is unprecedented in many ways. For the first time (except for the brief, later abandoned, anti-ballistic missile effort of the 1960s), missile defences are contemplated, thus opening a new avenue for competitive arms build-up. A whole panoply of latest technologies is being sought to underpin this effort. For the first time also the potential of the vast outer space - the fourth dimension - is planned to be exploited in full measure.

Strategic Defence Initiative represents America's ultimate faith in technology, its firm commitment to strategic defence. In its ideological expression it aims at the ultimate decomposition of deterrence theory. It is a technological, strategic and political adventure. It is a clear reflection of cold war politics, competitive arms race and disarmament diplomacy.

This chapter explains Strategic Defence Initiative in conceptual terms. It defines the doctrine, technology and strategy of the programme in simple and largely non-specialized language. It is divided into three sub-sections:-

(a) STRATEGIC DEFENCE INITIATICE : THE DOCTRINE

(b) STRATEGIC DEFENCE INITIATIVE : THE TECHNOLOGY

(c) STRATEGIC DEFENCE INITIATIVE : THE STRATEGY

In these sub-sections, an attempt has been made, primarily, to introduce the "Strategic Defence Initiative" programme in its doctrinal, technical and strategic dimensions.

STRATEGIC DEFENCE INITIATIVE : THE DOCTRINE

Strategic Defence Initiative proposes the erection of a full scale space-based anti-ballistic missile defence, capable of neutralizing a nuclear attack. It is designed to be a defence-mechanism which would destroy the Soviet missiles (ICBMs)*, fired at the United States and its allies in a phased manner with an umbrella of exotic weapons. It would be a "shield in space".

Strategic Defence Initiative, as the name indicates, contains three different aspects - "Strategy", "Defence" and "Initiative". Each of these aspects carries a specific purpose. Hence, the purpose of each aspect of "SDI"** programme merits special scrutiny.

Strategic

The programme is strategic in that it concerns the relationship between the United States and the Soviet Union in the field of nuclear weapons. It has to do with the present nuclear force posture, and the plans for its use. It also affects the relationship between the two opposing alliance systems on either side of the East-West divide.

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* ICBM stands for Intercontinental Ballistic Missile.

** SDI stands for Strategic Defence Initiative.

It is strategic as it would bring a qualitative change in strategic environment. It challenges the strategy of "deterrence" and claims that due to increased capabilities of Soviet missiles, the survivability of American missile silos is called into question. Increased Soviet capabilities also present a threat to the command, control and communication facilities and other primary targets in the United States. So, in order to re-establish strategic balance, a ballistic missile defence is needed.

Thus, the conception of SDI as strategic means that it primarily involves the relationship between the USA and the USSR. It is concerned about the strategic balance and strategic superiority of the superpowers.

Defence

Strategic Defence Initiative is designed to provide a defence-mechanism to avert a nuclear war. It proposes the erection of a full-scale anti-ballistic missile defence. It aims to replace Mutual Assured Destruction, which is based on offence, by "Mutual Assured Survival", which is based on defence. It focuses on mutual defence rather than on mutual vulnerability. It rejects deterrence theory as it would fall victim to technological innovation thereby enhancing the threat of nuclear war.

Research in defensive technology is seen as essential to the continued efficacy of deterrence and the eventual transition to a world for ever free of the threat of nuclear devastation. The political and moral rationale behind SDI is to replace mutual vulnerability with mutual defence. In such a situation the incentive to maintain offensive arms will be reduced and security can be achieved without basing it on the threat of destruction.[3]

Initiative

Strategic Defence Initiative is a presidential initiative to do more research on the feasibility of ballistic missile defence and to explore the technological possibilities that exist already. It is not only an initiative, but also a response. It is a response to Soviet ballistic missile research. It is a hedge against a Soviet break out of the ABM treaty and a reaction to a perceived strategic imbalance with the Soviet Union.[4]

This initiative which reflects the actual content of SDI is known as "Nitze Concept".[5] It was developed by

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3. Hans-Henrik Holm, "Star Wars", Journal of Peace Research, (Oslo), Vol.23. No.1, March 1986, p.4.

4. Ibid, p.5.

5. Ibid, p.5.
Also see Evan Thomas, "Strategic Questions", Time (Chicago III) 23 June 1986, pp. 6-7.

arms control adviser Paul Nitze as an attempt to define a common position for future policy and for arms control negotiations with the Soviet Union. The concept contains four elements -

1. It presents the long-range goal as a world free of nuclear arms;
2. It forsees a period of transition that would lead to elimination of all nuclear arms, both defensive and offensive;
3. It aims to make the transition as a gradual one where forces exist in a defensive and offensive mix;
4. It believes that SDI has a supporting role in arms control efforts.

The analysis of each aspect of SDI reveals the following features of the programme -

(a) It would replace the failed and morally suspect doctrine of Mutual Assured Destruction with a strategy of Mutual Assured Survival.

(b) It would effectively close "The window of vulnerability" by denying the Soviets nuclear first-strike capability, without deploying any more American nuclear weapon.

(c) It would create a reliable, effective deterrent to nuclear war by defending the U.S.A. rather than by threatening a suicidal punitive strike at Soviet civilians.

(d) It would create an immediate surge in the high technology sector of the American economy by opening and securing space for private enterprise.

(e) It would augment the arms control process.

Thus, Strategic Defence Initiative in its doctrinal aspect presents a theoretical paradigm which is designed to achieve the above strategic objectives. But doctrine is only a theoretical design. Technology translates it into Practice. Doctrine designs, Technology creates. Both are co-relative and part of the same process. Hence, after focusing on the doctrine of SDI programme, an attempt is made to explain the technology which aims to make it a reality.

STRATEGIC DEFENCE INITIATIVE : THE TECHNOLOGY

Nuclear technology is the bed rock of nuclear strategy. Strategy is conditioned by the quality of technology. SDI as a strategy is essentially an off shoot of technological break-throughs which include development of directed energy weapons(Laser and particle beams, X-rays, kinetic energy projectiles) and advances in guidance and sensing systems (Sensors, data processors and transmitters). With these defensive technologies, SDI is designed to be a perfect "defence-mechanism" to knock out Soviet ballistic missiles.

Currently, SDI is a collection of many technologies, in various stages of research and development, which, when brought together, may be able to identify, track, intercept and destroy ballistic missiles or their re-entry vehicles(RV) in flight. These technologies can be grouped into three basic types:[6]

1. Kill Mechanisms:

   Prospective weapons system for defeating ballistic missile attack range from earth or satellite - launched interceptor missiles to space-based satellites armed with lasers, particle beams, electromagnetic cannon and other forms of exotic technology.

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6. Strategic Survey (1984-85), (London), p.12.

2. Surveillance and Tracking:

In order to intercept ballistic missiles successfully, an arry of land-air-space-based emitters and receivers (using radar and optical means of acquisition) must be deployed.

3. Battle Management:

Command, control, communications and intelligence (C^3I) arrangements must be developed to handle the extremely high rate of information flow and the very short engagement times involved in detecting, acquiring and destroying ballistic missiles and warheads.

The operationalization of these technologies in the Star Wars programme is analysed in the following section.

THE THEORY OF STAR WARS

THE MULTI-LAYER PRINCIPLE:

The theory of Star Wars is based on the multi-layer principle.[7] The space-based defence system will be multi layer: Boost Phase Defence, Post-Boost Phase Defence, Mid Course Interception and Terminal Defence. The Soviet ballistic missiles will be attacked all along their flight path in a phased manner in each of these layers. The defence system will be designed in such a way that Soviet missiles can be knocked out while they are rising through the atmosphere from their silos and at the stage when the individual warheads are released. The third layer of interceptors can then tackle those warheads which evade destruction by the first two layers and finally the warheads which manage to re-enter the atmosphere will be intercepted. The theory of Star Wars projects that these layers will have a cumulative defensive effect.

To understand the mechanism of SDI programme, it is essential to know the several phases an ICBM passes through

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7. See:Hans A. Bathe, Jeffrey Boutwell, Richard L. Garwin, "BMD Technologies and Concepts in the 1980s " in Daedalus (Massachusetts) Vol. 114, No. 2,(Spring 1985), pp. 53-71.

from launch to impact.[8] The flight of a land-based ICBM follows a trajectory over the Arctic from one Superpower to the other, last 25 to 30 minutes and cover approximately 10,000 kilometers. It has four phases of flight: The boost phase, during which large rocket boosters accelerate the missile to a velocity of seven kilometers per second; the post-boost phase, during which the missile deploys its warheads and decoys follow a trajectory through the vacuum of space; and the terminal phase, during which the warheads re-enter the atmosphere. An analysis of each of the phases of ballistic missile's flight path would focus upon the operationalization of SDI mechanism.

The Boost Phase

The flight of an Intercontinental ballistic missiles of current design begins with its silo-cover sliding back or popping open. The missile is then ejected by hot gases and once outside the silo, its first-stage booster ignites. When this booster which gives the warheads the required velocity to travel intercontinental distances burns out,

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8. Ibid, pp. 55-60.
Also see : Ben Thompson "What is Star Wars" in E.P. Thompson, ed. Star Wars(Harmondsworth, 1985), pp. 28-49.

it falls away and the second stage takes over. The portion of journey from the silo to the point at which the last stage stops burning is known as boost phase.

The missiles in boost phase are particularly vulnerable to destruction by a ballistic missile defence. In this layer, the destruction of missiles will be caused by the use of directed energy weapons like chemical and x-ray lasers, particle beam weapons and kinetic energy weapons. These systems have to be installed on hundreds of space platforms fitted out with an optical focussing system or a mirror and a laser or particle beam pointing device. Bulk of the ICBMs would be destroyed within 2 to 5 minutes after their launching.

Boost phase is the most crucial stage for missile defence for four distinct and equally important reasons:[9]

1. During boost phase the defender confronts the smallest number of targets to be destroyed in an ICBM attack. Hence, 90 percent of the missiles can be destroyed at this stage. After the boost phase, once the warheads are released, it is very difficult to track and destroy them.

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9. Richard Ned Lebow, "Assured Strategic Stupidity: The Quest for Ballistic Missile Defense", in Journal of International Affairs, (New York), Vol. 39, (Summer 1985), p.59.

2. The booster flame makes the ICBM a readily identifiable target. It emits a vast amount of infrared radiation that can be detected easily by the satellite sensors.

3. The missile booster is a large and fragile target, easily damaged by directed energy weapons.

4. The problem associated with mid-course and terminal interception and so enormous that they are only feasible as adjuncts to a highly effective boost stage defence. The Reagan administration has cited the figure of 90 percent as the minimum acceptable efficiency of the boost-stage part of a layer defence.[10]

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10. This is the figure used in "The Fletcher Report". This official investigation of BMD by the Defensive Technologies Study Team, was headed by Dr. James D.Fletcher and has provided technical guidance on the Strategic Defence Initiative to the Defence and Energy Departments.

    See: Donald L. Hafner, "Assessing the President's vision: The Fletcher, Miller, Hoffman Panels", n.7, p.92.

Post-Boost Phase

The phase of an ICBM begins when the final rocket booster has separated from what is known as MIRV(Multiple Independently Targetable Reentry Vehicles) Bus, a small platform on top of the missile carrying the warhead and decoys. Depending on the number of warheads and decoys, this phase will last approximately two to five minutes.

A space-based ballistic missile defence can attack the MIRV bus during the post-boost period and can destroy a number of warheads and decoys along with the bus.

Mid-Course Phase

The third layer of the multi-layer defence plan goes into action against the surviving warheads and decoys as they travel through space. This layer consists of electromagnetic rail guns which can fire projectiles at several dozen kilometers per second and also satellites with compact homing missiles. The mid-course phase is regarded as the most difficult and uncertain phase of the whole operation, because of the difficulty of finding and tracking the warheads released by MIRV bus after post-boost phase. It is very difficult to distinguish between warheads and decoys at this phase.

Terminal Phase

The final portion of ballistic missile flight is the terminal phase during which the warheads and decoys re-enter the earth's atmosphere at an altitude of about 100 milometers and approach their targets. Defence becomes theoretically more feasible, because it is now possible to distinguish warheads from decoys.[11] The former is carried by specially shaped and protected re-entry vehicles (RVs) while the later burns up or slows down more rapidly when exposed to friction of the atmosphere. Terminal defence must be able to protect both hardened military targets(point defence) and soft targets such as cities and industries(area defence). For this purpose, land-based anti-ballistic missiles, both short and long-range, are proposed to be used.

The preceeding discussion makes it clear that any effective defence system must concentrate on the boost phase. The defence at this phase is most crucial. Scientists and experts are unanimous that for defence to be effective, upto 90 percent of the Soviet ICBMs must be destroyed in that phase.

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11. Bathe, Boutwell, Garwin, N.7, p.58.

A brief scenario of Star Wars is described on the following lines.[12] The first important requirement is an early warning of an attack. This is done by geo-stationary satellites with sensors to detect the infrared emissions from rockets in boost phase. Warning would be available as the missiles rise through the lower atmosphere. The next task is to provide a threat assessment: determing the exact number of rockets, their positions and even their identities. The system can use sensors on aircraft, on satellites or on popped up platforms.

Then follow target acquisition and tracking. Each object in the "Threat Cloud" has to be distinguished and its trajectory determined by a sequence of measurements of position and velocity. The system would distinguish between false - targets and real targets. Computers assigned to battle-management would use the tracking and targeting information to assign interceptors and beam weapons. A damage assessment will follow to determine target destruction and rectify defects, if any, in defence. For boost-phase interception, all these tasks would have to be completed within the time when the booster separates from the missile (three minutes). Again, the entire operation of defence (Boost Phase, Post-Boost Phase, Mid-Course and Terminal Phase) has to be done in less than 30 minutes.

12. See: Pictorial Representation of Operation of SDI in Appendix- C.

Thus, Strategic Defence Initiative is a product of ballistic missile defence technologies' development. It is essentially a technological epiphany.

The system outlined by President Ronald Reagan can be dubbed as a "black box war stopping machine".[13] It is up in space, unmanned and equipped with its own Artificial Intelligence, Sensors and C^3I systems. Presumably, when it sees a missile attack, it sprays its beam on the missiles and hits every single one. Since it can stop all the attacking missiles, theoretically it is a shield in the sky, a machine for executing the doctrine of assured survival, the opposite of assured destruction.

The technology creates the conditions for developing strategy.[14] Nuclear strategy is designed on the basis of technological break-throughs. Hence, after reflecting on the technology of Strategic Defence Initiative, it is to be analysed how and why it is conceived to act as a strategy.

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13. Deborah Shapley "Strategic Doctrine, the militarization and semi-militarization of space" in Bhupendra Jasani, ed. Space Weapons: The Arms Control Dilemma, (London, 1984), p.66.

14. Bhupinder Jasani establishes the close linkage between the new weapons and the strategic doctrines.
See: Bhupendra Jasani ed. Outer Space: A New Dimension of the New Arms Race, (London, 1982) pp. 91-102.

STRATEGIC DEFENCE INITIATIVE : THE STRATEGY

Strategy is the art and science of making general plans for the purposeful, coherent and deliberate use of resources or any form of power, towards the attainment of specified objectives. In the field of disarmament diplomacy, it has military connotations, applied to a conflict situation. It involves the distribution and application of military means, including both armed forces and supplies, to fulfill the objectives dictated by national policy.

Essentially, strategy means "the art of distributing and applying military means to fulfil ends of policy".[15] It is a long-term plan for the future course of action. It is a design to weaken the power-position of the adversary in a conflict situation. "Using power to fulfill the goal" is the core of military strategy. Power is exercised on the basis of "personality(Leadership) which is the quality of physique, mind, speech, moral certainty and other personal traits".[16]

After the Second World War, the economic and military power of the United States, along with the possession of

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15. B.H. Liddell Hart, Strategy: The Indirect Approach, (London, 1968), p.334.

16. John Galbraith, The Anatomy of Power(Boston, 1983), p.6.

the atom bomb, allowed it a distinct personality with a self image of superiority - moral, military and material. It shaped the global strategy on the basis of this distinct personality to secure its core and peripheral national security interests. In order to defend itself from an attack, it shaped global strategy to prevent an aggressive communist behaviour in Europe, Asia, Africa, Latin America and now in Outer Space.

Before analysing Strategic Defence Initiative as a global strategy, it is essential to focus upon the evolution of nuclear strategy in America. This makes the analysis systematic and complete.

EVOLUTION OF STRATEGIC DOCTRINES IN THE UNITED STATES

The strategic doctrines of the United States, since World War II, have been determined by military technologies, the size and quality of opposing strategic forces and by domestic, bureaucratic and international politics.

Changes in the technological state-of-the-art can present opportunities for doctrinal modifications and can also result in "doctrinal lags". Policy-makers are slow to see that their strategies have become anarchronistic in the face of revolutionary technologies.

U.S. strategic nuclear policy has always operated on four levels : employment policy, acquisition policy,

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17. For "U.S. Strategic Doctrines" See:

R. Osgood, Limited War: The Challenge to American Strategy, (Chicago, 1957);

Lawrence Freedman, Evolution of Nuclear Strategy (London, 1981)

L. Martin, ed, "Strategic Thought in the Nuclear Age (Heinemann 1979).

Donald M. Snow, Nuclear Strategy in a Dynamic World (Alabama, 1981).

declaratory policy and deployment policy.[18] Employment policy describes the targets and how the United States plans to use the nuclear weapons which it possesses today. Acquisition policy establishes criteria for developing and procuring nuclear weapons for the future. Declaratory policy gives guidance to American officials on what they say publicly about the employment and acquisition policies. Deployment policy designates where nuclear weapons are to be stationed.

Common to all U.S. strategic doctrines in post-war period is the role of nuclear energy. President Truman said, "America's security and the security of the Free World depended to a large degree on our leadership in the field of nuclear energy".[19]

The global strategy of the United States is reflected in its strategic doctrines. Strategic thinking has been conditioned by domestic politics, military-industrial complex , relative power-position of Russia in the nuclear field, technological breakthroughs and international political environment.

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18. Lynn Davis, "Limited Nuclear Options, Deterrence and the New American Doctrine", Adelphi Papers(London), No. 121, (Winter 1976), p.1.

19. Harry S. Truman, Years of Trial and Hope, Vol.2 (New York 1956), p. 336.

The Strategy of "Massive Retaliation"

During the 1950's, while the United States still enjoyed a decisive nuclear superiority, the global strategic policy was Massive Retaliation[20]. As a doctrine, Massive Retaliation propounded by John Foster Dulles in January, 1954, meant that "the use of direct threat of general war or of any military response which would carry with it a substantial likelihood of general war, in defence of a wide range of peripheral areas"[21]. It was the threat of nuclear response to restrain the actions of another state.[22] After the Korean war, the Eisenhower Administration adopted a policy of massive retaliation to cope with the threat of limited, peripheral wars.

Flexible Response

Once the Soviet strategic nuclear build up had reached respectable dimensions in the late 1960s, the American strategic doctrine was modified to adjust to this new reality.

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20. See: Barry R. Schneider "Space based Lasers and the Evolution of Strategic Thought" in Keith B. Payne, ed., Laser Weapons in Space: Policy and Doctrine(Colorado,1983), p. 165.

21. Henry S Rowen, "The Future of General War", in Morton Berkowitz and P.G. Bock, ed, American National Security : A Reader in Theory and Practice (New York, 1983),p.78.

22. See : Freedman, n.17, pp.76-89.

Then the U.S. pursued Graduated Deterrence or Flexible Response whereby Soviet aggression would be met at its own level (conventional, theatre nuclear, strategic nuclear) and defeated or stalemated at that level, if possible. Escalation to the next level or beyond would be initiated if U.S. and allied forces were unable to contain enemy attacks at lower levels of conflict. This policy essentially linked the conventional defence forces of the NATO alliance with the U.S. strategic forces in such a way as to bring them into play as a last resort and as a deterrent to adversary initiation or escalation of conflict.

Mutual Assured Destruction

In the 1960s, the Kennedy - Johnson Administrations announced a declaratory strategic deterrent doctrine called Mutual Assured Destruction.[23] John F. Kennedy, the then President of America commented," The periphery of the Free World will slowly be nibbled away by the Soviet Union through its tactics of Suptnik diplomacy, limited brushfire wars, indirect aggression, intimadation and subversion".[24]

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23. Ibid, pp. 245-254.

24. Allen Nevins, ed, John F Kennedy : The Strategy of Peace, (New York, 1960), pp. 37-38.

Secretary of Defence, Robert Mc Namara , who designed the strategy of Mutual Assured Destruction, pointed out that the U.S. government could deter any Soviet government from launching a military attack on the United States by maintaining a strategic nuclear force capable of riding out a surprise attack and then inflicting "unacceptable" damage on the aggressor. Thus, the Kennedy - Mc Namara strategy focussed upon the strategy of deterrence.

The Schlesinger Doctrine: Limited Nuclear Options

The sophistication in war-fighting policies and the interlinked technological developments have made it possible to reject MAD and adopt new nuclear war-fighting and winning strategies.[25] Osgood observes, "The existence of weapons of mass destruction clearly adds great urgency to limitation" .[26] The concept of Limited Nuclear War, introduced by Secretary James Schlesinger made a qualitative departure

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25. Ian Clark, Limited Nuclear War : Political Theory and War Conventions(Princeton, 1982), p.19.

26. Robert E Osgood, "The Theory of Limited War" in Berkowitz and Bock, n.21, p.97.

from Assured Vulnerability Model since it visualised the possibility of waging and winning limited nuclear wars. In 1975, the U.S. Administration advanced a new modification of the doctrine of assured destruction. Schlesinger stressed the need to be able to fight limited nuclear engagements against Soviet military targets. He emphasized limited counter force capabilities as important to deterrence and added an additional guideline for restructuring U.S. strategic forces,"essential equivalance".[27] Schlesinger's nuclear strategy gained ground in the 70's as it marked a change in targeting strategy.

Harold Brown's Counter-vailing Strategy : PD-59

The "Schlesinger Doctrine" began a strategic debate over "warfighting" versus "MAD". The debate was given fresh impetus in August, 1980, when Secretary of Defence Harold Brown announced a new American targetting policy in a speech at the U.S. Naval Academy.[28] Brown unveiled the countervailing strategy which was based on President Jimmy Carter's approval of "Presidential Decision Memorandum 59 (PD-59)" in the summer of 1980.

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27. Schneider, n.20, p.167.

28. Ibid, p.169.

The countervailing strategy focuses on the need to deter the Soviet leadership from either limited or all-out nuclear attacks by maintaining U.S. nuclear forces and C^3I assets capable of denying the Russian achievement of their objectives at any level of conflict or by inflicting costs upon them exceeding any of their anticipated gains. It thus requires U.S. forces capable of fighting effectively at each rung on the escalation ladder and forces that are able to endure repeated exchanges over an extended period of time.

PD-59 is based on the concept that the most effective way to deter Soviet nuclear aggression is by maintaining escalation -dominance and by targeting those things which their leadership values most.

This brief analysis of evolution of American Strategic Doctrine provides a basis for understanding the present strategic doctrine, as every strategic doctrine is designed in the light of the performance of earlier strategic doctrines. The present strategy should not be treated as President Reagan's Whimsy. It is essentially a product of the re-examination of political, military and technological trends and the performances of existing nuclear strategic doctrines.

THE STRATEGIC NUCLEAR POLICY OF REAGAN ADMINISTRATION

The pace and direction of current strategic nuclear policy of the United States must be seen against the background of the strategic programmes of the Reagan Administration and its immediate predecessors. This type of analysis would clearly reflect the military, technological and political trends that necessiated to adopt a new strategic doctrine.

The Reagan Administration has adopted and extended the strategic policies introduced by Carter Administration. President Reagan and Defence Secretary Weinberger made it clear that PD-41, PD-48, PD-53, PD-58, PD-59(counter vailing - strategy)[29] are alive and well on their watch.[30]

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29. PD-41 was concerned with the need to improve the American Command, control, communication and intelligence during war time;

    PD-48 was concerned with a new search for cost-effective means of providing active and passive defences;

    PD-53 focused upon improvements in U.S. C^3I between National Command Authorities and Strategic Forces;

    PD-58 dealt with improvements in plans and procedures to provide continuity in government during a nuclear wars;

    PD-59 projected "Countervailing Strategy".

30. Ibid., p.171.

The present administration has embraced these policies in force survivability and connectivity which could improve U.S. capabilities to limit damage and ensure survival during a counterforce nuclear exchange.

But political and strategic processes are inherently dynamic. It follows that policy in all its aspects similarly must be adjusted in detail as the problems it addresses change their form. The Reagan Administration found many faults with the earlier strategic nuclear policy and tried to rectify them by introducing new strategic programmes. The perceived challenge essentially was to translate "Countervailing Strategy" into appropriate detailed policy guidance and to identify the necessary hardware programmes and secure their proper funding. Also, some refinement, clarification and alteration of programme priorities was deemed necessary.

The present administration took a closer look at certain issues which had not been satisfactorily resolved earlier, e.g., "The Launch-Under-Attack(LUA) Option","Command, Control, Communication and Intelligence (C^3I) requirements", and "the force structure implications of a protracted war". It has also inherited from the earlier administration the problem of Inter-continental Ballistic Missile(ICBM)survivability, and tried to accelerate its decision-making with respect to the ultimate basing mode of the MX missile. It felt seriously that space-based weaponization could make an important

contribution to an American damage-limiting strategic policy by defending assets other than those associated with strategic force survivability and the prosecution of a nuclear war.

Thus, faced with the above strategic questions, the Reagan administration wanted to design a "grand nuclear strategy" which would solve them and provide adequate security to the United States. Alteration and refinement of strategic nuclear priorities started with the help of new nuclear technologies. The entire focus of the administration was on Ballistic Missile Defence. A new strategic doctrine was launched: "The Strategic Defence Initiative".

SDI AS A STRATEGY

"Strategic Defence Initiative" is launched by the Reagan Administration as a global strategy to achieve the following strategic objectives:-

A. The Window of Vulnerability and Quick Fixes :

The Reagan administration realized that the United States faced a severe strategic-force-survivability problem through the 1970s and 1980s. It categorically projected that U.S. missile(Minuteman-Titan) silos were totally

vulnerable to prompt destruction in a Soviet surprise attack. This was feared because of growing accuracy of Soviet ICBMs. This vulnerability was named as "Window of Vulnerability". Initially, the administration provided a quick-fix option by suggesting to board the holes (vulnerability) by MX missiles. The MX missiles are to be boarded at the window. But, this idea was rejected both by military-industrial technical complex and the public. Hence, the focus was shifted from MX-missile to Ballistic Missile Defence. It was suggested that a space-based defence-mechanism would be the best strategy to shield the United States and its allies from a nuclear attack and to keep super power relations in strategic balance. Thus, SDI was launched with this strategic mission.

B. A "War Fighting" Doctrine of Continuing Deterrence

The Reagan administration believes that although a central nuclear war cannot be won, a nuclear war can be waged in such a way that the enemy's war plan is thwarted.[31] Victory-denial capability, which is not to be confused with victory, provides robust support for deterrence stability

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31. Colin S. Gray "The Strategic Nuclear Policy of Reagan Administration: Trends, Problems and the Potential Relevance of Space-Based Laser Weapons, n.20, p.200.

because it is caliberated, as best as can be achieved, by constant reference to adversary thinking, plans, objectives and capabilities.

The administration points out that victory-denial capability can be achieved only through strategic-defence. Thus, Ballistic Missile Defence is the best strategy for the purpose.

C. Mutual Assured Survival:

The Reagan administration rejects the strategy of "Mutual Assured Destruction" which accelerates the arms race and keeps the superpowers under constant threat. Thus, President Reagan in his address to the nation on 23rd March, 1983 proposed, "Would not it be better to save lives than to avenge them?"[32] It was proposed that "Mutual Assured Destruction" should be replaced by "Mutual Assured Survival". The core of Strategic Defence Initiative is the strategy of " Mutual Assured Survival".

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32. President Ronald Reagan, Address to the Nation, March 23, 1983, See Appendix 'A'.

D. Commitment to the Survival and Endurance of Strategic Forces, to the Continuity of Strategic Policies and to the Surviability of C^3I .

The Reagan administration called for the survivability of strategic forces, strategic policies, C^3I and a functioning National Command Authority. It believes that the ability of the United States to conduct a protracted nuclear war is important for deterrence and for this, U.S. strategic nuclear forces and their supporting C^3I systems have to be modernized. Ballistic Missile Defence Programme would contribute significantly in this direction. BMD programme involves the continuation of strategic forces, policies and C^3I systems in its operationalization. Hence, SDI would be instrumental in continuing modernizing C^3I support structure and strategic forces.

E. Improved Launch-Under-Attack(LUA) Capability:

The current administration in the United States believes that a Launch-Under-Attack capability is an important factor in ICBM survivability. Hence, there is an unusual degree of official interest in the enhancement of the technical and political capability for LUA. Some critical elements of C^3I modernization programme could be invaluable for the credibility of LUA options, as well as being essential for the support of surviving and operationally enduring strategic forces in a protracted conflict.

Development of Ballistic Missile Defence would help in the improvement of Launch-Under-Attack capability and C^3I systems.

F. A Better Integration of Defence and Arms Control Policy as a Component of Overall National Security Policy :

President Reagan focussed on developing a coherent strategy, a strategy that would give clear purpose to the national security activities. He felt an absence of an authoritative strategic vision of national security policy and declared that a "Grand Strategic Policy" should be designed in such a way that there would be perfect integration of defence and arms control policies. Strategic Defence Initiative is launched as a strategic policy by Reagan administration to serve the above objectives. It would represent a coherent, systematic and purposive national security policy based on the principles of "Mutual Assured Survival". It is designed to be an instrument in American foreign policy, strategy and disarmament diplomacy.

CONCLUDING OBSERVATIONS:

Strategic Defence Initiative, both as a technological innovation and strategic proposition, reflects the Reaganite vision for a future world invulnerable to nuclear attacks. It is a product of "politics of vulnerability". In fact, ICBM survivability necessitated and conditioned the idea of strategic defence. The programme believes in a "defensive transition" which would create a nuclear free world, by providing a shield against nuclear missiles.[33]

But, whatever may be the political merit or strategic wisdom of SDI, it remains the most controversial strategic issue of the contemporary nuclear age. Since its unvailing in March 1983, a great deal of analytical attention has been given to it. The Scientists, Technocrats, Military Strategists, Academicians and Politicians are sharply divided over the technical feasibility and politico-strategic implications of this defence programme. Controversies regarding the impact of SDI on superpower relations, deterrence, crisis-stability, western alliance and arms-control, have been generated extensively. The major focus is on its strategic risk and political uncertainties.

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33. See: Keith B. Payne, Colin Gray, "Nuclear Policy and The Defence Transition, Foreign Affairs(New York), Spring 1984, pp. 820-42.

CHAPTER - II

POLITICAL AND STRATEGIC IMPLICATIONS OF THE STRATEGIC DEFENCE INITIATIVE

The politico - strategic implications of the "Strategic Defence Initiative", as an overarching strategic concept, will profoundly influence the course of world political events. In contrast to the putative benefits of the programme which are distant and hypothetical, the political and strategic dangers of it are near term and predictable.

This chapter examines the politico-military-strategic implications of Strategic Defence Initiative for Superpower relations, Deterrence, Crisis-stability, Western Alliance System and The Third World. For this assessment, it analyses the programme in a broader strategic context and probes some of the policy issues raised by it.

The chapter is divided into five parts. The first part addresses the implications of Strategic Defence Initiative to the U.S. - Soviet strategic relations. The second part deals with the Soviet responses to the programme. A brief analysis of Soviet Anti-Ballistic Missile Programme is also attempted. The third part makes an analytical survey of the politico-strategic-military implications of the programme for deterrence and crisis-stability. The fourth part records the perceptions and reactions of European members of NATO. Finally, the impact of the programme on the Third World is focussed upon.

STRATEGIC DEFENCE INITIATIVE AND US - SOVIET RELATIONS

Over thirty years of cold war have created a cognitive barrier of mistrust that dominates the Superpowers' perception of each other. This has led to a situation where leaders on both sides appear to take for granted the aggressive intentions of the other, even when such an interpretation is unwarranted by the facts. For this reason, the 'Star Wars Programme,' which to President Reagan may be an avowedly defensive system, is judged an offensive measure by the Soviet Union. It is seen as part of an American effort to acquire a first-strike capability - the ability to launch a devastating attack against Soviet Strategic forces and to defend effectively against a Soviet retaliatory strike. In the context of the on going American nuclear build up, which parallels the adoption of a "war fighting" strategic - doctrine and the conversion of virtually all strategic forces to a counterforce role, such an interpretation is by no means inconsistent with the facts.

The Soviet Union is no more likely than the United States to accept a position of strategic inferiority. In addition to working on its own 'Ballistic Missile Defence',

the Russians can be expected to give a high priority to the development and maintenance of forces capable of penetrating or circumventing American defences. They could develop a number of countermeasures. Gorbachev made it clear in an interview with American newsmen that any American attempt to deploy a Ballistic Missile Defence would mean, "the end of the process of nuclear arms limitation and reduction, and would become a catalyst of an uncontrolled arms race in all fields".[1]

If the United States persists unilaterally in working towards a reliance on defensive forces against nuclear weapons, it will definitely face the prospect of determined Soviet opposition. The transition period of moving from offensive deterrence to a defence-dominated posture will be long and will be filled with political and technical uncertainities. Thus, the 'Star Wars Programme' is to be analysed within the "Action-Reaction Syndrome".

A Superpower competition in strategic defences will lead to an increased Soviet-American offensive arms race. The U.S. defensive developments will lead

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1. New York Times, 1 February 1985, p.3.

to an acceleration of Soviet efforts both to develop similar capabilities. Thus, the "action-reaction process" will go on.

Again, a greatly accelerated American R&D effort on strategic defence might introduce an insurmountable obstacle to arms control negotiations. The Soviet government has made it clear that they would not be willing to accept reductions in offensive forces until strict limitations are placed on defensive efforts. Yet the Reagan administration has been equally adament that it does not consider the SDI to be a negotiable bargaining chip. Thus, the net effect of the SDI on Soviet-American relations may well be to fuel the competition in offensive and defensive systems, thereby making the strategic relationship less stable.[2]

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2. Union of Concerned Scientists, Fallacy of Star Wars (New York, 1984), pp. 23-30.

SOVIET RESPONSE TO "STRATEGIC DEFENCE INITIATIVE"

One of the principal political elements in the 'Strategic Defence Initiative' debate concerns its impact on the strategic balance between the United States and the Soviet Union and one of the arguments most frequently directed against the programme is that it will force the Soviet Union into embarking on a similar programme, thus creating another dangerous twist in the spiral of the arms race.

The Soviet reaction to President Reagain's "Star Wars" speech of 23, March, 1983 was clearly reflected by the statement of the late General Secretary Yuri Andropov. In a statement issued four days later, he said that the defensive measures Reagan spoke of would seem defensive only to "Someone not conversant with these matters". He added: "In fact the strategic offensive forces of the United States will continue to be developed and upgraded at full tilt and along a quite definite line at that, namely that of acquiring a first strike nuclear capability. Under these conditions, the intention to acquire the capability of destroying the strategic systems of the other side with the aid of BMD* that is of rendering the otherside

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* Ballistic Missile Defence

incapable of dealing a retaliatory strike, in a bid to disarm the Soviet Union in the face of the American nuclear threat".[3]

Similarly, an article published in Pravada entitled "Space: Alarm and Hopes" claimed that,

> " the comprehensive ABM system does not do away with ballistic missiles in the U.S. strategic arsenel, but, on the contrary, envisages their build up and improvement primarily as a means for delivering a nuclear first strike".[4]

A February 24, 1985 Pravada editorial pointedly asked, "If the said 'initiative' is put forward in order to make offensive nuclear weapons unnecessary, why is it accompanied with an unprecedented build up of the American strategic nuclear arsenal?"[5]

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3. Yuri Andropov, interview with a correspondent of Pravada (Moscow), 27 March, 1983, cited in David B. Rivkin, what does Moscow Think, Foreign Policy(New York), No. 59, Summer, 1985,p.96.

4. Pravada, 3 December 1984, Ibid.

5. Pravada 24 February, 1985, Ibid.

What Soviet analysts invariably stress today in their criticisms of the SDI is that it is combination of U.S. offensive modernization and space-based defensive deployments within the context of an apparent U.S. war-fighting doctrine that makes the "Star Wars" programme so dangerous.

Andropov's response to Reagan's speech also expressed dismay at the implicit intention to abrogate the ABM treaty. Along with other agreements negotiated by the Soviet Union and the United States in the early 1970s, the ABM treaty embodied some measure of common understanding on how best to manage the strategic arms competition without precipitating nuclear war. Andropov chided Reagan for ignoring the link between offensive and defensive strategic weapons and for failing to understand that BMD deployment would stimulate the competition in offensive systems.

The most detailed soviet analysis of the Strategic Defence Initiative has been done by a group of Scientists, headed by Academician R.Z. Sagdeev, director of the Academy of Sciences, Institute of Space Research and by Dr. A.A. Kokoshin of the Academy's Institute of U.S.A. and Canada, working under the direction of Academician

E.P. Velikhov, director of the Kurchatov Institute of Atomic Energy.[6]

This report examines the technological feasibility of a large-sclae space based ballistic missile defence system, the potential cost of such a system and the strategic and international political consequences of deploying it. It argues that the creation of such a system to destroy ICBMs in their boost phase is beyond current technological capabilities. Even if it could be developed, such a system would be extremely vulnerable to both active and passive countermeasures. It warned that the net effect of deploying a BMD system would not be to provide escape from mutual deterrence, but rather to make that relationship less stable.

This report should be understood as part of a larger Soviet discussion about the appropriate response to the Star Wars Programme. In an interview to the

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6. Committee of Soviet Scientists for peace against nuclear threat, "Strategic and International Political Consequences of the creation of a Space-Based Anti-missile system using Directed Energy Weapons" (Institute of Space Research), USSR Academy of Sciences, Moscow, 1984).

Los Angeles Times, Velikhov said that after the Star Wars Speech of Reagan, he had organised a discussion in the Academy of Sciences. "Its result was very surprising for me", he said, "Not everybody had a real understanding of the issue because rhetroically it is quite attractive to move from offensive weapons to defensive weapons. But the real problem is it's just rhetoric".[7]

Thus, the USSR's opposition to the "Star Wars Programme" reflects simply a conviction that SDI is the combination of U.S. strategic defences and offensive first-strike forces that threatens Soviet security. This is reflected in virtually all Soviet Statements on the subject.[8]

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7. Robert Scheer, "A Soviet Scientist on the Real War Games", Los Angeles Times, 24 July 1983, Section IV, p.7.

8. See: L. Semeyko, "Counting on impunity on the White House's Military Concepts", Krasnaya Zvezda (Moscow), 15 April 1983; A Bovin, "Fantasies and Realities", Izvestiya(Moscow), 21 April 1983; Ye. Velikbov, "Ambitions in Space - threat to earth: Washington's adventurous course", Pravada, 30 April 1984. Cited in n.3, p.97.

Soviet analysts have also claimed that a space-based "Ballistic Missile Defence System" itself would be vulnerable to destruction and hence could not provide an effective defence against a first strike. It might prompt a first strike by the side that deploys it.[9] Thus, it has been suggested that even if highly effective strategic defences were feasible, the transition to defence dominance would endanger major strategic instabilities.

The Soviet military and political leaders do not see the programme as simply another military challenge or another spiral in the continuing nuclear arms competition where off-setting measures would suffice. Rather, SDI is seen as a profound technological challenge; the initiation of "a new type of arms race", one involving "previously unknown new types of weapons based on new physical principles.[10] This technological challenge , Soviet political and military leaders have repeatedly observed, is one which the Soviet Union cannot afford to ignore. In other words, an off-setting response to SDI is not sufficient; an emulating response is required as well.

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9. A Rolkunov, "Preaching space adventures, "Pravada, 22 May 1984, cited in Ibid.

10. See : V. Kuzar, "Kursom Konfrontatsii", Kraznaya Zvezda, 26 May, 1985, Ibid.

Three broad options are open to the Soviet Union in this context, either separately or in combination - (1) it can upgrade its retaliatory forces; (2) it can develop weapons that could destroy the space-based Ballistic Missile Defence System, or it can deploy its own Ballistic Missile Defence System. An analysis of Soviet Anti-Ballistic Missile Defence Programmes is needed here.

SOVIET ANTI-BALLISTIC MISSILE DEFENCE PROGRAMME

Anti-Ballistic Missile Systems may be conveniently be divided into four generations, each of increasing capability, which are now at varying stages of maturity in the U.S.A. and the USSR. The United States has essentially abandoned the first and second generation systems, is in the process of perfecting the third generation and is making some progress on the fourth generation. In contrast, the Soviets are only just now making the transition from the first to the second generation.[11]

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11. John Pike, "Assessing the Soviet ABM Programme", in E.P. Thompson, ed., Star Wars(Harmondsworth,1985), p.51.

Soviet work on ABM began in the late 1950s as an outgrowth of an intensive programme to build air defences when Soviet military doctrine and strategy were revised under Khrushchev to take account of the impact of ballistic missiles and nuclear weapons on the conduct of war, BMD was assigned a key role. Marshall V.D. Sokolovskii's "Military Strategy" which was the most important Soviet study published during this period, declared that "one of the cardinal problems for Soviet military strategy is the reliable defence of the rear from nuclear strikes". He acknowledged that "in contemporary conditions the means and methods of nuclear attack unquestionably prevail over the means and methods of defences against them".[12] In 1962, Khruschchev asserted that the Soviet Union has developed an anti-ballistic missile that could "hit a fly in space".[13] In the early 1960's, the Soviet Union began to deploy a BMD system around Leningard. Soviet BMD policy in early 1960s was rooted in unwillingness to regard vulnerability to nuclear attack as an acceptable basis for Soviet security.

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12. V.D. Sokolovskii, "Voennaia Strategiia"(Moscow 1962) cited in Daedalus, (Massachusetts), Vol.II, (Summer 1985), p-258.

13. Pravada, 25 Oct 1961, Ibid.

The Soviet leaders recognized the existence of mutual vulnerability to devastating retaliatory strikes and at the same time felt it necessary to devise a military strategy for the conduct of nuclear war in case it should occur. Thus, Soviet military strategy assigned "BMD" an important role in the conduct of war.

In the fifteen years since the ABM Treaty was signed, Soviet Union has pursued research and development programmes which many analysts believe might permit her to undertake a rapid build up of ABM systems (Ballistic Missile Defence based on ground-launched interceptors and phased arry radars) and she has modernized her Galosh ABM system within the limitations of the ABM Treaty. A new generation of Soviet tactical Surface-to-air missiles may have some capability to defend point targets against ballistic missiles as well as aircraft and according to the Scowcroff Commission Report of April, 1983, at least one Soviet ATBM has the technical potential to be applied to defences against ICBMs as well.[14]

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14. Strategic Survey(London), 1984-85, p.15.

While current Soviet ABM capabilities are still minimal, US concerns about Soviet breakout potential have been reinforced by the USSR's apparent willingness to probe the limits of the ABM Treaty. Construction of a new phased array radar at Krasnoyavsk has been particularly unsettling in this regard.

The USSR has invested significant resources in research and development on "DEW"* systems. There is an active laser research programme at Sary Shagan. There have been reports of anti-satellite capability-testing by the Soviet Union.[15] The several electronic and optical ancillaries that go into the making of such an ASAT** System can be put to use to fabricate systems for the shooting down of ballistic missiles.

By establishing a network of Satellites in geo-stationary orbit, the Soviet Union can attempt to gain timely warning of US launches of submarine launched ballistic missiles. This warning becomes very necessary once X-ray lasers generated by nuclear explosions in space by American nuclear submarines in waters near Soviet territory threaten the missile silos.

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* DEW stands for Directed Energy Weapons.

** ASAT stands for Anti Satellite

15. Ibid.

Thus, it is conceivable that by the year 2000, when the US will be deploying the ballistic missile programme, the Soviet Union may see merit in deploying its own X-ray lasers or perhaps its neutral beam weapons aboard submarines that will be stationed some ten minutes from the Pacific and Atlantic seaboards of the United States.

A BMD competition would create a far tenser situation, because it would be interpreted by both superpowers as vitally threatening. The Soviet Union might build a BMD system in order to enhance the survivality of its offensive missiles. So far, it has tried to cope with ICBM vulnerability by developing mobile ICBMs, by diversifying its strategic forces and perhaps by adopting a launch-under-attack policy, but it might deploy BMD if the problem became serious enough. If the United States deploy a BMD, the issue of vulnerability will become more important for the Soviet Union, because it will want to ensure that as large a proportion of its offensive forces as possible will be available for retaliation if the United State should strike first.[16] Thus, BMD deployment by the

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16. Sayre Stevens, "The Soviet Factor in SDI", Orbis (Philadelphia), Vol. 29, Winter 1986, pp. 689-700.

United States would put pressure on the Soviet Union to deploy its own system.

The Soviet leaders are worried about the military and political aims of the United States and fear that any superiority achieved through the deployment of BMD would not only give the United States a military advantage, but would also enable it to put political pressure on the Soviet Union. As Andrei Gromyko asked rhetorically in January 1985, "Would not the ability (to launch a strike against the Soviet Union and escape retaliation) be used for pressure, for blackmail?"[17]

The Soviet leaders are anxious to stop the star wars programme before it gathers political momentum. In June, 1984, the Soviet Union proposed to the United States that the two governments hold talks on preventing "the militarization of outer space". This was the reason why the Russians did agree, in January, 1985, to begin arms control negotiations on intermediate-range nuclear forces, strategic offensive forces and space.[18]

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17. Pravada, 14 January 1985, p.4, cited in n.12,p.274.

18. There were other reasons as well. Soviet withdrawal from arms control talks in 1983 had been politically counter-productive; and the Reagan administration has changed its policy towards the Soviet Union at the beginning of 1984.

The joint Soviet American statement issued after the January talks between Secretary of State, Shultz and Foreign Minister Groymyko, specifies that the three areas of negotiation "will be considered and resolved in their interconnection, "and the Soviet leaders have insisted on the importance of this formulation.[19] The key interconnection is that between - offensive and defensive systems. Gromyko warned that the Soviet Union was not interested in a "Seminar" on SDI:

> " The Soviet Union is ready not only to consider the problem of strategic arms, but would even be ready to reduce them sharply - of course, while maintaining the principles of equality and equal security. And on the contrary, if there were no progress in questions of space, then it would be superfluous to speak about the possibility of reducing strategic arms."[20]

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19. The joint statement was published in Pravada, 9 Jan 1985, Gromyko stressed the importance of this formulation on Soviet television of Jan.13,1985; See Pravada, 14 Jan, 1985, cited in n.12, p.274.

20. Gromyko, n.12, p.4.

The Soviet Union has insisted that successful reduction of offensive systems will be contingent on progress in limiting defensive systems. The Reagan administration, on the other hand, has reaffirmed its commitment to SDI and to the goal of moving towards a defence - dominant strategic relationship. Paul Nitze, a senior arms control adviser to the Reagan administration, has spelled out this goal clearly:

> " For the next ten years, we shouldspeak a radical reduction in the number and power of existing and planned offensive and defensive nuclear arms, whether land based or otherwise. We should even now be looking forward to a period of transition, beginning possibly ten years from now, to effective non-nuclear defensive forces, including defenses against offensive nuclear arms. This period of transition should lead to the eventual elimination of nuclear arms, both offensive and defensive. A nuclear free world is an ultimate objective to which we, the Soviet Union and all other nations can agree".[21]

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21. Herdick Smith, "Arms control talks scheduled in March, Administration says", New York Times, 26 January 1985, p.5.

It is clear that the two sides have very different conceptions of the relationship between offensive and defensive systems and this will make it difficult for them to reach agreement on arms control. The Soviet Union has made it clear that it regards space weapons, especially space-based Ballistic Missile Defence, as the most pressing issue for arms control. The United States, on the other hand, regards the reduction of offensive forces - especially the Soviet ICBM force - as a more urgent matter. Although, the two sides have different goals, the possibility exists, in theory at any rate, of a trade-off between the Soviet interest in stopping the SDI and the United States' interest in reducing offensive forces. A direct trade-off between the two areas is difficult to envisage, because the offensive systems are already operational, while space-based BMD is still at the research stage.

The main appeal of the strategic Defence Initiative is that it looks forward to a world of defence where nuclear weapons will be rendered "impotent and obsolete". But as Richard DeLauer, former Under Secretary for Defence for Research and Engineering has said,"with unconstrained proliferation (of offensive systems),

no defensive system will work".[22]

The Soviets, no doubt, wish to bury Star Wars, but their propaganda has been less strident than usual. Gorbachov has insisted that the matter remains negotiable. He by no means insists upon a "unilateral" abandonment of SDI; he would happily negotiate a mutual deep cut in ICBM exchange.[23] Most recently, there have been Soviet feelers to suggest that the ABM treaty could be revised to permit "research only" developments or to permit ground-based (but no space based) defensive systems to be introduced by mutual agreement alongside serious cuts in offensive systems on both sides.[24]

Thus, both the sides have different conceptions of Ballistic Missile Defence in their strategic relationship.

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22. Richard Halloran, "Higher Budget Foreseen For Advanced Missiles", New York Times,18 May 1983,p.11.

23. Times(London), 11 June 1985.

24. See: New York Times,8 July 1985;
Guardian (New York) 9 and 10 July, 1985;
Times, 26 July, 1985.
New York Times, 26 July, 1985.

The peace movements in Europe have been against Star Wars programme mostly because of its negative consequences. It will carry the arms race into space, it would be destablizing and destroy arms control. European Socialist parties(including the British Labour Party) have been taken the same stance; there has been even a reapproachment between the French Socialists and the German SPD (so bitterly divided over Pershing II) with a common statement against SDI.[25]

Thus, the net effect of the Star Wars programme on Soviet American relations may well be to fuel the competition in offensive and defensive systems, thereby making the strategic relationship less stable; to complicate arms control and to cast a shadow over political relations. The SDI will not escape from mutual deterrence, rather it will make that relationship less stable and more fraught with suspicion and uncertainty.

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25. E.P. Thompson, "Folly's comet", in Thompson, n.11, p.127.

THE IMPACT OF STRATEGIC DEFENCE INITIATIVE ON CRISIS STABILITY AND DETERRENCE

The dangers associated with Ballistic Missile Defence will not subside even if the Superowers suceed in maintaining peace throughout the period in which they strive to develop and deploy their respective anti-ballistic missile defences. It would be profoundly destabilizing, would increase the risk of nuclear war during US-Soviet confrontations, and would reduce the chances of controlling hostilities if war did break out.

If both Superpowers had near perfect defences, the ability of either to penetrate the other's defence with even a few warheads would give it tremendous political and military leverage. Both sides would therefore do their best to achieve such a capability and would always live in fear that their adversary was on the verge of achieving a breakthrough in this regard.[26]

A crisis is more likely to lead to war when the military balance is unstable. Once military leaders on one or both sides believe that war is real possibility

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26. This point is made by Charles L. Glasser, "Why Even Good Defenses May Be Bad", International Security (Massachusetts), (Fall 1984), pp 92-123.

and that they can gain an advantage - perhaps a decisive one - by striking first, they are likely to contemplate a preemptive attack. Under such circumstances, even defensive measures can make expectation of war self-fulfilling prophecies. Defences that are perceived as aggressive , can provoke a response and aggravate the anxiety that prompted the original defensive action.

Similarly, any BMD deployment would itensify mutual pressures to preempt an attack in a crisis. BMD systems would be even more vulnerable than land-based missiles and command, control, communication and intelligence (C^3I) systems. Developments during the last decade have created a situation of instability between the Superpowers. Pressures to preempt in a crisis would be greatly intensified in the aftermath of BMD deployments. This is because of four reasons:-

1. Such systems would be a highly vulnerable portion of a nation's strategic arsenal.
2. A defence would be of questionable utility against a full-scale attack.

3. Even if a space-based BMD is ineffective against enemy ICBM boosters, its lasers could have the ability to destroy the adversary's communication and early warning satellites almost instantly.

4. The time for human decision-making would be exceedingly short, because boost phase interceptions must be initiated within seconds of warning of an attack; the BMD software package would have to contain major portions of a nation's strategic war plans.

These factors would combine to increase the pressure on political leaders to launch a first strike in a serious crisis.

A BMD, therefore, not only increases the pressure on political leaders to launch a first strike in a serious crisis, but could make such an attack a much more attractive prospect than would otherwise be the case. As this reality would be known to both sides, it would generate even greater pressures to launch a first strike for fear that the adversary was about to do so.[27]

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27. George Rathjens and Jack Ruina, "BMD and Crisis Stability", n.12, pp 239-55.

These projected consequences of BMD directly contradict the claims of its advocates that it would strengthen deterrence and play an important role in limiting the damage in the event that deterrence fails. These arguments are attempts to construct a strategic rationale for only modestly capable BMD systems. As such, they represent a massive retreat from the President's vision of transcending the system of nuclear deterrence by making nuclear weapons "impotent and obsolete".

The assertion that BMD would strengthen nuclear deterrence rests mainly on the claim that it would reduce the vulnerability of American land-based missiles to preemptive attack. By protecting the American ability to retaliate, BMD is supposed to make a Soviet first strike less certain of success and therefore less likely. However, this is an argument for terminal, so-called hard point, defence of American silos, not for the layered, area-defences being proposed by the administration. Though terminal defences could be defeated, they could succeed in complicating an adversary's attack, forcing him to deploy many more warheads to achieve the same level of damage possible in the absence of defences.[28]

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28. On this point, see: Ashton B.Carter, "BMD Applications: Performance and Limitation" in Ashton B.Carter and David N. Schwartz (ed), Ballistic Missile Defence (Washington, D.C., 1984), pp. 98-181.

The administration's initiative is not only vastly more expensive and complex than is necessary for the protection of retaliatory forces, but is also provocative to the Soviet Union in a way that would reduce, not enhance, deterrence stability.

The damage limitation justification for BMD is as dubious as the deterrence argument. It has two variants. Proponents of BMD argue that defences would save American lives in the event of a nuclear war. They also assert that this damage limitation effect would strengthen deterrence itself by making the threat of nuclear retaliation more credible. These arguments are implausible in the light of the size and destructive power of Superpower nuclear arsenals and the compensating adjustments in targeting strategy that BMD deployments would almost certainly bring about.

The unpalatable but inescapable truth is that the vulnerability of the United States to destruction by Soviet nuclear forms can not be mitigated by any foreseeable offensive shield as long as nuclear weapons exist in their current numbers. Only if offensive forces were radically reduced, to perhaps a tenth of their present scale, could a moderately effective defence begin to make a dramatic difference in the

vulnerability of populations to nuclear destruction. But the prospect of negotiating such a reduction would become virtually non-existent in the midest of a major Soviet-American ballistic missile defence competition.

In the absence of radical cuts in offensive arsenals, damage limitation might be sought only through deliberate strategies of controlled, limited nuclear strikes, with the bulk of each Superpower's nuclear forces being held in reserve and cities being spared. The general conclusion is that a nuclear war could not in practice be controlled in this manner.[29]

It is also important that the Space-based command and control systems necessary for limited war strategies would be put to risk if "Star Wars" defences were deployed. Plans for controlled, protracted nuclear conflict depend critically on survivable satellites for communications, navigation, early warning and reconnaissance. However, the growing vulnerability of these systems to attack would be an unavoidable side effect of the development of a space-based ballistic missile defence. In a strategic environment characterized

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29. Desmond Ball, "Can Nuclear War Be Controlled?, "Adelphi Papers, No. 169(London: International Institute for Strategic Studies, 1981).

by space-based missile defences and unrestricted anti-satellite(ASAT) competition, space assets would be particularly inviting targets for attack in the initial stages of Superpower war. This situation would not only exacerbate mutual fears of preemptive attack, but would also create incentives to use nuclear forces in massive strikes at the outset of hostilities to take advantage of the capabilities of command control systems before they were destroyed.

Deployments of missile defences would further reduce both the incentives and the capabilities of the two Superpowers to contain nuclear war below the threshold of all-out exchanges. To the extent that defences pose a serious threat to the "assured destruction" capability of either side, they invite retargeting to retain such destructive capacity.

Far from contributing to a strategy of limited nuclear war, Strategic Defence Initiative points in the opposite direction - toward massive, indiscriminate exchanges and erosion of control over strategic forces. Instead of damage limitation, a nuclear war fought under these circumstances could produce higher numbers of fatalities than one fought in the absence of defences.

Thus, the Star Wars Programme will bring about serious negative consequences which include the following:-

a. An increase in US-SOVIET tensions and intensification of the arms race.

b. The possibility that one of the Superpowers would withdraw from the ABM Treaty and deploy some type of BMD, even if it is one of the doubtful effectiveness.

c. Erosion of the confidence of European allies, who are deeply troubled by the implications an SDI programme might pose for their security.

d. A false sense that technology and new weapons systems can eliminate the threat of nuclear destruction.

The political, military and strategic implications of Strategic Defence Initiative will be dangerous and negative. SDI would sound the death-knell to arms control process; this would trigger a new round of the arms race and extend military competition into space.

STRATEGIC DEFENCE INITIATIVE AND INTRA-ALLIANCE POLITICS

The North Atlantic Treaty Organization has suffered a series of political tremors in the course of the last decade, all of which have been damaging to the foundations of alliance solidarity. Some of the worst of these tremors have had their epicentre in the United States. The crisis within the western alliance resulted mostly because of the growing realisation of the European countries that they were no longer actors of their own history.

Concerns of this kind have been increasing in recent years. The growing concentration of United States Foreign Policy on Latin America, the doubts cast by Dr. Henry Kissinger and others on the continuing validity of "extended deterrence," the failure of SALT II to gain ratification, the loose language of the Reagan Administration about the feasibility of a limited nuclear war in Europe and now the Star Wars Programme - all these factors have combined to create among the West European allies an apprehensions that the United States might be irresistibly attracted by a policy of

global unilaterialism, in which the security of Western Europe would be given the lowest priority.[30]

The announcement of Strategic Defence Initiative as ballistic missile defence programme by Reagan Administration has raised critical questions within the western alliance system. Of all the anxieties aroused by the President Reagan's Programme, those of the European members of NATO are possibly the most acute. The European concerns has generated much controversy within the alliance system.[31] While some Europeans are more concerned that SDI may decoupe the United States from Europe and undermine arms control, others on the right as well as an the left fear that SDI may be yet another U.S. attempt to reestablish American political and economic dominance in the alliance without regard to Europe's interests.

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30. See: Manfred R. Hamm and W.Bruce Weinrod, "The Transatlantic Politics of Strategic Defence", n.16, pp. 709-34.

31. For an overview of European positions on SDI, see: Christoph Bertram, "Strategic Defense and the Western Alliance" in Daedalus, Vol. 114, No.3, Summer 1985, pp. 279-295;

See also: Paul Gallis, Mark Lowenthal, Marcia Smith, The Strategic Defense Initiative and United States Alliance Strategy"(Congressional Research Service, Washington, DC, 1985);

David Yost, "European Anxieties About Ballistic Missile Defense", Washington Quarterly, Vol.7, No.4, Autumn 1984.

Most importantly, the prospect that Europe can gradually be pulled into SDI raises more important questions about the future of Europe itself - the conflict between its continued security dependence on the United States and its desire for greater political and economic independence. Moreover, SDI has come at a critical juncture in European politics, a time when Europe has before it two opposing alternatives to continuing the current uneasy state of transatlantic relations:-One of increasing militarization and the other of deepened detente and common security. Herein may lie the real danger of SDI. For by strengthening Europe's rightwing military industrial elites, by destroying the prospects for arms control and by militarizing more of Europe's technological and economic potential, SDI could, in the years ahead, push Europe onto the path of increasing militarization at the expense not only of East-West Security, but of translatlantic relations as well.

Star Wars is a uniquely American concept - the ultimate expression of America's faith in technology, its yearning for invulnerability and its desire for the ultimate weapon to restore U.S. leadership. But even if SDI is American in concept and appeal, the Reagan Administration has still had to face the task of

selling it to Europe. European support is necessary not only to mollify U.S. congressional opposition, but also for the sake of alliance solidarity. After all, if one of the purposes of SDI is to re-establish the foundations of U.S. leadership in the alliance, then nurturing the support of European government is critical, even for an administration given to unilateral impulses and actions.

As an overarching strategic concept, SDI obviously has far-reaching consequences for the alliance and for European security. It should therefore not be surprising that Reagan's characterization of SDI has not gone down well in Europe. Not only was the programme announced unilaterally (always a source of irritation for European elites) and on the heels of the wrenching crisis over placing Pershing II and Cruise Missiles in Europe(an event that itself badly fractured the European consensus on NATO doctrine), but it also seemed to European officials to strike directly at the heart of "the strategic concept on which peace has been based since the last war, namely, deterrence".[32]

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32. Jacques Ignard, "SDI's Real Purpose is to create a consensus in American Society", Interview with French Defence Minister Paul Quiles, Mnchester Guardian Weekly, 5 Jan 1986.

Worse, as French Defence Minister Paul Quiles put it, "SDI would replace deterrence with a remote objective, which is, to say the least, uncertain.[33]

To varying degrees, the West Europeans worry that SDI would restore a "Fortress America" attitude, thus effectively decoupling Europe from the United States and leaving Europe vulnerable to Soviet conventional aggression;[34] that SDI would undercut current efforts to improve NATO's conventional forces and would create new pressures for Europeans to increase defence spending; that it would provoke Soviet fears of an American first strike and therefore prove to be detstablizing; that it would spell the end of arms control and the anti ballistic mis ile(ABM) treaty and would set off a new offensive arms race and that by encouraging Moscow to go forward with its own ballistic missile defence, it would thus nullify the smaller independent nuclear deterrents of Britain and France.

The European perspective on the SDI in particular and weapons in space in general, is shaped by a number

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33. Ibid.

34. Bertram, n.31, pp. 287-290.

of factors :-

1. First, while European countries are becoming more active in space technology through their expanding civilian space programmes, they are still by-standers rather than participants in the military uses of space. This will probably change over time; there are currently plans to develop European reconnaissance satellites and at a much later date, a manned space station. Nonetheless, it will be many years before the Europeans even begin to approach the scale of military space operations that characterizes the American and Soviet programmes.

2. Secondly, most Europeans have little more than instinctive reactions to proposals such as the Strategic Defence Initative. The relative dependence of the Europeans on the U.S. for both information and concepts concerning new space based technologies has hindered Europe from responding to the challenges that SDI poses for strategic doctrine.

3. Europeans tend to view major technological developments in political, rather than military or even strategic terms. Their experience over the centuries has led them to conclude that security is, above all, a political task. Europeans ask, more persistently than Americans what will be the political consequences of a new weapon system in space. Many Europeans instinctively regard the introduction of major new military technologies either as a threat to stability or as a futile attempt to provide hardware answers to political questions.

The western alliance system has proved remarkably resilient and effective, despite changing strategic circumstances and the evolution from a U.S. nuclear monopoly in the late 1940s to the emergence of Superpower strategic parity in the mid 1960s. It has also remained effective in the face of changing political circumstances, from the cold war tensions of 1950s to the beginning of detente in the late 1960s. The alliance security system has survived the Korean War, the Berlin Crisis, the Cuban Missile Crisis, the Vietnam War and the

recent bitter debate in Europe over the Pershing II and Cruise Missiles. It has functioned from the presidency of Harry Truman to that of Ronald Reagan, providing an assuring framework for allied security. But the Star Wars Programme would fundamentally change this state of affairs. The effect of a major, purposeful effort to deploy defensive weapons in space will generate a political shift of historic proportions. It will introduce into a remarkabl unstable strategic relationship between East and West, an unprecedented degree of uncertainty and nervousness. It would bring a profound rift that could break up the Western Alliance for good.

AN INITIAL HOSTILE REACTION OF EUROPEAN COUNTRIES TO STRATEGIC DEFENCE INITIATIVE:-

President Reagan's vision of a world in which ballistic missiles have lost their threat is not shared by European allies. Within hours of the first detailed presentation on missile defence by Secretary Weinberger at the April 1984 meeting of the NATO Nuclear Planning Group in Turkey, the West German and French defence ministers criticised the

idea publicly. Defence Minister Manfred Woerner gave interviews to a number of West German Newspapers.[35] The West German government had just demonstrated its loyalty to the NATO alliance by confirming the decision to deploy the American Pershing II and cruise missiles in the face of serious Soviet opposition. But this German leader declared that deployment of an American defence against ballistic missiles could destroy that alliance. Defence Minister Woerner also urged that the United States and the Soviet Union should agree to ban defensive weapons from space.[36]

In June 1984, the French representative at the Geneva based United Nations Committee on Disarmament introduced a draft treaty prohibiting the testing or deployment of ballistic missile defence. French Foreign Minister Claude Cheysson urged the United States to drop the fatefully mistaken idea of a "Maginot line in Space".[37]

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35. Sueddeutsche Zeitung, 5 April, 1984;
Westdeutsche Algemeine, 7 April 1984
cited in Journal of International Affairs(New York), Vol. 39, Summer 85, p.96.

36. Cited in Congressional Research Service Report, The Strategic Defence Initiative and United States Alliance Strategy, 1 Feb, 1985. This is a useful compendium of statements by American and European leaders.

37. Federal Broadcast Information Service, Western Europe, 13 July 1984, p.7.
Cited in n.35, p.96.

European leadership opinion has evolved considerably since these first outraged reactions and has become more circumspect and differentiated. This analysis will examine that opinion shift and will try to predict its further evolution and significance for the Atlantic relationship in coming years, though this can be only a preliminary forecast of a problem which threatens to have a long life span.

Initial European worries focussed on three main areas: (1) The long term implications for Europe if both Superpowers ultimately deployed an effective anti-missile defence (2) the implications of the defence project for East-West relations and (3) the potential for serious public controversy over missile defence in their own electorates.[38]

To get a better picture of European concerns, the reactions of three Key European countries, "France", "West Germany" and "Great Britain" are to be examined in detail.

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38. Jonathan Dean, "Will NATO Survive Ballistic Missile Defence?", n.35, pp 95-114.

FRANCE:

France openly opposed the missile defence project from the outset and has continued to do so.[39] The reasons are doctrinal and practical. The doctrinal basis for French opposition is clear; one of the major reasons for Charles de Gaulle's expulsion of NATO headquarters from France and his withdrawl from the NATO United command was French opposition to NATO's adoption of the strategy of flexible responses, which envisages that, in the event of a Soviet conventional attack on Western Europe, an American decision to use nuclear weapons could be one of several possible reactions. France objected to the "flexibility" of this strategy. In the French view, a strategy designed to have conclusive deterrent effect on Soviet decision makers must be based on a definite decision in advance to use American nuclear weapons in every situation of massive Soviet attack.

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39. For French position on SDI, See : "French Minister warns against Star Wars Plan : US-Soviet "compolicity" seen as Threat to Europe, Washington Post, 10 February 1985, pp. 17-27.

Also See: "France is warning to Star Wars idea, New York Times, 27 Feb 85.

The French government has continued to insist that given Soviet Superiority in conventional forces, the only reliable way to ensure against Soviet attack on Western Europe is through a strategy of nuclear deterrence.

In the practical plane, the cost of maintaining a French nuclear force adequate to carry out a limited deterrent function has caused France to run down its conventional forces, leading to mounting political controversy with domestic supporters of conventional forces. In this context, the American project for ballistic missile defence represented a double disaster for France: Even if it led to only partially effective Soviet defence, this would mean that France's own expensive but small nuclear force could become a total waste. And, the project would make inoperative the most reliable guarantee against a Soviet attack on Western Europe, the strategy of nuclear deterrence - entailing the end of France's quasi - autonomous position in European defence. Both the international standing of France and its national security - two elements inextricably combined in French thinking - would be severely damaged.[40]

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40. See: Michael Lucas, "SDI and Europe", World Policy Journal (New York), Spring 1986, pp. 219-47.

France wants to develop its own space-based defence system as a part of its policy of an independent deterrence system against the Soviet nuclear might. Immediately after President Reagan's announcement of "SDI" programme, the French Government sought the cooperation of alliance partners of Europe to join together to develop a space-based defence programme for Europe, called "EUREKA" (The European Research and Coordinating Agency). The project is designed to promote cooperation among the allies to face USA's space challenge. As early as February 1984, President Mitterrand has made a speech at the Hague calling for a Western European response to the space challenge, the pooling of European knowhow in space researches and the construction of a European Orbiting Space Station. These proposals were reactivated by the French representative at a conference in Rome (30-31, January, 1985), with increasing emphasis on the need to secure the competitiveness of European high-tech industries. The Germans and the British backed away, fearing to offend their American guardians and wary of Gaullist ambitions to assume a French hegemony in Europe.[41] Commenting on this, a senior

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41. See: Thomson, n.25, p.117.

official of the French government acerbically remarked, "The Reagan administration has told us that this high powered technological train is leaving the station and we had better be on it. But what they don't realise is that Britain and Germany won't be in the front of the train or even in the middle. They will be lucky if they wind up in the baggage car".[42]

More differentiated views emerged within the French government in early 1985. The French Foreign Ministry continued to oppose the SDI project. French officials appeared to be holding back in recruiting support of other NATO states for France's "Eureka" project of promoting peaceful space research, intended as a deliberate rival to the American "Star War" programme.

At the May 1985 Summit meeting in Bonn, President Mitterand flatly rejected French participation in ballistic missile defence. French officials resumed the push for the Eureka Programme Mitterand's

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42. Judith Miller "Washington's Allies, Some with doubts, support star wars", New York Times, 30 December, 1985.

motivation was partly domestic; the public standing of his socialist party was falling as nationwide parliamentary elections scheduled for March 1986 approach and a resolute show of independence toward the United States could be helpful. In any event, French opposition to the missile defence programme is always unambigously negative.

GREAT BRITAIN

The British reaction to "Strategic Defence Initiative" has been more circumspect from the outset. Until her meeting with President Reagan at Camp David, December, 1984, the British Prime Minister Margaret Thatcher had been expressing her reservations about the programme. Following the meeting she agreed to support the research on SDI, but stressed that the deployment of space-based defence system would have to be a matter of East-West negotation. The "Four points" which she presented at Camp David are the following:

1. The U.S. and western aim is not to achieve superiority but maintain balance, taking account of Soviet developments.

2. SDI - related deployment would, in view of treaty obligations, have to be a matter of negotiation.

3. The overall aim is to enhance, not undercut, deterrence.

4. East-west negotiation should aim to achieve with reduced levels of offensive systems on both sides.[43]

In March 1985, in a major policy speech elaborating these four points, British Foreign Secretary Sir Geoffrey Howe firmly stated Britain's rejection of SDI as a replacement for deterrence and as a programme going unilaterally beyond research. He publicly questioned the technical feasibility and strategic desirability of space-based defence programme in his address to the Royal United Services Institute on March 15, 1985. He made it clear that the "SDI Britain Supports" is not the SDI of President Reagan with its orbiting particle beam weapons and battle management systems, but SDI as

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43. Britain, Arms control and Strategic Defence Initiative: North Atlantic Council", British Information Services Policy Statements, 46/85, 1st December, 1985.

a tentative "research programme" tightly circumscribed by the ABM treaty and the existing regime of deterrence.

Howe raised some basic questions - regarding SDI and he felt that they should be discussed among the members of the Atlantic alliance:-

1. Firstly, the SDI at this stage does not appear to be technically feasible or strategically desirable;

2. Secondly, the deployment of space - based defence would incur enormous expenditure which would not be cost-effective;

3. Thirdly, in the initial stage the system would be likely to decouple West European defence from that of the United States;

4. Fourthly, the introduction of space-based defence system would lead to new arms race between the two superpowers;

5. Fifthly, the merits and demerits of the proposed defence system should be examined during the course of its development and not at the time of its deployment;

6. Finally, it should not weaken the existing deterrence system which has maintained peace in Europe for the last four decades.[44]

Howe expressed his apprehension that SDI programme might be a set back to the existing ABM treaty. He stated "In his statement to Congress President Reagan spoke of the need to reverse the erosion of the ABM treaty. To go beyond the research into defensive systems would be inconsistent with the terms of the ABM Treaty as it stands".[45] He also expressed his anxiety about the ability of politicians to retain control over any new system, increasingly relying "upon computers and automatic decision making.

Britain's four points and Howe's speech fully capture the firm commitment that existing European governments have to deterrence and to the strategic assumptions of the ABM treaty. Howe's speech clearly reflected Britain's attitude towards SDI. It is also an authentic expression not only of British concerns, but of the continuing worries of all the European NATO Governments about ballistic missile defence.

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44. Sir Geoffrey Howe, the Secretary of State for Foreign and Commonwealth Affairs at the Royal United Services Institute in London 15, March, 1985, "Defence and Security in the Nuclear Age: The British View", British Information Services Policy Statements, 6/85, 15 March 1985.

45. Ibid.

WEST GERMANY

Like the French and British governments, the concerns of West Germany about "Star Wars Programme" also reflect its special foreign policy interests and domestic pressures. As a non-nuclear country, West Germany is even more dependent on the American nuclear deterrent than Britain or France. Because of its exposed geographic position at the point of contact between NATO and WARSWAW PACT military forces, its own active policy of encouraging closer ties with East Germany and the exceptionally strong anti-nuclear sentiments of the German public, it is even more interested than France or Britain in avoiding increased US-Soviet tensions.

In his sharply negative reaction to SDI, the Defence Minister Woerner pointed out:

> "A perfect defense against ballistic missiles could not be achieved. If both sides deployed partially effective defense, tension and instability between them would increase because each side would still fear, even more than at present, that the other would obtain a workable first strike capability, with its second strike

> missiles defended by a partially effective protective screen. These fears would drive an expanded arms race. In the longer run, if missile defenses improved, the United States and Soviet Union would become more secure and Western Europe less so and the binding glue of the NATO Alliance - the sharing of equal risks by its members - would be dissolved".[46]

Woerner's forthright critical comments were repeated in private comments from top German officials throughout the German Government. The West German Government's first hesitations over the SDI were hinted on 18 March' 84 when Foreign Minister Hans Dietrich Genscher voiced concern over a possible erosion of NATO's traditional deterrence doctrine. A substantial number of scientists, technicians and engineers have publicly refused to collaborate on SDI and anti-star wars protests have even occurred in West German military academies.[47]

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46. Sueddeutsche Zeitung, 5 April 1984; Cited in Dean, n.35, p.103.

47. "SDI - Resistance is Growing" Friedens - Politik, Winter 1985-86);
Vorwarts, 1 June 1985, Frankfurter Allgemeine Zeitung 30 May 1985;
As cited in Lucas, n.40, p.230.

Both the Social Democrates and the Greens are adamantly opposed to SDI, on both security and economic grounds. In an open letter to Chancellor Kohl, former Chancellor Helmut Schmidt has argued that SDI would not result in any significant technology transfer to Federal Republic and West German participation in SDI would risk undermining the ABM Treaty. He also said that in the future Europe should expect stricter COCOM restrictions on the export of U.S. high tech products. He concluded that "it was in the interests of France, the Federal Republic and other European states to develop advanced technologies independent from the United States". In a talk to the North Atlantic Assembly, meeting in Stuttgart in May 85, General Wolfgang Altenburg, Chief of the German Armed Forces, said that missile defence programme as presently conceived raised more questions than answers.[48]

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48. "Kohl Hedges Support For Star Wars", Washington Post, 21 May 1985.

In an effort to reconcile differences across Western Europe as well as in his own government about the programme, Kohl said that it was essential to leave open commitment to build a space-based missile defence system to enhance prospects for agreements at Geneva arms talks. But Kohl has been opposed by Foreign Minister Genschev who has fought to block a premature agreement that would not expolicitly meet the full range of West German demands.

Thus, one finds sharp political opposition and official reservations about SDI in West Germany.

RECENT DEVELOPMENTS : AN UNEASY BARGAIN

In recent months, European governments have expressed a more positive, less skeptical attitude towards SDI. All have adopted the policy of allowing private firms to sign contracts with U.S. high tech firms on SDI projects. In December, 1985, Britain became the first U.S. partner to sign a Memorandum of Understanding on participation in the research phase of SDI. Italy and West Germany are expected to sign similar agreements. Even France, one of the strongest critics of SDI as a strategic programme, has given up earlier misgivings about French firms negotiating SDI contracts.

But, the significance of the developments should not be overstated. What has happened in effect is that now Washington and its NATO allies have struck an uneasy bargain: individual European governments will sign memorandums of understanding, which although very general, nonetheless give the appearance of

European government support and alliance solidarity on SDI. In return, the United States will provide European Governments with an ambiguous assurance that SDI research will remain within the ABM treaty framework, that a decision on testing or deployment will not occur without prior NATO consultation and negotiations with Soviet Union and that the United States will strive for mutual US-Soviet reductions in strategic offensive forces.[49]

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49. Lucas, n.40, p.227.

WEST EUROPEAN ATTITUDE : SUMMING UP

After examining the reactions of the European members of NATO to "Strategic Defence Initiative", the European concerns can be summarized in the following way:

1. It will be technically impossible to create a leak-proof defence against attacking missile. An imperfect defence, on the other hand, will produce strategic instability, especially if both sides retain or increase their sizable offensive forces so as to overcome any projected defnesive system. Moreover, the deployment of even an imperfect system could be interpreted by the adversary as an attempt to obtain a first-strike capability.

2. Secondly, West Europeans suspect that the deployment of defences will provide little additional security for Western Europe, bordering as it does on the countries of Warsaw Pact. The result, they fear, will be a strategic decoupling of America's

security from that of Western Europe, resulting in a "fortress America", with an unprotected and unprotectable glacis in Europe.[50]

3. Thirdly, the bitter and protracted debate that took place in the early 1980s over the deployment of U.S. intermediate-range nuclear forces (INF) in Europe has left its mark. Those who favour the INF deployment believe that these systems foster an increased solidarity of risk within the Alliance. A major effort to build "Ballistic Missile Defence" shield around the United States would undercut the arguments of those who have stood by the INF deployment decision.

4. The West Europeans are concerned about the impact of SDI on the resources of the Alliance as a whole. The SDI raises the specter of a new strategic arms race that could siphon off much-needed defence funds as

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50. These doubts were first formulated by West German Defence Minister Manfred Worner, with the apparent approval of his European Colleagues, after they briefed on the SDI by Casper Weinburger at a meeting of NATO's Nuclear Planning Group, held in Turkey 1984.

well as Scientific and industrial resources. Defence resources are likely to remain limited; even the United States will be unable to maintain its current defence spending increases in the face of mounting budget deficits. Given the enthusiasm in the White House for the SDI, Europeans fear that when the squeeze comes, the administration will not only increase pressure on them to carry more of the conventional military burden, but might also reduce its NATO related defence spending. An American preoccupation with strategic defence could thus weaken the existing defence in Europe.[51]

5. For many Europeans, the main question for the moment is whether the United States will be willing to collaborate on SDI-related projects on fair basis. The Reagan administration has sent West European governments confusing

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51. This also seems to be the reason why US General Bernard Rogers, the Supreme Allied Commander in Europe, has repeatedly displayed skepticism towards the SDI project.

and contradictory signals. On the one hand it has solicited participation by suggesting that SDI could result in a technological windfall for European firms. On the other hand, it has not yet reassured those firms that there will be any change in the frustrating way the Americans have handled collaborative projects in the past.

6. Another European concern is the Pentagon's deeply ingrained preference for large U.S. firms when it comes to major military contracts. After repeated disappointments with joint U.S. European high-tech and military production efforts, neither the leading military-industrial companies in Europe nor their governments expect the Defence Department to give major contracts to European firms.

7. Another European concern related to the American practice of placing restriction on civilian use of military research, on technology transfers and on the East-West trade. To varying degrees, West European nations have expressed their

> understandable reluctance to become so deeply involved with SDI that their future economic and technological development would be subordinated to U.S. military based restrictions. For countries highly dependent on exports, such as West Germany, curtailing high tech trade to meet U.S. Security rules and military secrecy regulations would blatantly contradict their most vital economic interests.[52]

In sum, the transatlantic bargain being forged on SDI could be described as a recipe for tensions and conflicts within the Atlantic Alliance. Washington evidently hopes that SDI contracts can generate the kind of political and economic support for SDI in Europe that will override the current concerns of European elites, outflank popular opposition and incrementally push Europe over the boundaries of the ABM regime through on going SDI research. In other

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52. Lucas, n.40, pp. 235-40.

words, SDI research can be viewed as a "Trojan Horse" wheeled into Europe to allow the Reagan administration to reestablish American dominance within NATO.[53] This ascendancy would be based on a Post-MAD arms race and a predominantly military and technological recording of international political and economic relations well into the next century. While this may be the current U.S. design, it will probably not succeed, given SDI's weak and unstable foundations. More likely, there will be a failure to create the consensus in Europe or in the United States needed to make SDI an economically and militarily viable basis for a new American hegemony. The result will be growing instability in East-West, West-West and North-South relations over the coming years.

West European governments have so far adopted a "Walt and see" attitude. They do not object to the continuation of SDI research in the U.S. and have even expressed an interest in being involved in these efforts. But they have also made it clear that they regard the ABM Treaty as an important contribution to arms control that they would like to see maintained. And they have assigned to the United States the burden of proof that strategic defences will neither decouple

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53. Ibid.

Europe from America, nor undermine strategic stability between the Superpowers.

The President's Star Wars vision and space programme are not just another case of American infatuation with the promises of military technology. They suggest a fundamental shift away from past strategic concepts as well as from the basic philosophy of the Alliance itself. For Europeans, the American strategic vision is one more expression of a shift in the American world outlook, away from coalition politics and towards an assertive, protected United States acting on his own.

Star Wars has come at a time of gathering change in European politics best characterised by the term "Europeanization". This new European self-assertiveness stems partly from a recognition that Europe's and America's interests are no longer identical and partly from decreased confidence in a declining America's leadership ability. The establishment of the European Political Cooperation(EPC), the current negotiations to reform the Treaty of Rome and the effort to upgrade the "Independent European Planning Group" and other "European NATO planning staffs" are the examples of Western Europe's determination to

more effectively articulate its interests in the international arena.

SDI would place the United States on a significantly more militarized path of economic - development than Europe would be on. This disparity would severely strain the Western Alliance and place Europe in a position of having to resolutely reject SDI. In this case, Western Europe would probably have to adopt a course of deepended detente coupled with structural demilitarization - not merely to protect its own security and economic interests, but also to pressure the United States to alter its promotion of SDI and other cold war policies.

Tragically, SDI would foreclose the real opportunities that are emerging in Europe for military disengagement, deepened detente and common security.

The "Strategic Defence Initiative", therefore, risks undermining, on the American side, the basic bargain of the Alliance, and on the side, the acceptability of nuclear weapons and nuclear deterrence. Furthermore, the two trends are reinforcing each other. The more Europeans display an aversion to nuclear weapons, the more the United States will avoid committing its security to the uncertainties of European politics.

Thus, SDI might snake the very foundation on which the Western Alliance System has rested in the nuclear age.

STRATEGIC DEFENCE INITIATIVE AND THE THIRD WORLD

The Strategic Defence Initiative as a military strategy will have serious implications for the Third World Countries. These countries will be strategically, politically, economically and militarily affected.

Strategically, the Third World countries will be unsafe as the SDI scheme seeks to engulf the Indian Ocean area in its operation. Diego Garcia, based in the Indian Ocean, will be a strategic base for the ballistic defence programme. It will provide facilities to F-15s which are to be used for air-launched intercepts meant for the Southern hemisphere. The militarization of Indian Ocean will, thus, strategically place the third world countries in a dangerous position.

Politically, SDI will decisively affect the power-structure, political legitimacy and regional balance of the developing countries. In this age of cold war politics any competition or conflict between the Superpowers will proundly influence the political

conditions of these countries. They will fall a victim to Superpower rivalry.

SDI, both as a political tactic and a military strategy, will have serious implications for Third World Political Structures. Some countries of the Third World, because of their military and economic alliance with the western bloc will have to support with SDI plan, thus leading to a division among them. This will reduce the bargaining position of the Third World.

Economically, SDI will affect the Third World seriously. Massive expenditure on 'SDI' will divert the developed nations' economic aid to the Third World for developmental purposes. Support to SDI will be the condition of the developed nations for assistance and because of economically weak position, the developing nations cannot remain indifferent. They will have to side with SDI plan.

Militarily, the Third World will be affected as SDI will introduce new technologies for both defensive and offensive purposes. This will lead to Soviet counter measures and thus, arms-race in space

will be accelerated. Militarization of outerspace is a disturbing trend for the Third World countries. Since, the Indian Ocean is a part of SDI operations, these countries will be militarily affected.

Moreover, no one has offered any shields to the Third World. A shield over one or both the nuclear superpowers will only dramatize the vulnerability to threat of non-nuclear developing nations.[54]

At the Six-Nations' Summits in New Delhi and Mexico, Non-Aligned Summit in Harare and U.N. Resolutions, the Third World countries have legitimately voiced their concern against the spectre of a new arms race in outer-space.

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54. Thompson, n.11, p.144.

CONCLUDING OBSERVATIONS

An American commitment to ballistic missile defence would percipitate Soviet responses and a chain of "action-reactions" will follow. Superpowers' competition in strategic defences will lead to an increased Soviet-American offensive arms race. Thus, deterrence will be weakened and crisis stability decreased, making the prospect of a war more likely. Damage limitation will be undermined by the need of both sides to increase their strategic arsenals in order to compensate for other's defensive measures. Again, a commitment to ballistic missile defence will provoke a serious crisis in the Atlantic Alliance. More importantly, the programme will affect the Third World countries strategically, politically, economically and militarily. Thus, "Strategic Defence Initiative" will trigger a new round of arms race and extend military competition into space.

The world shakes at the launching of this ballistic missile defence programme, as it is reflected by the Eighth Non-Alligned Summit in Harare, the nuclear freeze movement in U.S.A.,[55]

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55. Paul M. Cole(ed), The Nuclear Freeze Debate, (Colorado, 1983).

the catholic Bishops' letter to the US Administration,[56] the proposition of "No First Strike" by Bundy Kennan, MC Namara and Smith[57], the peace movements in Europe, the peace proposals of the Soviet Union and the resolutions of The United Nations. This shows how the world is concerned about the consequences of "Strategic Defence Initiative" Programme.

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56. National Conference of Catholic Bishops, The Challenge of Peace: God's Promises and our Response: A pastoral Letter on War and Peace (Washington, D.C., 3 May, 1983).

57. Mc George Bundy, George I. Kennan, Robert S. McNamara and Gerard Smith, The President's Choice: Star Wars or arms control, Foreign Affairs, Vol. 63, (Winter 1984-85).

CHAPTER - III

STRATEGIC DEFENCE INITIATIVE AND NUCLEAR ARMS CONTROL

STRATEGIC DEFENCE INITIATIVE AND NUCLEAR ARMS CONTROL

Nowhere has the STRATEGIC DEFENCE INITIATIVE given rise to greater controversy than over its implications for the nuclear arms control. Currently, it is the "bargaining-chip" in all arms control initiatives.

This chapter examines the implications of ballistic missile defence for the current and future arms control measures. It begins with a brief examination of "Nuclear Arms Control" in theoretical terms and then focuses on the existing arms control agreements that govern the military activities in outer space. The remainder of the chapter addresses the implications of "Strategic Defence Initiative" for nuclear arms control. The most important treaties like "The Outer Space Treaty" and "The Anti Ballistic Missile Treaty" have been analysed in detail. Finally, the recent developments in the field of arms control are recorded and examined thoroughly. A brief analysis of the future prospect of nuclear arms control is also attempted in the chapter.

NUCLEAR ARMS CONTROL : A CONCEPTUAL ANALYSIS

As a conscious effort of political and military strategy, "Nuclear Arms Control" is a Post-World War II development. It was the horror over new, highly destructive atomic weapons that spurred the attempts to seek, through negotiated limitations, a barrier against disaster. Nuclear Arms Control is the dominant trend in the nuclear age, the principal instrument to pursue strategic stability.

Arms Control is defined as any measure taken in the military security field which increases strategic stability in the relations of states involved in a conflict. Strategic stability is the diminution in the frequency of wars and , once they occur, their limitation. A related objective of arms control is the limitation and reduction of defence expenditure, provided strategic parity is not harmed. Hence, arms control is a broader concept than mere limitation to the acquisition of arms.[1]

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1. For a detailed study of Arms Control See :
   Morton Halperin and Thomas Schelling, Strategy and Arms Control (New York, 1961);
   Richard Burt, ed. Arms Control and Defence postures in the 1980s (England, 1982);
   Christoph Bertram, ed, Arms Control and Military Force, (England, 1980);
   David Carlton and Carlo Schaerf, ed Reassing Arms Control, (Hongkong, 1985);
   Julie Dahlitz, Nuclear Arms Control(England, 1983).

Schelling and Halperin defined arms control as "all the forms of military cooperation between potential enemies in the interests of reducing the likelihood of war, its scope and violence if it occurs, and the political and economic costs of being prepared for it".[2]

The theory of nuclear arms control has, thus, developed within the framework of Superpowers' relations. It is part of the Strategic Paradigm which has focused primarily on the bipolar nuclear relationship. Nuclear Arms Control is not expected to bring about a fundamental change in the crisis-ridden international environment, but is intended only to increase relative stability within the framework. Arms control operates only in the military security areas; its impact on political developments, although sometimes considerable, is indirect. It is achieved only when the contracting partners' defence establishments recognize that arms control agreements improve their respective countries' security. Thus, arms control is a political and military strategy whereby, despite all existing conflicts and antagonisms, states and alliances harmonize with

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2. Halperin and Schelling, n.1, p.2.

one another as "partners" and coordinate their individual military potential. This includes the strategies, size, structure , deployment and even the tactical commitment of this potential in the interest of mutual security.

Politically, arms control has been seen as a symbol of East-West detente, perhaps the most tangible and unambiguous of all such symbols. The objectives of arms control are basically three -

1. To reduce the likelihood of war by increasing stability;
2. To reduce the damage of war if war does break out;
3. To reduce the economic cost of preparing for war.

Thus, Arms Control has following objectives:-

a. Strategic Stability

b. Damage Limitation

c. Reduction of Military Costs

d. Conflict Management

In spite of the considerable political appeal of arms control and intellectual investment in the field

over the years, the record has not been very impressive. This is because, as Rip Bulkeley observes: "Every negotiation becomes a bloodless battle for propaganda advantage in the global political struggle".[3] In a similar tone, J. Goldblat says, "The arms control agreements hitherto reached have not halted arms race or reduced the military potential of states. In many cases, the weapon prohibited have had little, if any, military importance and outlawed activities have never seriously been contemplated as method of war. Negotiations on measures which could make a significant impact on the arms situation in the world have stagnated over years".[4]

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3. Rip Bulkeley, "The Effects of SDI on Disarmament", in E.P. Thompson ed Star Wars (Harmondsworth, 1985),p.70.

4. J. Goldblat, Agreements for Arms Control, (London, 1982), p.355.

ARMS CONTROL IN SPACE

In the last twenty-seven years since Sputnik I, developments in space-related activities have indicated two broad trends - "Commercialisation" and "militarization".[5] Commercialisation of outer space is positive in nature, but militarization is a disturbing trend. Militarization of outer space may lead to nuclear wars that have global effects.[6] Thus, when the exploration of outer space for military purposes became a dominant trend, an awareness immediately arose that space could play a vital role in matters connected with international peace and security.

The international community, since the advent by the space era, has been deeply concerned over the normative constraints to prevent the extension of national rivaliries into this new domain. Controlling arms in space was focused in different arms control negotiations.

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5. Michiel Schwarz and Paul Stares, "Perspectives on 25 years of space development", Futures(Binghamton), Vol. 14, No.5, October 1982, p.349.

6. Carl Sagan "Nuclear War and Climatic Catastrophe", Foreign Affairs, (New York), Vol. 62, No.2, 1983, pp. 257-292.

The United Nations General Assembly through its resolutions has consistantly reiterated the collective concern of the International Community to keep outer space free from military operations. Political leaders and international lawyers have worked to establish a legal regime to govern activities in outer space. During the last three decades, a considerable, if by no means comprehensive, body of laws has evolved. The different treaties certainly go towards creating a special status for outer space and they could be seen as a first element in the building of a new and nuclear weapon free "Sanctuary" .

The rules of international law relevant to the use of weapons in space can be found in international treaties both in those of a general nature, in particular the United Nations Charter and in those containing specific rules, especially those which apply to space activities. It is, therefore, important to point out the several international agreements which restrict the activities of states in space.

Existing Rules of International Law Relevant to Militarization of Outer Space

UNITED NATIONS

A. The Charter of the United Nations:-

Article 2.4 of the Charter of the United Nations prohibits the use of force or the threat of use of force.[7] An attack on a space craft belonging to another country must be forbidden according to this article. An explicit reference to the U.N. Charter is included in Article III of the 1967 Outer Space Treaty.

B. United Nations' Resolution 1148(XII), 1957:-

As early as 1957, The United Nations' General Assembly in its resolution 1148(XII) by virtue of Article 1(f) urged "The joint study of an inspection system designed to ensure that sending of object through outer space shall be exclusively for peaceful purposes."[8]

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7. The Charter of The United Nations, Year Book of The United Nations(New York,1952), p.10.

8. Year Book of the United Nations, 1957, p.20.

C. United Nations' Resolution 1721(XVI) -

The need for vigorous pursuits of peaceful aspects of exploration of outer space was stressed by the General Assembly Resolution 1721(XVI). This resolution enumerated two important principles of outer space law, namely -

1. International Law, including the Charter of United Nations, applies to outer space and celestial bodies;

2. Outer space and celestial bodies are free for exploration and use by all states in conformity with International Law and are not subject to national appropriation.[9]

Nuclear Test Ban Treaty, 1963

An important step to partially demilitarize outer space was undertaken with the signing of the Treaty Banning Nuclear Weapons Tests in the atmosphere, in outer space and under water in Moscow on August 5,1963.[10]

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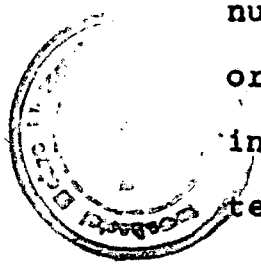
9. Resolution adopted by the General Assembly, 1085th Plenary Meeting, 20 December, 1961.

10. Article I, Paragraph 1(a) of 1963 Partial Test Ban Treaty prohibits the testing of nuclear weapons in outer space, October 10, 1963, 14 U.S.T, 1313, T.I.A.S. No 5433, 480, United Nations Treaty Series, (New York, 1963), Vol.43.

Article I of the Treaty is an attempt to ban nuclear tests in space. It reads as follows:-

"Each of the parties to this treaty undertake to prohibit, to prevent and not to carry out, any nuclear weapons test explosion or any other nuclear explosions at any place under its jurisdiction or control, in the atmosphere, beyond its limits, including outer space or under water, including territorial waters or the high seas". "



The Partial Test Ban Treaty of 1963 is the first legally binding international instrument which acknowledges the fact that outer space constitutes a new dimension in international security, deserving attention not less than that given to terrestrial dimensions.

The Outer Space Treaty, 1967

A major step to check the extension of the arms race into outer space was taken in 1967 when the Outer Space Treaty was concluded with a view to preventing man's earthly conflicts to be carried into space and to resolve the controversy over the binding effects of the United Nations Resolutions.

Prohibiting the placing in orbit around the earth or stationing in outer space of any objects carrying nuclear weapons or other weapons of mass destruction, the Outer Space Treaty subjected outer space - in a manner relevant to its special nature - to a new body of arms control measures designed to limit the use of nuclear weapons as well as weapons of mass destruction.

According to Article I of Outer Space Treaty, space activities "shall be carried out for the benefit of economic and scientific development and shall be the province of all mankind". According to Article III, "Space activities shall be carried out in accordance with international law, including the UN Charter and "in the interest of maintaining international peace and security and promoting international co-operation and understanding".[11]

Thus, the Outer Space Treaty is the first major step to demilitarize the outer space.

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11. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, January 27,1967, 18 U.S.T. 2410, T.I.A.S., No 6347, 610, United Nations Treaty Series, Vol. No. 205, 1967.

The Accident Measures Agreement, 1971

The Prevention of Nuclear War Agreement, 1974

Both these agreements prohibit the Soviet Union and the United States to interfere with or attack on the early warning systems of either side, which would include satellites that are components of such warning systems.[12]

The Anti Ballistic Missile Treaty, 1972

The Anti Ballistic Missile Treaty which took effect in 1972 is the most significant step in arms control in space. The treaty categroically prohibits the deployment of ABM systems in outer space.[13] The treaty forbids the placement of nuclear weapons or other weapons of mass destruction in outer space. It prohibits the development,

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12. See:

Sune Danielsson, "Approaches to prevent an arms race in outer space" in Bhupendra Jasani ed. Space Weapons : The Arms Control Dilemma(London,1984), p.162.

13. A detailed analysis of the treaty is given afterwards in this chapter.

testing and deployment of ABM Systems for placing in outer space. According to its provisions, the contracting parties shall use "National technical means of verification" to monitor the adherence to the provisions of the agreements. Furthermore, it is stated that these national means of verification must not be disturbed or "interfered with". It prohibits "deliberate concealment measures which impede verification by National technical means".[14]

Thus, the ABM Treaty is a major break through in the arms control process in space. The SALT II agreement of 1979(still unratified) also prohibits the development, testing and deployment of nuclear weapons of mass-destruction.

International Telecommunication Convention, 1973

According to article 35 of this convention, the countries are prohibited to interfere with other countries' radio communications that are operated in accordance with the Radio Regulations of the International Telecommunication Union(ITU).[15] Signals to and from

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14. For the text of the ABM Treaty See: Stockholm International Peace Research Institute Year Book of World Armaments and Disarmament, (Stockholm, 1973), pp. 20-24.

15. Jasani, n.12, p.160.

Satellites are thus protected according to this provision. This is of particular importance since radio communication is a vital factor in militarization of outer space.

Convention on Regulations of Objects Launched into Outer Space, 1974

According to article IV of this convention, certain general data about space missions should be sent to the Secretary General of the United Nations as soon as possible.[16]

Environmental Modification Agreement of 1977

It prohibits the use of some environmental warfare techniques which could involve outer space.

Agreement Governing Activities of States on Moon and other Celestial Bodies, 1979.

This agreement binds the signatories to use the Moon and other celestial bodies exclusively for peaceful purposes ; it bans conducting hostile acts on the celestial bodies, placing of nuclear weapons in a trajactory around them, the establishment of military

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16. Year Book of the United Nations, Vol. 28, 1974,pp.63-5.

bases, installations and fortifications, the testing of any type of weapons and conduct of military manoeuvers on the moon and celestial bodies.[17] Thus, this treaty prohibits militarization of outer space.

After this brief survey of different arms control measures, it can be concluded that even since the advent of the space era, the superpowers have been busy in exploring the military potentialities of space technology; while on the other hand, the international community has ever been deeply concerned over the normative constraints to prevent the extension of national rivalries into this new domain. Arms control in space through different agreements(multilateral as well as bilateral) has been going on since the beginning of the space age.

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17. The Year Book of the United Nations, 1979, pp. 102-114.

STRATEGIC DEFENCE INITIATIVE AND NUCLEAR ARMS CONTROL

The implications of Strategic Defence Initiative in the field of nuclear arms control fall into two main categories: its relevance to existing arms control agreements and its possible impact on current and future arms control negotiations.

The perception that the arms control process of the 1970s is at a deadend and that a new conceptual approach is needed to break the impasse is in part responsible for the renewed interest in missile defence.[18] The argument that ABM deployment could be a catalyst for an arms control breakthrough is perhaps the most novel, but least convincing , of the Reagan administration's rationals for embarking on SDI. Turning the "action -reaction" theory on its head, the administration has argued that

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18. This perception reflects a range of attitudes - from disillusionment to outright hostility - towards past arms control agreements. See, respectively :

Henry A. Kissinger, "Should we try to defend against Russia's missiles?", Washington Post, 23 September,1984; Colin Gray, "Moscow is cheating" Foreign Policy, (New York, No. 56, Fall 1984).

For an argument that defences could offer the United States a unilateral substitute for arms control, See:

Zbigniew Brzezinski, "From Arms Control to Controlled Security", Wall Street Journal(New York),10 July 1984.

U.S. defences can provide the impetus needed for reductions in Soviet offensive nuclear forces. The SDI has thus been presented as a route to arms control on American terms - a tool for extracting the deep cuts in large Soviet ICBMs. Presidential Science Adviser George Keyworth, has argued that a demonstration of SDI Technology "would pressure the Soviets to take our arms reduction proposals much more seriously than they do now".[19]

The Reagan administration's contention that SDI is the path to a new arms control regime is thoroughly unconvincing. The more likely consequence of proceeding with the programme is a wholesale collapse of arms control. Again it will destablize East-West security and further escalate the Arms race.[20]

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19. Cited in "Science(Massachusetts), 25 November, 1983, p. 902.

    Also see Keyworth's statement to the Senate Foreign Relations Committee, Hearing on Strategic Defence Initiative, 25 April, 1984, Congressional Record (Washington, D.C., 1984).

20. Robert C. Johansen, "The Future of Arms Control", in World Policy Journal (New York) , Vol. II, No.2, Spring, 1985, pp. 193-227.

Like a bull in the arms control shop, the Reagan administration is shattering treaty restrictions and arms control practices that have been painstakingly established over many years. By pursuing deployment of the very weapons that these norms were designed to prohibit, the administration is actively undermining almost all constraints on nuclear arms and is making it more difficult to reach future agreements. These actions have already begun to erode Soviet confidence in U.S. pledges, making Soviet leaders less inclined to restrict their own arms programmes. If Washington violates old rules, the Russians may ask, why should Moscow sacrifice to establish new ones?

The Reagan strategic doctrine has brought the arms control process to the breaking point. It has moved the purpose of arms control from comprehensive arms restraint towards the development of an extensive war-fighting capability. Officials use arms control to legitimate a more offensively armed and less secure East-West relationship.

SDI of Reagan administration violates the following international agreements and treaties that prohibit

the militarisation of outer space :-[21]

1. The Charter of the United Nations:

   SDI, in its doctrine and policy, violates the article 2.4 of the Charter of the United Nations.

2. United Nations' Resolution 1148 (XII), 1957;
3. United Nations' Resolution 1721(XVI), 1961;
4. Partial Test Ban Treaty, 1963;
5. Outer-Space Treaty, 1967;
6. The Accident Measures Agreement, 1971;
7. Anti-Ballistic Missile Treaty, 1972;
8. International Telecommunication Convention,1973;
9. The Prevention of Nuclear War Agreement, 1974;
10. Registration Convention, 1975;
11. Environmental Modification Agreement, 1977;
12. Agreement Governing Activities of States on Moon and other Celestial Bodies, 1979;
13. Strategic Arms Limitation Talks II, 1979(unratified).

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21. The provisions and the arrangement of these International Treaties and Agreements have been discussed earlier in this chapter.

Thus, Strategic Defence Initiative threatens to undermine 13 international agreements prohibiting militarization of outer space. Out of these treaties, The Outer Space Treaty of 1967 and the ABM Treaty of 1972 will be affected most. Hence, a detailed analysis of these two treaties and how SDI would violate them is needed.

The Outer Space Treaty, 1967

Article IV.1 of the Treaty prohibits the placing "in orbit, around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction" and the installation of such weapons in outer space in any manner.[22]

The second paragraph of that article states that the Moon and other celestial bodies shall be used exclusively for peaceful purposes and prohibits all kinds of military activities on those bodies.[23]

According to Article I of the Outer Space Treaty, space activities "shall be carried out for the benefit of and in the interest of all countries, regardless of the degree of economic or scientific development and

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22. n.10

23. Ibid.

shall be carried out in accordance with international law, including U.N. Charter" and "in the interest of maintaining international peace and security and promoting international co-operation and understanding".

In article IX, it is stated that States shall conduct their activities in outer space " with due regard to corresponding interests of all other parties". If space activities could cause potentially harmful interference with peaceful activities of other states, international consultation should be held.The Outer Space Treaty also contains certain provisions which are of interest as regards verification.[24]

Although only a few provisions of the treaty deal specifically with military activities, the affirmation of the basic principles of peaceful purposes and international cooperation in exploration and use nevertheless remains important for the construction and application of more specific agreements governing outer space activities. The principles reflected widespread attitudes toward the new environment of space in the late 1960s, and there is little reason to suppose that

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24. Ibid.

those attitudes are different today. The principles of the treaty have remained largely intact throughout the past thirty years of outer space activity.

But SDI would change this situation. It would introduce new nuclear weapons in space and thus the Outer Space Treaty will be flatly violated. Ballistic Missile Defence and Anti-Satellite Systems could well represent the first significant challenge to the continued validity of the first and only international legal framework that has governed outer space.

Awareness of this danger is clearly reflected in the following statement of General Bernard Schriever:-

> " I don't rule out a military lunar base in the next fifty years".[25]

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25. Gen. Bernard Schriever, Address to the USAF Academy Symposium on Military Space Doctrine, 1-3 April,1981, Cited in Thompson, n.3, p.72.

The Anti-Ballistic Missile Treaty, 1972

The Anti-Ballistic Missile Treaty of 1972 has rightly been called the delicate and only child of the Soviet-American arms control relationship since the 1960s. It remains the only permanent and legally operative bilateral arms control agreement between the two Superpowers - a thin legacy of detente and its hope of attaining substantial reductions of strategic arms. It is the linchpin of a thirty-year effort to limit strategic weapons of the Superpowers. Mc George Bundy, George Kennan, Robert Mc Namara and Gerard Smith have argued that "The ABM Treaty stands at the very centre of the effort to limit the strategic arms race by international agreements".[26]

The ABM Treaty smbolises the essence of detente and the strategy of mutual deterrence. The treaty severely restricts the deployments of defences against nuclear weapons and locked the two nuclear giants in a deterrence - relationship based primarily on offensive

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26. Mc George Bundy, George Kennan, Robert Mc Namara, Gerard Smith, "The President's Choice: Star Wars or Arms Control", Foreign Affairs, Vol. 63, Winter 1984-85, p.274.

nuclear weapons. Both the United States and the Soviet Union considered their vulnerability to each other's retaliatory nuclear forces the best bet to preserve peace in the nuclear age. In this scheme of mutual assured destruction, the role of defensive systems is reduced to the bare minimum by the Treaty. Thus, the treaty bears an extraordinarily heavy burden in US-SOVIET relations.

Provisions of the Treaty

The chief purpose and effect of the treaty is to eliminate defensive - that is, anti-ballistic missile systems from the arsenals of the two countries.[27] To that end, the first obligation undertaken by each government, as set forth in Article I of the Treaty, is "not to deploy ABM systems for the defence of the territory of its country."[28]

The plain meaning of Article I is fully corroborated by an analysis of the more detailed provisions. The treaty defines ABM Systems in Article II : "An ABM system is a system to counter strategic ballistic missiles or their elements in flight trajectory, currently

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27. With the exception of a single designated site on each side, sharply limited in area and armament. Cited in Jasani, n.15, pp. 219-234.

28. Ibid. p.219.

consisting of ;

a. ABM interceptor missiles which are interceptor missiles constructed and deployed for an ABM role or of a type tested in an ABM mode;

b. ABM launchers which are launchers constructed and deployed for launching ABM interceptor missiles; and

c. ABM radars, which are radars constructed and deployed for an ABM role, of a type tested in an ABM mode.

Article III allows each country to build two ABM systems - one around the capital city and other around an ICBM silo-launching site. No more than 100 missiles and 100 launchers are allowed at either side. Under a protocol signed in 1974, the US and the USSR agreed to further restrict the deployment of ABM systems to just one each.

In an important provision, under Article V, "Each party undertakes to develop, test or deploy ABM systems or their components which are sea-based, space-based or mobile land based". Thus the only ABM systems permitted are ones which are fixed and land based.

Article VI prohibits giving any ABM capability to systems other than the permitted missiles, launchers and radars. Article VII permits modernization and replacement of the land-based ABM systems or components in a third state or transfer of these to other states.[29]

It is clear from the provisions of the treaty that the treaty that the task President Reagan has set before the American Scientific Community to devise systems that will "interrupt and destroy strategic ballistic missiles before they reach American soil" - is a task which, if accomplished, would flatly violate the solemn treaty obligations of the United States.

Issues of Treaty Interpretation

Interpretation of the ABM Treaty in the light of SDI developments has generated much controversy. Definitional problems over key concepts in the treaty have come under greater focus. A number of the provisions of the treaty are being interpretated differently.

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29. Ibid. p.220.

The distinction between legal "research" and prohibited "development" and "testing" is not too clear in the ABM Treaty, since these terms are not clearly defined. Hence, the Reagan Administration is relying on ambiguities in the treaty language to provide a legal rationale for the programme. Three areas of ambiguity, in particular, lend themselves to such use:

1. What is the difference between "research", which is not prohibited by the treaty, and "development" which, except for fixed land-based systems, is barred for all types of ABM systems, including space-based?

2. What is the difference between a "component" which is subject to treaty limitation on development and testing and parts or elements of a system which might not be characterized as components?

3. To what extent can dual or multi-purpose technology which might be relevant to or even intended for use in ABM systems, be developed and tested in connection with other systems not covered by the treaty - such as anti-satellite(ASAT) systems or anti-tactical ballistic missile(ATBM) systems?

The U.S. Government has relied on a unilateral U.S. interpretation made by Gerard Smith before the U.S. Congress in 1972. Smith suggested that the treaty's prohibitions begin at that process of development where "field testing is initiated on either a prototype or a bread board model"[30].

The 1985 Report to Congress on SDI includes an Appendix entitled " Compliance of the Strategic Defence Initiative with the ABM Treaty". It sets forth the legal justification for SDI tests and experiments. An attempt was made to show that such activities were mere "research" and did not amount to "development" or testing within the meaning of the treaty.

But the meaning of the term "development" as used in the Treaty, is as follows:

> " The obligation not to develop such systems, devices or warheads would be applicable only to that stage of development and testing. The prohibition on development contained in the ABM treaty would start at that part of the development process where field testing is initiated on either a prototype or bread board model".[31]

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30. Cited in Daedalus (Massachusetts), Summer 1985,p.202
31. n.21.

Taking this definition of "development", both the technical meaning and its spirit, it can be found that SDI tests and experiments would clearly violate the ABM Treaty.

Similarly there is considerable ambiguity over what constitutes a "component" referred to in the treaty. Article V prohibits the testing and development of both ABM systems and components. The "current" components defined in the treaty as "interceptor missiles, launchers and radars (Art. II)"[32]. The Agreed Statement "D" refers to components "capable of substituting for ABM missiles, launchers and radars". Since the present ballistic missile defence concepts are based on technologies which are completely different from those "current" in the 1960s, a controversy has arisen as to what constitutes a component now.[33]

The prohibition in Section V on the testing and development of components was specifically designed to prevent circumvention of the limitations on testing and development of systems by disaggregation. It would be ironic if this prohibition could be evaded simply by

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32. n.21.

33. Patricia M. Mische, "Star Wars and the State of our Souls", Minneapolis, 1985.

disaggregating the system along different axes than those of the original system. Dual purpose technologies create problems for the interpretation of the ABM Treaty. In case of such technologies that might achieve ABM capability, the intention of the party conducting the development will always be in doubt. SDI technologies have a dual purpose. Hence, they present the most difficult problem of treaty interpretation and ultimately pose the most serious threat to the existing ABM Treaty.

The managers of the Star Wars programme are seeking to circumvent the spirit, if not the letter, of the treaty's prohibition on development and testing of components. The pentagon has claimed that some of the experiments are laboratory ones, hence, they fall under "research" and are permitted. Some other experiments involve "field testing" of fixed land-based ABM components which again are allowed by the treaty. It is the third category of experiments which cause the most concern. This involves "field testing" of what the pentagon calls, "devices that are not ABM components or prototypes of ABM components". In this interpretation, the pentagon is clearly treading on the fine line between "research" and "development" and seeking to by-pass the restriction on testing of components. By conducting tests which are largely indistinguishable from ABM

components, the Pentagon is indulging in technical and legal jugglery and teetering on the brink of the ABM Treaty.

The Pentagon is also using other loopholes in the ABM Treaty to pursue the development of SDI. The treaty does not prohibit the development of anti-satellite weapons. It is well known that anti-satellite technology has a lot of similarity with the ABM technology. It is possible then to develop ABM technologies and components under the rubric of ASAT development without breaching the ABM Treaty. Similarly, the treaty's definition of ABM systems refers only to strategic ballistic missiles. It thus permits the development of anti-tactical ballistic missile(ATBM) capability.

Again, Article VI prohibits the giving of ABM capabilities to "missiles, launchers or radars other than ABM interceptor missiles, ABM launchers or ABM radars". It also prohibits the testing of missiles or radears in an "ABM mode". The first restriction is not sufficient to deal with dual-purpose technologies like ASAT and ATBM.[34]

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34. The advances in air defence technologies are making SAM systems dual capable, allowing yet another way of circumventing the treaty.

Yet another problem with the current SDI programme is the participation of American allies in it. The US has invited 18 of its allies to participate in the programme. The treaty under Article IX prohibits the transfer of ABM systems and components limited by the treaty to other states.[35] The US could argue that since the present programme is a "research" one, the invitation to its allies is to participate in the research.[36] While joint research by US and its allies would not be prohibited by the treaty, the joint testing and development could be illegal. But, the Soviets could invoke a more restrictive interpretation of the term "research"(as "create") and question the participation of American allies in the SDI.[37]

Issues of treaty interpretation, such as these discussed above, can never be resolved definitively. No court or other third party tribunal sits with jurisdiction to answer such questions authoritatively. At the

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35. n.21.

36. George R. Schneiter "Implications of Strategic Defence Initiative for the ABM Treaty" in Survival(London), Vol. XXVII, No. 5, September-October,1985, pp.213-25.

37. The Russian text of Article V uses the word Sozdavat, which translates more nearly as "create" rather than "develop". This may lay the basis for an even narrower reading of permitted research. Cited in n.24, p.218.

same time, the interpretation of treaties, like other legal instruments, consists of more than playing games with words to see what stretched constructions they can be made to bear. In the case of ABM treaty, the basic purpose is clear and appears in the opening words "Each party undertakes to limit anti-ballistic missile systems....." In the light of this fundamental objective, there is little doubt how the questions that have been raised about the coverage of the treaty should be answered.

Even as the abovementioned problems relating to the ABM treaty came into sharp focus, the United States and the Soviet Union are trading allegations regarding the violation of the treaty. Since last year, the United States has alleged that the Soviet radar being built at Krasnoyarsk violates the ABM Treaty, which demands that early warning radars should be located at the periphery of the State and oriented outwards.[38] The Soviets, in turn, have accused the US of violating the ABM treaty by SDI Programme and two large phased-arry radars called "Pave Paws", being constructed in Georgia and Texas.

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38. Thompson, n.3, p.87.

Neither the United States nor the Soviet Union seems to have adopted a strict constructionist approach to questions that arise under the treaty. Instead, each seems to be embarking unilaterally on an expanding series of programmes, more or less defensible on technical legal grounds. Individually and cumulatively, however, such activities may have considerable ABM potential. This would lead to the erosion of the treaty.

Concluding Observations on SDI and ABM Treaty

The Strategic Defence Initiative enterprise as a whole, its objectives and philosophy, are simply at odds with the purposes and objectives of the ABM treaty. Whatever the exact technical limits on testing and development may be, it is inevitable that under current presidential mandate and Defence Department response, these limits will be breached. Attempts to develop ABM technologies under the label of ASAT or ATBM programmes would be legally disingenuous, technically costly and in any event could only extend arguably permissible development a few years.

Thus, Star Wars programme poses the most severe threat to the ABM treaty which is the only bilateral agreement in force between the United States and the

Soviet Union limiting the armaments of the two countries. The programme embodies a much more far-reaching, indeed, a fundamental challenge to the policy assumptions of the treaty.

The ABM treaty is important for practical and symbolic reasons. It constitutes recognition and acceptance of three fundamental strategic realities :-

1. effective territorial defence against nuclear weapons is technically infeasible;

2. the pursuit of such a defence would be strategically destablizing;

3. it would preclude negotiated constraints on offensive nuclear forces.[39]

These premises are still valid and the treaty accordingly remains very much in the interest of both Superpowers. Renunciation of the treaty by either signatory would be tentamount to a rejection of arms control perse and would have dangerous political as well as military consequences for US-Soviet relations.

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39. Richard Ned Lebow, "Assured Strategic Stupidity" in Journal of International Affairs(New York), Vol.39, (Summer, 1985).

The controversy over the ABM Treaty is only symptomatic of the larger crisis in nuclear arms control. The diminishing faith in mutual assured destruction, the shift towards nuclear warfighting, the search for acquisition of nuclear superiority through unilateral measures knocks at the very foundations of the ABM Treaty. Technological change, on the one hand, has increased the lure of nuclear defence and, on the other hand, strains the ABM Treaty. The decline of political trust between the US and the USSR has increased the frequency of allegations of non-compliance with the treaty's provisions.

P.T.O.

RECENT DEVELOPMENTS IN NUCLEAR ARMS CONTROL

The early 1980s have seen the near eclipse of hopes for arms control agreements. The SALT II Treaty has till not been ratified by the United States; the negotiations on SS-20, Cruise and Pershing II missiles have largely been unproductive; a complete nuclear test ban appears to be as far away as ever and hopes of chemical arms control have been repeatedly dashed. In these circumstances, the Strategic Defence Initiative was announced by Reagan administration. This strategic concept caused one major development - it broke the arms control stalemate. The United States and the Soviet Union held two top-level summits in an effort to reach agreements on arms reduction and other international issues that pose a grave danger to peace. But, both the summits failed and the outcome was largely negative. No concrete major could be taken. The bargaining-chip and the root of failure of these two arms control initiatives was - The Strategic Defence Initiative.

The Geneva Summit, November 19th-20th, 1985

The historic Superpower summit between President Reagan and Soviet leader Mikhail Gorbachev was held on November 19-20, 1985, in Geneva. This summit broke the ice.[40]

The Geneva summit of 1985 raised hopes all over the World that the first steps towards a renewal of detente and arms control could be taken. These expectations soon belied, as the spirit of Geneva began to evaporate. Despite the apparent warmth at the "fireside summit", the two leaders appeared to drift apart on all the major issues that had bedevilled Soviet-American relations.

On the question of nuclear arms limitation - the touchstone of Soviet-American relationship - the gulf between Reagan and Gorbachev was broadened. Indeed,

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40. There had been no such summit for 6 years. The last one was in 1979 between President Carter and Mr. Brezhnev in vienna. In 1983, the summit could not take place as the Soviet Union walked out from Geneva arms control talks because of deployment of Cruise and Pershing II missiles in Western Europe by United States.

at Geneva the two leaders had declared their commitment to "accelerate" the on-going bilateral talks at Geneva on nuclear and space weapons. Yet, in the months that followed the summit, the Geneva talks continued to be deadlocked. Despite some sensational proposals by Gorbachev in January 1986, which included a comprehensive plan for the elimination of all nuclear weapons by the end of the century, Reagan refused to move even a little towards some form of arms limitation.

However, the meeting narrowed the conflicting opinions of the two parties for a sharp reduction in strategic weapons. The two leaders reached bilateral agreements on five subjects. The joint statement affirmed that "any conflict between the USA and USSR could have catastrophic consequences". Thus, the process of East-West dialogue got an impetus as a result of the summit meeting. But there was no concrete agreement.

Star Wars Programme remained the most important issue in the Summit. The widespread arms control diplomacy was completely based on this programme.

The main condition to accept the reduction of strategic nuclear weapons put forth by Gorbachev was to renounce the development, testing and deployment of space strike weapons. But the Reagan administration appeared strong enough to ward off the strategic disarmament initiative of Gorbachev and showed its commitment to the programme.

Thus, the Geneva Summit could not achieve anything. Only it raised the "spectre" of nuclear disarmament and brought to the fore the old controversy on the role of nuclear weapons as instruments of national security and on the viability of deterrence.

Reykjavik Summit, 11th 12th October, 1986

The Second Summit between the United States and the Soviet Union was held in Reykjavik, the capital of Iceland on October 11-12, 1986. There was a general expectation before the Reykjavik meeting that both were close to an arms control agreement. Unfortunately, the expectations were belied since nothing postive came out of it. Thus, another opportunity for progress in the reduction of nuclear weapons and signalling the end of the arms race was missed. The Strategic Defence Initiative remained the major obstacle to an agreement at the Iceland meeting. The original purpose was to set a date for the full-scale meeting in the U.S. to deal with medium range missiles. Yet, at the end of the meeting, it broke down over a single word- LABORATORY. The most astonishing proposal offered by the Soviet Union was to slash to half the long-range nuclear missiles in the arsenals of the Superpowers and eventually eliminate them altogether. After two days of intensive and serious negotiations, disagreement arose with regard to SDI. While the Soviets held that it would be confined to "laboratory research", Reagan was adament that the US should retain the right not only to conduct scientific research on SDI, but also to develop and conduct tests.

What is interesting is that the Soviets dropped their total opposition to SDI, and wanted a commitment from the US that it would restrict its Strategic Defence Initiative to within the limits imposed by the ABM Treaty. The Soviets till now demanded a total ban on all space-strike weapons and a complete scrapping of SDI. But now, their position at Reykajavik was "Let's talk about SDI".

Gorbachev proposed in early 1986 that both sides agree to abide by the ABM Treaty for the next twenty years. This was proposed to secure Soviet interests by containing the SDI programme. Reagan then held that he would restrict the deployment of SDI for seven and a half years. He also proposed a compromise by accepting a 10-year extension of the ABM treaty.Unfortunately, disagreement arose as to what exactly would be allowed under the ABM treaty in 10 years. While the USA held that everything short of deployment be allowed, the Soviets insisted that SDI be confined to "research in the laboratory only". The US officials at Iceland felt that the USSR was engaging itself once again in a propaganda ploy.[41]

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41. For a detailed analysis of "Reykjavik Summit" See:
Time(Chicago) 20 October, 1986;
The Guardian (New York), 19 October, 1986;
The Newsweek (New York), 22 September, 1986;
The Newsweek, 13 October, 1986;
The Newsweek, 27 October, 1986.

The Soviet Union called for a 50% cut in strategic missiles. It proposed the reduction of strategic launchers to 1,000 and a total of 6,000 warheads. The US agreed to include bombers, while the Soviet Union agreed to a cut in its 408SS - 18 ICBM. But, all these hopes ended in smoke due to SDI.

"In several critical areas we made more progress than we anticipated when we came to Iceland", said Reagan, "but there remained at the end of the talks one area of disagreement". He added " The Soviet Union insisted that we sign an agreement that would deny to me and future presidents for ten years the right to develop, test and deploy a defence against nuclear missiles for the people of the free world. This we could not and will not do".[42]

As his own press conference, Gorbachev said in sober, measured tones: " I must say the Americans came to this meeting empty handed". He added, "Let America think. We are waiting. We are not withdrawing the proposals we have made".[43]

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42. Time, 20 October, 1986, p.12.

43. Ibid. pp 12-13.

Thus, the Reykjavik Summit had the potential of producing the most sweeping arms control agreement in the history of the nuclear age.

The Soviet assumptions at Reykjavik appear to be as follows:-

(a) That the Soviets would have to match or build missile systems which will overwhelm whatever shoot down capability SDI provides;

(b) The Soviets would indulge President Reagan by agreeing to laboratory research on SDI, but not agree to field testing;

(c) The Soviets believed that in indulging Reagan's fancy for the project, it would either not work out or the Congress would starve it of funds or in two years a new American President could be persuaded to abandon the project. In the mean time, they were prepared to make larger cuts in strategic weapons.

(d) Finally, the reduction in INF weapons was not linked to SDI. The SDI is not a defence against the theatre weapons within Europe, but only against long-range strategic weapons. Gorbachev had come with one purpose - to offer to pay

> Reagan a price he could not refuse for abandoning SDI - a programme that the Kremlin seemed to see not just as a military challenge, but as vehicle for surpassing technological and economic challenges as well.[44]

Thus, as long as the SDI remains the basis of the future US defence programme, the Russian military is unlikely to forgo the option of saturating American defence by weights or numbers. Hence, there is on this basis little promise for arms control at the strategic level.[45]

The questions that arise in the aftermath of the Reykjavik meeting are -

(a) Do the US and the USSR really wantto disarm and maintain military parity?

(b) Do they really want to cut most and all the nuclear dimensions from their continued rivalry?

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44. The Guardian, Vol. 135, 19 October, 1986.

45. Ibid.

The emergence of the SDI, around which an entire new generation of exotic weaponry will be fashioned, would lead one to believe that arms control is a dying dream.

The meeting at Reykjavik was a contest between two skilled competitors, both of whom seem to enjoy theatrics and relish the opportunity to out-manoeuvre each other. The issue was clearly drawn. Two self-declared abolitionists who say they are ready to agree on a mutual path to a shared goal, parted company on a single question.

P.T.O.

CONCLUDING OBSERVATIONS

The future of arms control is in limbo. It leaves us with the nagging problem of a total mistrust in bilateral arms agreement. Both USA and USSR are in a contradictory and unprecedented position. Their irrevocable differences prevent them from making real peace; nuclear weapons prevent them from making war.[46] Partly for that reason, arms control has emerged as the new coin of the realm, which the two sides use to measure progress towards a reduction in tension.

The whole purpose of arms control should be understood as an attempt to create new incentives to transform the political relations between the two Superpowers. Today, the concept of nuclear one-upmanship is playing a leading role in governing the relationship between the two Superpowers. They use nuclear weapons for their respective political advantage. Unless and until there is an underlying political will to achieve some sort of a breakthrough in arms control, there is no hope for a reduction in tensions.

No arms control treaty has a separate, purely legal life of its own. Each is a marker, precariously attached to one aspect of the living and changing relationship between the Superpowers. As that relationship blossoms or wilts, so does the treaty.

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46. n.36,p.6.

During the Summer of 1987, the prospects for meaningful arms control brightened up with the distinct possibility of an agreement on the elimination of Intermediate Nuclear Forces from Europe. It is widely believed that an agreement will be signed in the next few months. The successful culmination of these negotiations may facilitate a meaningful dialogue between Soviet Union and United States on the reduction of Strategic Nuclear Weapons. The main hurdle even then will be Strategic Defence Initiative.

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C O N C L U S I O N

The conceptual and analytical survey of Strategic Defence Initiative, following a deductive - investigative and analytical methodology, leads to the hypothesis that this missile defence programme will be technically uncertain, politically risky and strategically dangerous. Analysis of SDI in a broader strategic context and examination of some of the policy issues raised by it, reveal the possible political, military and strategic consequences of the programme. The conclusions arrived at in the process of research can be summarized in the following way:

The first major politico-strategic consequence of Strategic Defence Initiative will be the decisive disturbance of the existing strategic nuclear stability. A superpower competition in strategic defence will lead to an increased Soviet-American offensive arms race. American defensive developments will lead to an acceleration of Soviet efforts to develop similar capabilities for defence as well as to improve offensive capabilities. And these Soviet counter-measures will be definitely met with corresponding U.S. efforts. Thus, the action-reaction process will be started. The net effect will be acceleration of the arms race, thereby greatly increasing the risk of a nuclear war. This scientific undertaking

will not provide escape from mutual deterrence, but will make that relationship less stable and more frought with suspicion and uncertainty. It will give a death-blow to deterrence and crisis stability. Deterrence, the bedrock of Superpowers' strategic relationship for the last forty years , will be severely disturbed and the danger of a nuclear catastrope will be augmented.

Secondly, the goal of an impregnable defence is illusory. It is difficult to imagine that an invulnerable space-based defence can be technically feasible. No phase of a layered Ballistic Missile Defence system promises a success rate that would reduce the number of warheads arriving on U.S. territory sufficiently to prevent unprecedented death and destruction. Instead, each phase presents intractable problems, the failure of each compounding:the failure of the system as a whole.

A highly efficient boost phase intercept is a prerequisite of total ballistic missile defence, but this is doomed by the inherent limitations of the weapons, insoluble basing dilemmas and an arry of offensive counter-measures. Because of these, the failure of mid-course defence system is preordained.

Mid-course phase is plagued not so much by the laws of physics and geometry as by the sheer unmanageability of its task in the absence of a ruthless and apparently unattainable thinning out of the attack in boost-phase. Terminal phase defence remains fundamentally unsuitable for area defence of population centres, as opposed to hard-point targets. It does not seem possible to defend soft targets on a continent -wide basis against the broad variety of attacks that could be tailored to circumvent and overwhelm terminal defence. Moreover, command, control, communication and Intelligence Systems(C^3I) which are central to SDI programme, are space-based and their vulnerability clearly proves that ballistic missile defence will not be technically feasible. In fact, the greatest technical objection is SDI's vulnerability to countermeasures. SDI, thus, provides a "leaky defence".

More importantly, even if SDI will be a success, it would work only against missiles fired on highly ballistic trajectories. It will still be fatally vulnerable to nuclear weapons delivered by bombers, by hugging cruise missiles and by such unconventional means as small airplanes. Thus, SDI's thesis of perfect defence is self-defeating. It is a fragment of wild imagination, an illusion of security.

Thirdly, Strategic Defence Initiative has raised critical questions within the Western Alliance System. West European attitude towards ballistic missile defence range from ambivalence and skepticism to outright hostility. While some Europeans worry that SDI would restore a "Fortress America" attitude, thus effectively decoupling Europe from the United States and leaving Western Europe vulnerable to Soviet conventional aggression, others fear that it may be yet another U.S. attempt to reestablish American political and economic dominance in the alliance without caring for Europe's interests.

The allies do not share the strategic philosophy upon which Strategic Defence Initaitve rests. They still believe in the philosophy of deterrence. They prefer the certainty of a concept of security that has served them well to a technically absurd idea.

It is clear that the Reagan Administration will trigger off a serious crisis of confidence on the otherside of the Atlantic, if it goes for ballistic missile defence. SDI raised, for West Europeans, an array of questions that are both immediate and far-reaching - questions about the reliability of American leadership, about the fate of arms control and

East-West relations, about Western Europe's security and about Europe's technological - economic position vis-a-vis America.

Thus, an American commitment to ballistic defence will cause major political and strategic strains within the Western Alliance System.

Fourthly, Strategic Defence Initiative will profoundly affect the politico-strategic and economic conditions of the Third World countries. It seeks to engulf the Indian Ocean area in its operation and thus, most of the third world countries will be militarily and strategically affected. The SDI scheme aims to make Diego Garcia a strategic base which will provide facilities to launch F-15s, to be used for air-launched intercepts meant for the Southern hemisphere in ballistic missile defence operations. The militarization of the Indian Ocean is a disturbing trend and it is a matter of grave concern to third world countries. Again, in this age of cold war politics, any military-technical competition between the Superpowers, decisively affects the politico-military-economic conditions of the developing countries.

Moreover, no one has offered any shield to the Third World. A shield over one or both nuclear Superpowers would only dramatize the vulnerability of the non-nuclear developing nations. The monstrous diversion of human resources into holes in space would mock the hunger of the world's poor. And the ulterior objectives of SDI of maintaining technological superiority would add insult to injury. The Third-World countries have legitimately expressed their concern about the militarization of outerspace in different international forums.

Last but not the least, the impact of Strategic Defence Initiative for nuclear arms control will be profound, decisive and far-reaching. SDI, both in its objective and philosophy, brings the process of arms control to the breaking point in two ways: Firstly, it will destabilise the legal regime governing militarization of outerspace and secondly, it will stand as a stumbling block in all arms control initiatives. It will violate thirteen international agreements preventing military use of space, out of which the Anti-Ballistic Missile Treaty of 1972 will be severely affected.

This treaty is the only legally operative bilateral arms control agreement between the two Superpowers. It simbolises the essence of detente and the strategy of mutual deterrence. It is the linch-pin of a thirty-year effort to limit strategic weapons of the Superpowers. The abrogation of ABM treaty will spun the grotesque race in offensive weapons.

More importantly, SDI has become a "bargaining chip" in all current arms control initiatives. Both Geneva and Reykjavik Summits ended in smoke because of this programme.

It must, however, be added that international politics will not be rendered static after the SDI system becomes operational. The race for political ascendency and the momentum of science will produce counter-measure weapon systems that can rip this defensive shield and then, a pursuit toward devising a more sophisticated weapon will be started. Thus, the wheels may change, but the track will continue to be the same. The stakes will be higher and peace will be a more fragile state of affairs.

SDI is the technical extension of militarism which has overtaken politics, diplomacy and arms control in the Reagan Administration. It should not be viewed

merely as a response of the United States to the Soviet ICBM capacity, but as a part of an offensive preparation for a first-strike capability in a future nuclear exchange. In fact, the talk of defensive technology opening the flood-gates of security from nuclear war, is a chimera. It is a sugar-coating to aggressive designs.

The advent of Ballistic Missile Defence will be akin to opening the Pandora's box. The putative benefits of such weapons will be short-lived or more likely illusory. Instead, the Superpowers will become locked into a never-ending, ever-demanding search for security in space that will leave them worse off than before. The opportunity costs in both financial and operational terms will be immense. More worrisome is that it will add yet another potential source of conflict to an already over-taxed international system. In short, outerspace will never be the same again.

Strategic Defence Initiative stands out as the most bizarre episode in the sad history of the nuclear arms race. It is unfortunate that a U.S. President presents this theoretically laudable, but technically baseless programme which is irreconciable with both

technology and with a reasonable pursuit of nuclear stability.

As a last word, it can be said that survival is the first principle of life and when survival can only be guaranteed by rational conduct, it becomes the first priority. The Superpowers must deprive themselves of the luxury of lunacy and the pleasure of violence - latent or manifest. If the experiment of life is to go on, the conspiracy against life must be stopped. And if human civilization is to survive, peace must be given a chance. Peace must be practised as much as it is preached.

APPENDICES

APPENDIX- A

PRESIDENT RONALD REAGAN'S ADDRESS TO THE NATION, 23 MARCH, 1983.

My fellow Americans, thank you for sharing your time with me tonight.

The subject I want to discuss with you, peace and national security, is both timely and important. Timely, because I've reached a decision which offers a new hope for our children in the 21st century, a decision I'll tell you about in a few minutes. And important because there's a very big decision that you must make for yourselves. This subject involves the most basic duty that any President and any people share, the duty to protect and strengthen the peace.

At the beginning of this year, I submitted to the Congress a defense budget which reflects my best judgement of the best understanding of the experts and specialists who advise me about what we and our allies must do to protect our people in the years ahead. That budget is much more than a long list of numbers, for behind all the numbers lies America's ability to prevent the greatest of human tragedies and preserve our free way of life in a sometimes dangerous world. It is part of a careful, long-term plan to make America strong again after too many years of neglect and mistakes.

Our efforts to rebuild America's defenses and strengthen the peace began 2 years ago when we requested a major increase in the defense program. Since then, the amount of those increases we first proposed has been reduced by half, through improvements in management and procurement and other savings.

The budget request that is now before the Congress has been trimmed to the limits of safety. Further deep cuts cannot be made without seriously endangering the security of the Nation. The choice is up to the men and women you've elected to the Congress, and that means the choice is up to you.

Tonight, I want to explain to you what this defense debate is all about and why I'm convinced that the budget now before the Congress is necessary, responsible, and deserving of your support. And I want to offer hope for the future.

But first, let me say what the defense debate is not about. It is not about spending arithmetic. I know that in the last few weeks you've been bombarded with numbers and percentages. Some say we need only a 5 percent increase in defense spending. The so-called alternate budget backed by liberals in the House of Representatives

would lower the figure to 2 to 3 percent, cutting our defense spending by $163 billion over the next 5 years. The trouble with all these numbers is that they tell us little about the kind of defense program America needs or the benefits and security and freedom that our defense effort buys for us.

What seems to have been lost in all this debate is the simple truth of how a defense budget is arrived at. It isn't done by deciding to spend a certain number of dollars. Those loud voices that are occasionally heard charging that the Government is trying to solve a security problem by throwing money at it are nothing more than noise based on ignorance. We start by considering what must be done to maintain peace and review all the possible threats against our security. Then a strategy for strengthening peace and defending against those threats must be agreed upon. And, finally, our defense establishment must be evaulated to see what is necessary to protect against any or all of the potential threats. The cost of achieving these ends is totalled up, and the result is the budget for national defense.

There is no logical way that you can say, let's spend x billion dollars less. You can only say, which part of our defense measures do we believe we can do

without and still have security against all contingencies? Anyone in the Congress who advocates a percentage or a specific dollar cut in defense spending should be made to say what part of our defenses he would eliminate, and he should be candid enough to acknowledge that his cuts means cutting our commitments to allies or inviting greater risk or both.

The defense policy of the United States is based on a simple premise: The United States does not start fights. We will never be an aggressor. We maintain our strength in order to deter and defend against aggression - to preserve freedom and peace.

Since the dawn of the atomic age, we've sought to reduce the risk of war by maintaining a strong deterrent and by seeking genuine arms control. "Deterrence" means simply this: making sure any adversary who thinks about attacking the United States, or our allies, or our vital interests, concludes that the risk to him outweigh any potential gains. Once he understands that, he won't attack. We maintain the peace through our strength; weakness only invites aggression.

This strategy of deterrence has not changed. It still works. But what it takes to maintain deterrence

has changed. It took one kind of military force to deter an attack when we had far more nuclear weapons than any other power; it takes another kind now that the Soviets, for example, have enough accurate and powerful nuclear weapons than any other power; it takes another kind now that the Soviets, for example, have enough accurate and powerful nuclear weapons to destroy virtually all of our missiles on the ground. Now, this is not to say that the Soviet Union is planning to make war on us. Nor do I believe a war is inevitable-quite the contrary. But what must be recognized is that our security is based on being prepared to meet all threats.

There was a time when we depended on coastal forts and artillery batteries, because, with the weaponry of that day, any attack would have had to come by sea. Well, this is a different world, and our defenses must be based on recognition and awareness of the weaponry possessed by other nations in the nuclear age.

We can't afford to believe that we will never be threatened. There have been two world wars in my lifetime. We didn't start them and, indeed, did everything we could to avoid being drawn into them. But we were ill-prepared for both. Had we been better prepared, peace might have been preserved.

For 20 years the Soviet Union has been accumulating enormous military might. They didn't stop when their forces exceeded all requirements of a legitimate defensive capability. And they haven't stopped now. During the past decade and a half, the Soviets have built up a massive arsenal of new strategic nuclear weapons-weapons that can strike directly at the United States.

As an example, the United States introduced its last new international ballistic missile, the Minute Man III, in 1969, and we're now dismantling our even older Titan missiles. But what has the Soviet Union done in these intervening year? Well, since 1969 the Soviet Union has built five new classes of ICBM's, and upgraded these eight times. As a result, their missiles are much more powerful and accurate than they were several years ago, and they continue to develop more, while ours are increasingly obsolete.

The same thing has happended in other areas. Over the same period, the Soviet Union built 4 new classes of submarine launched ballistic missiles and over 60 new missile submarines. We built 2 new types of submarine missiles and actually withdrew 10 submarines from strategic missions. The Soviet Union built over 200 new Backfire

bombers, and their brand new Blackjack bomber is now under development. We haven't built a new long-range bomber since our B-52's were deployed about a quarter of century ago, and we've already retired several hundred of those because of old age. Indeed, despite what many people think, our strategic forces only cost about 15 percent of the defense budget.

Another example of what's happended. In 1978 the Soviets had 600 intermediate range nuclear missiles based on land and were beginning to add the SS-20-a new, highly accurate, mobile missile with 3 warheads. We had none. Since then the Soviets have strenthened their lead. By the end of 1979, when Soviet leader Brezhnev declared "a balance now exists", the Soviets had over 800 warheads. We still had none. A year ago this month, Mr. Brezhnev pledged a moratorium, or freeze, on SS-20 deployment. But by last August, their 800 warheads had become more than 1,200. We still had none. Some freeze. At this time Soviet Defense Minister Ustinov announced "approximate parity of forces continues to exist". But the Soviets are still adding an average of 3 new warheads a week, and now have 1,300. These warheads can reach their targets in a matter of a few minutes. We still have none.

So far, it seems that the Soviet definition of parity is a box score of 1,300 to nothing, in their favor.

So, together with our NATO allies, we decided in 1979 to deploy new weapons, beginning this year, as a deterrent to their SS-20's and as an incentive to the Soviet Union to meet us in serious arms control negotiations. We will begin that deployment late this year. At the same time, however, we're willing to cancel our program if the Soviets will dismantle theirs. This is what we've called a zero-zero plan. The Soviets are now at the negotiating table-and I think it's fair to say that without our planned deployments, they wouldn't be there.

Now, let's consider conventional forces. Since 1974 the United States has produced 3,050 tactical combat aircraft. By contrast, the Soviet Union has produced twice as many. When we look at attack submarines, the United States has produced 27 while the Soviet Union has produced 61. For armored vehicles, including tanks, we have produced 11,200. The Soviet Union has produced 54,000-nearly 5 to 1 in their favor. Finally, with artillery, we've produced 950 artillery and rocket launchers while the Soviets have produced more than 13,000 -a staggering 14 to 1 ratio.

There was a time when we were able to offset superior Soviet numbers with higher quality, but today they are building weapons as sophisticated and modern as our own.

As the Soviets have increased their military power, they've been emboldened to extend that power. They're spreading their military influence in ways that can directly challenge our vital interests and those of our allies.

The following aerial photographs, most of them secret until now, illustrate this point in a crucial area very close to home: Central America and the Caribbean Basin. They're not dramatic photographs. But I think they help give you a better understanding of what I'm talking about.

This Soviet intelligence collection facility, less than a hundred miles from our coast, is the largest of its kind in the world. The acres and acres of antennae fields and intelligence monitors are targeted on key US military installations and sensitive activities. The installation in Lourdes, Cuba, is manned by 1,500 Soviet technicians. And the satellite ground station allows instant communications with Moscow. This 28-square miles facility has grown by more than 60 percent in size and capability during the past decade.

In Western Cuba, we see this military airfield and it complement of modern, Soviet-built Mig-23 aircraft. The Soviet Union uses this Cuban airfield for its own long-range reconnaissance missions. And earlier this month, two modern Soviet antisubmarine warfare aircraft began operating from it. During the past 2 years, the level of Soviet arms exports to Cuba can only be compared to the levels reached during the Cuban missile crisis 20 years ago.

This third photo, which is the only one in this series that has been previously made public, shows Soviet military hardware that has made its way to Central America. This airfield with its MI-8 helicopters, anti-aircraft guns, and protected fighter sites is one of a number of military facilities in Nicaragua which has received Soviet equipment funneled through Cuba, and reflects the massive military buildup going on in that country.

On the small island of Grenada, at the southern end of the Caribbean chain, the Cubans, with Soviet financing and backing, are in the process of building an airfield with a 10,000-foot runway. Grenada doesn't even have an air force. Who is it intended for? The Caribbean is a very important passage way for our international commerce

and military lines of communication. More than half of all American oil imports now pass through the Caribbean. The rapid buildup of Grenada's military potential is unrelated to any conceivable threat to this island country of under 110,000 people and totally at odds with the pattern of other eastern Caribbean Stages, most of which are unarmed.

The Soviet-Cuban militarization of Grenada, in short, can only be seen as power projection into the region. And it is in this important economic and strategic area that we're trying to help the Governments of El Salvador, Costa Rica, Honduras, and others in their struggles for democracy against guerrillas supported through Cuba and Nicaragua.

These pictures only tell a small part of the story. I wish I could show you more without compromising our most sensitive intelligence sources and methods. But the Soviet Union is also supporting Cuban military forces in Angola and Ethiopia. They have bases in Ethiopia and South Yemen, near the Persian Gulf oil fields. They've taken over the port that we built at Cam Ranh Bay in Vietnam. And now for the first time in history, the Soviet Navy is a force to be reckoned with in the South Pacific.

Some people may still ask: Would the Soviets ever use their formidable military power? Well, again, can we afford to believe they won't? There is Afghanistan. And in Poland, the Soviets defined the will of the people and in so doing demonstrated to the world how their military power could also be used to intimidate.

The final fact is that the Soviet Union is acquiring what can only be considered an offensive military force. They have continued to build far more intercontinental ballistic missiles than they could possibly need simply to deter an attack. Their conventional forces are trained and equipped not so much to defend against an attack as they are to permit sudden, surprise offensives of their own.

Our NATO allies have assumed a great defense burden, including the military draft in most countries. We're working with them and our other friends around the world to do more. Our defensive strategy means we need military forces that can move very quickly, forces that are trained and ready to respond to any emergency.

Every item in our defense program-our ships, our tanks, our planes, our funds for training and spare parts-is intended for one all-important purpose: to keep the peace.

Unfortunately, a decade of neglecting our military forces had called into question our ability to do that.

When I took office in January 1981, I was appalled by what I found: American planes that couldn't fly and American ships that couldn't sail for lack of spare parts and trained personnel and insufficient fuel and ammunition for essential training. The inevitable result of all this was poor morale in our Armed Forces, difficulty in recruiting the brightest young American to wear the uniform, and difficulty in convincing our most experienced military personnel to stay on.

There was a real question then about how well we could meet a crisis. And it was obvious that we had to begin a major modernization program to ensure we could deter aggression and preserve the peace in the years ahead.

We had to move immediately to improve the basic readiness and staying power of our conventional forces, so they could meet-and therefore help deter-a crisis. We had to make up for lost years of investment by moving forward with a long-term plan to prepare our forces to counter the military capabilities our adversaries were developing for the future.

I know that all of you want peace, and so do I. I know too that many of you seriously believe that a nuclear freeze would further the cause of peace. But a freeze now would make us less, not more, secure and would raise, not reduce, the risks of war. It would be largely unverifiable and would seriously undercut our negotiations on arms reduction. It would reward the Soviets for their massive military buildup while preventing us from modernizing our aging and increasingly vulnerable forces. With their present margin of superiority, why should they agree to arms reductions knowing that we were prohibited from catching up?

Believe me, it wasn't pleasant for someone who had come to Washington determined to reduce government spending, but we had to move forward with the task of repairing our defenses or we would lose our ability to deter conflict now and in the future. We had to demonstrate to any adversary that aggression could not succeed, and that the only real solution was substantial, equitable, and effectively verifiable arms reduction-the kind we're working for right now in Geneva.

Thanks to your strong support, and bipartisan support from the Congress, we began to turn things around. Already, we're seeing some very encouraging results. Quality recruitment

and retention are up drmatically-more high school graduates are choosing military careers, and more experienced career personnel are choosing to stay. Our men and women in uniform at last are getting the tools and training they need to do their jobs.

Ask around today, especially among our young people, and I think you will find a whole new attitude toward serving their country. This reflects more than just better pay, equipment, and leadership. You the American people have sent a signal to these young people that it is once again an honour to wear the uniform. That's not something you measure in a budget, but it's a very real part of our nation's strength.

It'll take us longer to build the kind of equipment we need to keep peace in the future, but we've made a good start.

We haven't built a new long-range bomber for 21 years. Now we're building the B-1. We hadn't launched one new strategic submarine for 17 years. Now we're building one Trident submarine a year. Our land-based missiles are increasingly threatended by the many huge, new Soviet ICBM's. We're determining how to solve that problem. At the same time, we're working in the START and INF negotiations with the goal of achieving deep reductions in the strategic and intermediate nuclear arsenals of both sides.

We have also begun the long -needed modernization of our conventional forces. The Army is getting its first new tank in 20 years. The Air Force is modernizing. We're rebuilding our Navy, which shrank from about a thousand ships in the late 1960's to 453 during the 1970's. Our nation needs a superior navy to support our military forces and vital interests overseas. We're now on the road to achieving a 600-ship navy and increasing the amphibious capabilities of our marines, who are now serving the cause of peace in Lebanon. And we're building a real capability to assist our friends in the vitally important Indian Ocean and Persian Gulf region.

This adds up a major effort, and it isn't cheap. It comes at a time when there are many other pressures on our budget and when the American people have already had to make major sacrifices during the recession. But we must not be misled by those who would make defense once again the scapegoat of the Federal budget.

The fact is that in the past few decades we have seen a dramatic shift in how we spend the taxpayer's dollar. Back in 1955, payments to individuals took up only about 20 percent of the Federal budget. For nearly three decades, these payments steadily increased and, this year, will account for 49 percent of the budget. By contrast,

in 1955 defense took up more than half of the Federal budget. By 1980 this spending had fallen to a low of 23 percent. Even with the increase that I am requesting this year, defense will still amount to only 28 percent of the budget.

The calls for cutting back the defense budget come in nice, simple arithmetic. They're the same kind of talk that led the democracies to neglect their defenses in the 1930's and invited the tragedy of World War II. We must not let that grim chapter of history repeat itself through apathy or neglect.

This is why I'm speaking to you tonight-to urge you to tell your Senators and Congressmen that you know we must continue to restore our military strength. If we stop in midstream, we will send a signal of decline, of lessened will, to friends and adversaries alike. Free people must voluntarily, through open debate and democratic means, meet the challenge that totalitarians pose by compulsion. It's up to us, in our time, to choose and choose wisely between the hard but necessary task of preserving peace and freedom and the temptation to ignore our duty and blindly hope for the best while the enemies of freedom grow stronger day by day.

The solution is well within our grasp. But to reach it, there is simply no alternative but to continue this year, in this budget, to provide the resources we need to preserve the peace and guarantee our freedom.

Now , thus for tonight I've shared with you my thoughts on the problems of national security we must face together. My predecessors in the Oval Office have appeared before you on other occasion to describe the threat posed by Soviet power and have proposed steps to address that threat. But since the advent of nuclear weapons, those steps have been increasingly directed toward deterrence of aggression through the promise of retaliation.

This approach to stability through offensive threat has worked. We and our allies have succeeded in preventing nuclear war for more than three decades. In recent months, however, my advisers, including in particular the Joint Chief of Staff, have underscored the necessity to break out of a future that relies solely on offensive retaliation for our security.

Over the course of these discussions, I've become more and more deeply convinced that the human spirit must be capable of rising above dealing with other nations and human beings by threatening their existence. Feeling

this way, I believe we must thoroughly examine every opportunity for reducing tensions and for introducing greater stability into the strategic calculus on both sides.

One of the most important contributions we can make is, of course, to lower the level of all arms, and particularly nuclear arms. We're engaged right now in several negotiations with the Soviet Union to bring about a mutual reduction of weapons. I will report to you a week from tomorrow my thoughts on that score. But let me just say, I'm totally committed to this course.

If the Soviet Union will join with us in our effort to achieve major arms reduction, we will have succeeded in stablilizing the nuclear balance. Nevertheless, it will still be necessary to rely on the specter of retaliation, on mutual threat. And that's a sad commentary on the human condition. Wouldn't it be better to save lives than to avenge them? Are we not capable of demonstrating peaceful intentions by applying all our abilities and our ingenuity to achieving a truly lasting stability? I think we are. Indeed, we must.

After careful consultation with my advisers, including the Joint Chiefs of Staff, I believe there is a way. 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. Let us turn to the very strengths in technology that spawned our great industrial base and that have given us the quality of life we enjoy today.

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?

I know this is a formidable, technical task, one that may not be accomplished before the end of this century. Yet, current technology has attained a level of sophistication where it's reasonable for us to begin this effort. It will take years, probably decades of effort on many fronts. There will be failures and setbacks, just as there will be successes and breakthroughs. And as we proceed, we must remain constant in preserving the nuclear deterrent and maintaining a solid capability for flexible response. But isn't it worth every investment necessary to free the world from the threat of nuclear war? We know it is.

In the meantime, we will continue to pursue real reductions in nuclear arms, negotiating from a position of strength that can be ensured only by modernizing our

strategic forces. At the same time, we must take steps to reduce the risk of a conventional military conflict escalating to nuclear war by improving our non-nuclear capabilities.

America does possess-now-the technologies to attain very sginificant improvements in the effectiveness of our conventional, non-nuclear forces. Proceeding boldly with these new technologies, we can significantly reduce any incentive that the Soviet Union may have to threaten attack against the United States or its allies.

As we pursue our goal of defensive technologies, we recognise that our allies rely upon our strategic offensive power to deter attacks against them. Their vital interests and ours are inextricably linked. Their safety and ours are one. And no change in technology can or will alter that reality. We must and shall continue to honour our commitments.

I clearly recognize the defensive systems have limitations and raise certain problems and ambiguities. If paired with offensive systems, they can be viewed as fostering an aggressive policy, and no one wants

that. But with these considerations firmly in mind, 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.

Tonight, consistent with our obligations of the ABM treaty and recognizing the need for closer consultation with our allies, I'm taking an important first step. I am directing a comprehensive and intensive effort to decline a long-term research and development program to begin to achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles. This could pave the way for arms control measures to eliminate the weapons themselves. We seek neither military superiority nor political advantage. Our only purpose - one all people share - is to search for ways to reduce the danger of nuclear war.

My fellow Americans, tonight we're launching an effort which holds the promise of changing the course of human history. There will be risks, and results take time. But I believe we can do it. As we cross this threshold, I ask for your prayers and your support.

Thank you, good night, and God bless you.

Source: Weekly Compilation of Presidential Documents, Monday, 28 March, 1983, Vol. 19, Number - 12 , pp. 423-66.

APPENDIX - B

TREATY BETWEEN THE UNITED STATES OF AMERICA AND THE UNION OF SOVIET SOCIALIST REPUBLICS OF THE LIMITATION OF ANTI-BALLISTIC MISSILE SYSTEMS

SIGNED : MOSCOW, 26 MAY 1972
ENTERED INTO FORCE : 3 OCTOBER 1972

The United States of America and the Union of Soviet Socialist Republics, hereinafter referred to as the Parties,

Proceeding from the premise that nuclear war would have devastating consequences for all mankind,

Considering that effective measures to limit anti-ballistic missile systems would be a substantial factor in curbing the race in strategic offensive arms and would lead to a decrease in the risk of outbreak of war involving nuclear weapons,

Proceeding from the premise that the limitation of anti-ballistic missile systems, as well as certain agreed measures with respect to the limitation of strategic offensive arms, would contribute to the creation of more favorable conditions for further negotiations on limiting strategic arms,

Mindful of their obligations under Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons,

Declaring their intention to achieve at the earliest possible date the cessation of the nuclear arms race and to take effective measures towards reductions in strategic arms, nuclear disarmament, and general and complete disarmament,

Desiring to contribute to the relaxation of international tension and the strengthening of trust between States,

Have agreed as follows :

Article I

1. Each party undertakes to limit anti-ballistic missile (ABM) systems and to adopt other measures in accordance with the provisions of this Treaty.

2. Each party undertakes not to deploy ABM systems for a defense of the territory of its country and not to provide a base for such a defense, and not to deploy ABM systems for defense of an individual region except as provided for in Article III of this Treaty.

Article II

1. For the purpose of this Treaty an ABM system is a system to counter strategic ballistic missiles or their elements in flight trajectory, currently consisting of:

(a) ABM interceptor missiles, which are interceptor missiles constructed and deployed for an ABM role, or of a type tested in an ABM mode;

(b) ABM launchers, which are launchers constructed and deployed for launching ABM interceptor missiles; and

(c) ABM radars, which are radars constructed and deployed for an ABM role, or of a type tested in an ABM mode.

2. The ABM system components listed in paragraph 1 of this Article include those which are:

(a) operational;

(b) under construction;

(c) undergoing testing;

(d) undergoing overhaul, repair or conversion; or

Article III

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 Party may deploy:
(1) no more than one hundred ABM launchers and no more than one hundred ABM interceptor missiles at launch sites, and (2) ABM radarswithin 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 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.

Article IV

The limitations provided for in Article III shall not apply to ABM systems or their components used for development or testing, and located within current or additionally agreed test ranges. Each Party may have no more than a total of fifteen ABM launchers at test ranges.

Article V

1. 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.

2. Each Party undertakes not to develop, test, or deploy ABM launchers for launching more than one ABM interceptor missile at a time from each launcher, not to modify deployed launchers to provide them with such a capability, not to develop, test, or deploy automatic or semi-automatic or other similar systems for rapid reload of ABM launchers.

Article VI

To enhance assurance of the effectiveness of the limitations on ABM systems and their components provided by the Treaty, each Party undertakes:

(a) not to give missiles, launchers, or radars, other than ABM interceptor missiles, ABM launchers, or ABM radars, capabilities to counter strategic ballistic missiles or their elements in flight trajectory, and not to test them in an ABM mode; and

(b) not to deploy in the future radars for early warning of strategic ballistic missile attack except at locations along the periphery of its national territory and orientated outward.

Article VII

Subject to the provisions of this Treaty, modernization and replacement of ABM systems or their components may be carried out.

Article VIII

ABM systems or their components in excess of the numbers or outside the areas specified in this Treaty, as well as ABM systems or their components prohibited by this Treaty, shall be destroyed or dismantled under agreed procedures within the shortest possible agreed period of time.

Article IX

To assure the viability and effectiveness of this Treaty, each Party undertakes not to transfer to other States, and not to deploy outside its national territory, ABM systems or their components limited by this Treaty.

Article X

Each party undertakes not to assume any international obligations which would conflict with this Treaty.

Article XI

The Parties undertake to continue active negotiations for limitations on strategic offensive arms.

Article XII

1. For the purpose of providing assurance of compliance with the provisions of this Treaty, each Party shall use national technical means of verification at its disposal in a manner consistent with generally recognized principles of international law.

2. Each Party undertakes not to interfere with the national technical means of verification of the other Party operating in accordance with paragraph 1 of this Article.

3. Each Party undertakes not to use deliberate concealment measures which impede verification by national technical means of compliance with the provisions of this Treaty. This obligation shall not require changes in current construction, assembly, conversion, or overhaul practices.

Article XIII

1. To promote the objectives and implementation of the provisions of this Treaty, the Parties shall establish promptly a Standing Consultative Commission, within the framework of which they will:

(a) consider questions concerning compliance with the obligations assumed and related situations which may be considered ambiguous;

(b) provide on a voluntary basis such information as either Party considers necessary to assure confidence in compliance with the obligations assumed;

(c) consider questions involving unintended interference with national technical means of verification;

(d) consider possible changes in the strategic situation which have a bearing on the provisions of this Treaty;

(e) agree upon procedures and dates for destruction or dismantaling of ABM systems or their components in cases provided for by the provisions ofthis Treaty;

(f) consider, as appropriate, possible proposals for further increasing the viability of this Treaty; including proposals for amendments in accordance with the provisions of this Treaty;

(g) consider, as appropriate, proposals for further measures aimed at limiting strategic arms.

2. The Parties through consultation shall establish, and may amend as appropriate, Regulations for the Standing Consultative Commission governing procedures, composition and other relevant matters.

Article XIV

1. Each Party may propose amendments to this Treaty. Agreed amendments shall enter into force in accordance with the procedures governing the entry into force of this Treaty.

2. Five years after entry into force of this Treaty, and at five-year intervals thereafter, the Parties shall together conduct a review of this Treaty.

Article XV

1. This Treaty shall be of unlimited duration.

2. Each Party shall, in exercising its national sovereignty, have the right to withdraw from this Treaty if it decides that extraordinary events related to the subject matter of this Treaty have jeopardized its supreme interests. It shall give notice of its decision to the other Party six months prior to withdrawal from the Treaty. Such notice shall include a statement of the extraordinary events the notifying Party regards as having jeopardized its supreme interests.

Article XVI

1. This Treaty shall be subject to ratification in accordance with the constitutional procedures of each Party. The Treaty shall enter into force on the day of the exchange of instruments of ratification.

2. This Treaty shall be registered pursuant to Article 102 of the Charter of the United Nations.

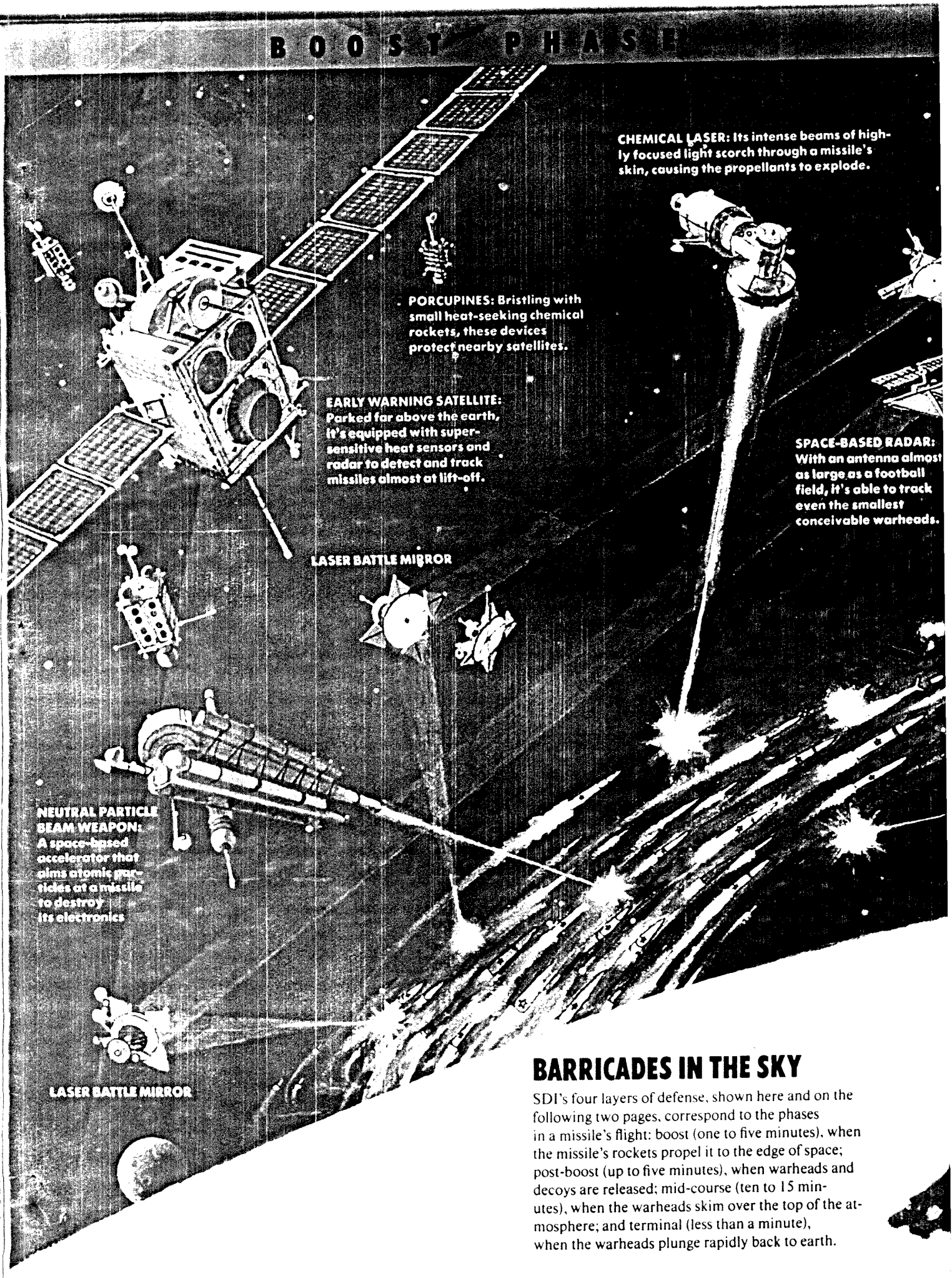
DONE at Moscow on May 26, 1972, in two copies, each in the English and Russian languages, both texts being equally authentic.

For the United States of America	For the Union of Soviet Socialist Republics.
President of the United States of America	General Secretary of the Central Committee of the CPSU.

Source : Bupendra Jasani ed., Space Weapons : The Arms Control Dilemma (London, Taylor & Francis, 1984, pp. 219-22).

A P P E N D I X - C

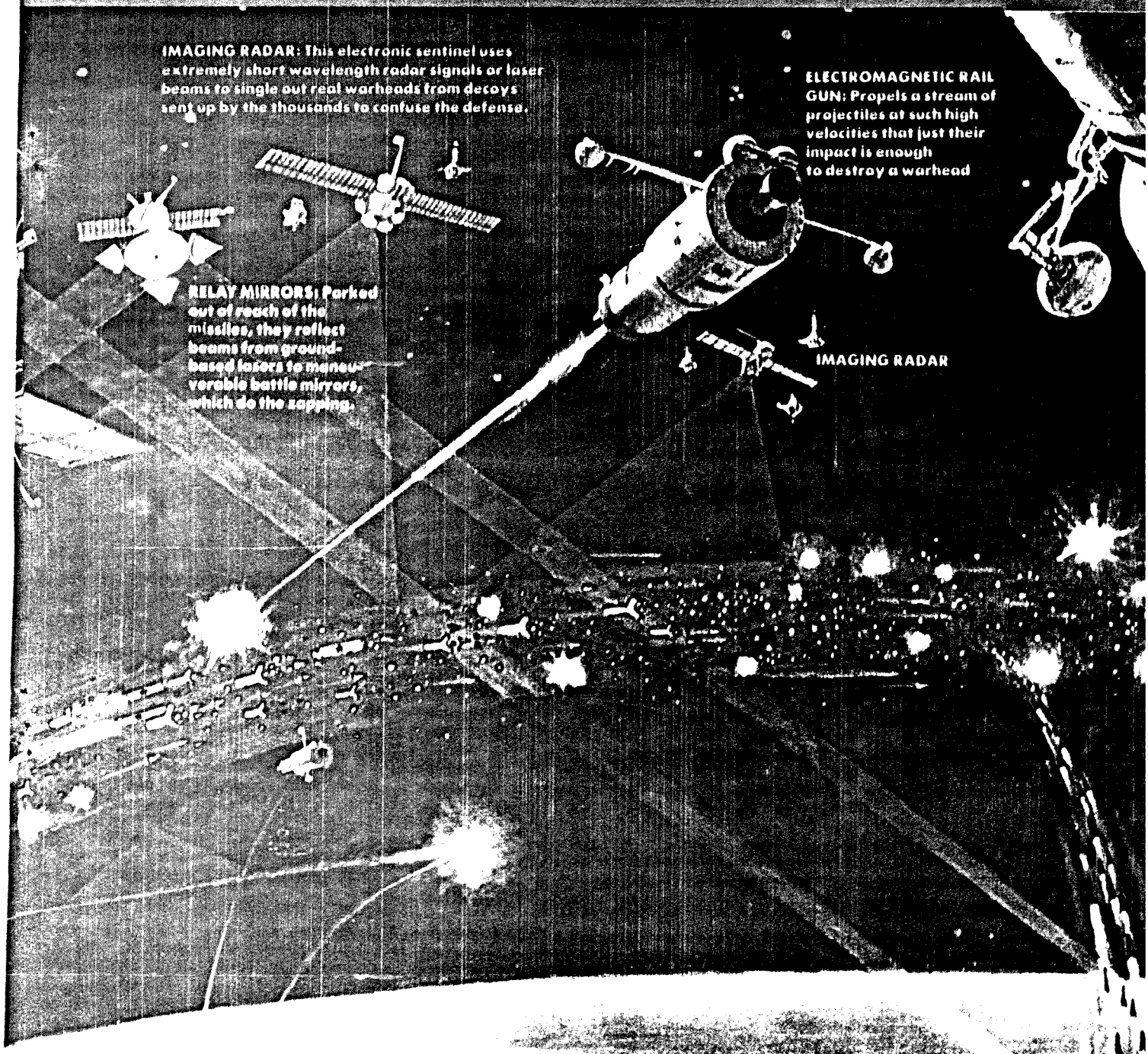
GRAPHICAL REPRESENTATION OF THE STRATEGIC DEFENCE INITIATIVE.



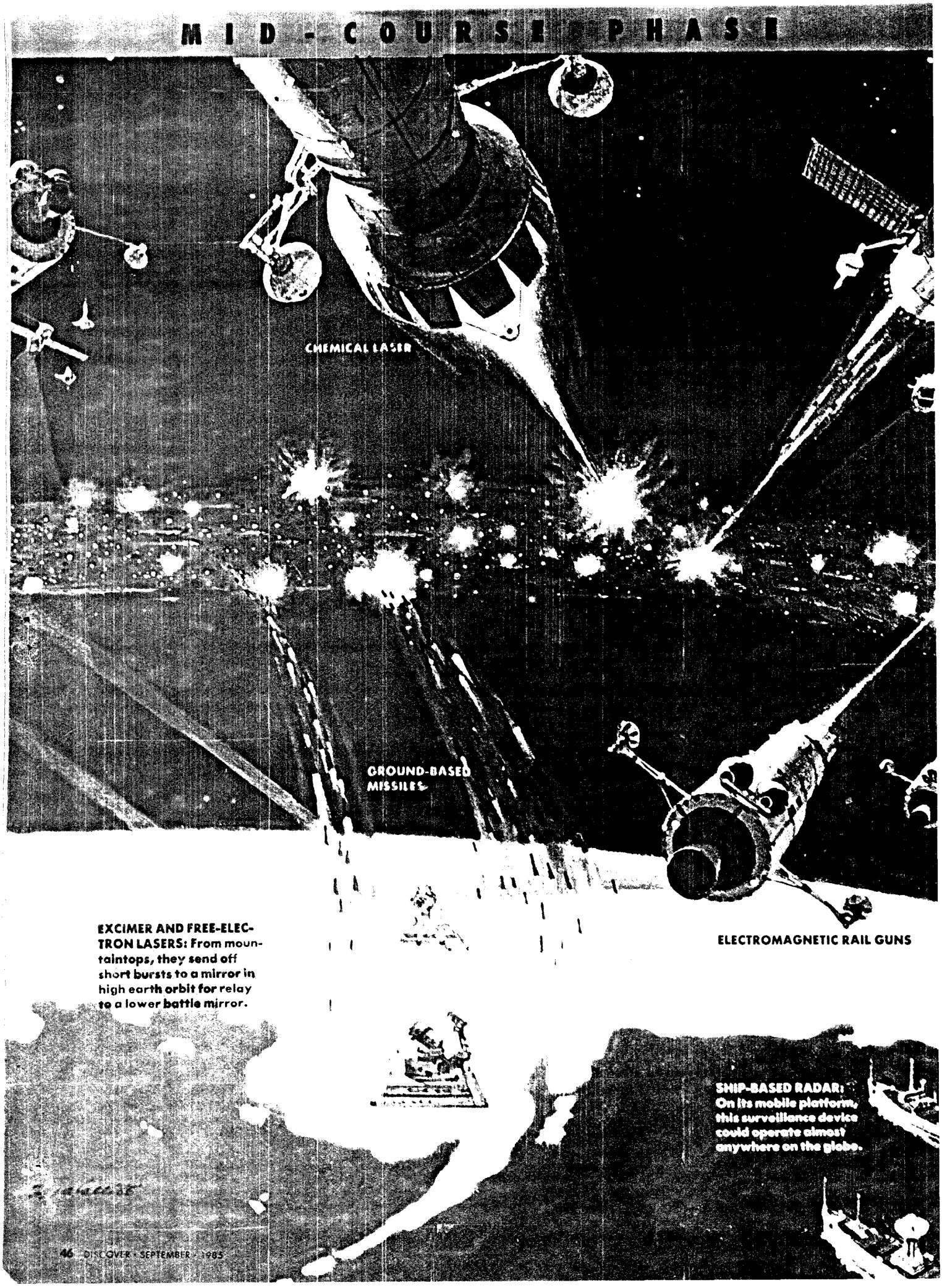
BARRICADES IN THE SKY

SDI's four layers of defense, shown here and on the following two pages, correspond to the phases in a missile's flight: boost (one to five minutes), when the missile's rockets propel it to the edge of space; post-boost (up to five minutes), when warheads and decoys are released; mid-course (ten to 15 minutes), when the warheads skim over the top of the atmosphere; and terminal (less than a minute), when the warheads plunge rapidly back to earth.

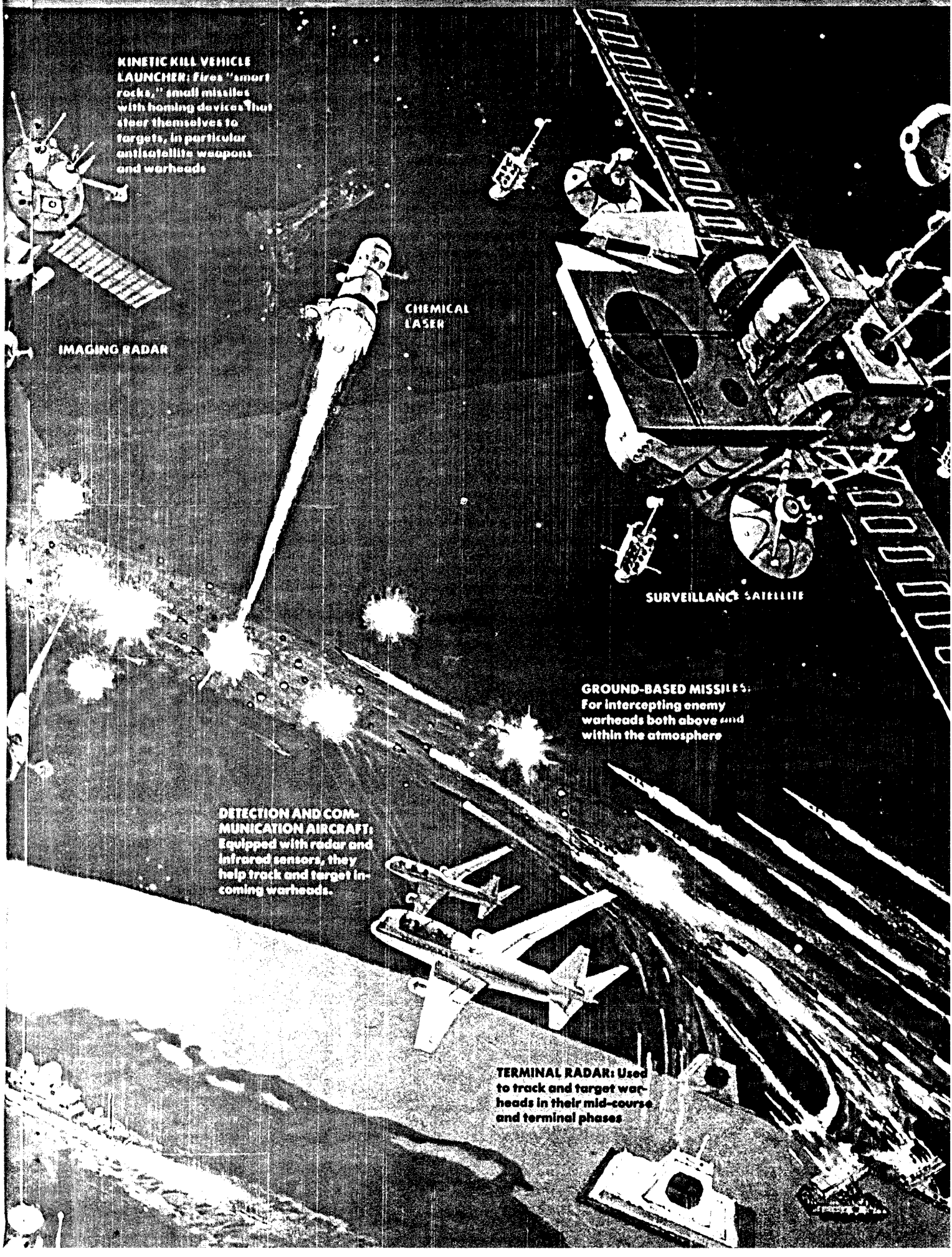
POST-BOOST PHASE

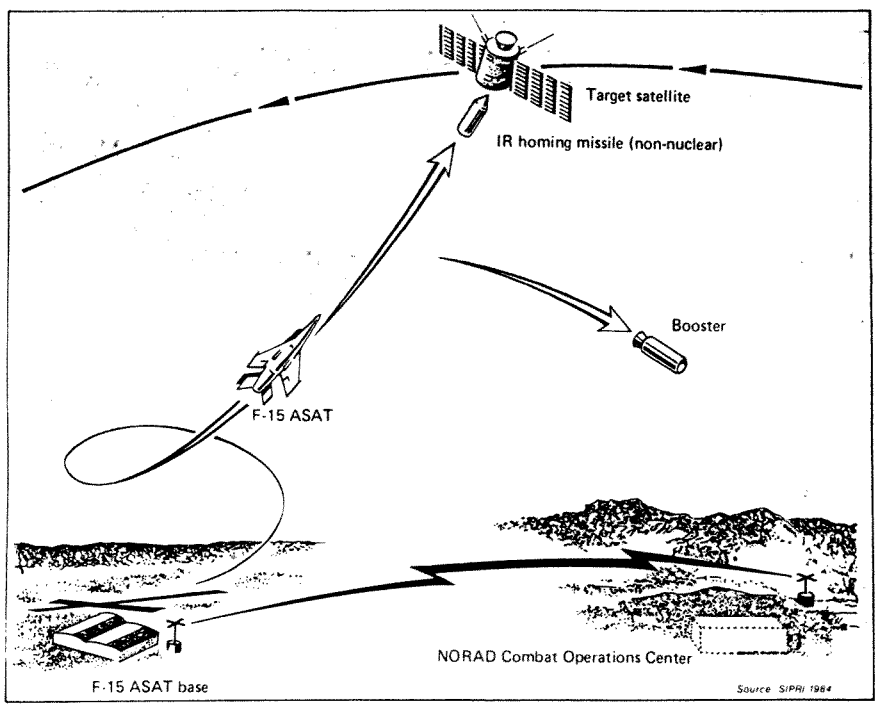


POP-UP X-RAY LASER: Launched from a submarine, this kill device uses the explosion of a small H-bomb to produce a pulse of highly energetic x-rays to disable a missile.


MID-COURSE PHASE
CHEMICAL LASER
GROUND-BASED MISSILES
ELECTROMAGNETIC RAIL GUNS
EXCIMER AND FREE-ELECTRON LASERS: From mountaintops, they send off short bursts to a mirror in high earth orbit for relay to a lower battle mirror.
SHIP-BASED RADAR: On its mobile platform, this surveillance device could operate almost anywhere on the globe.

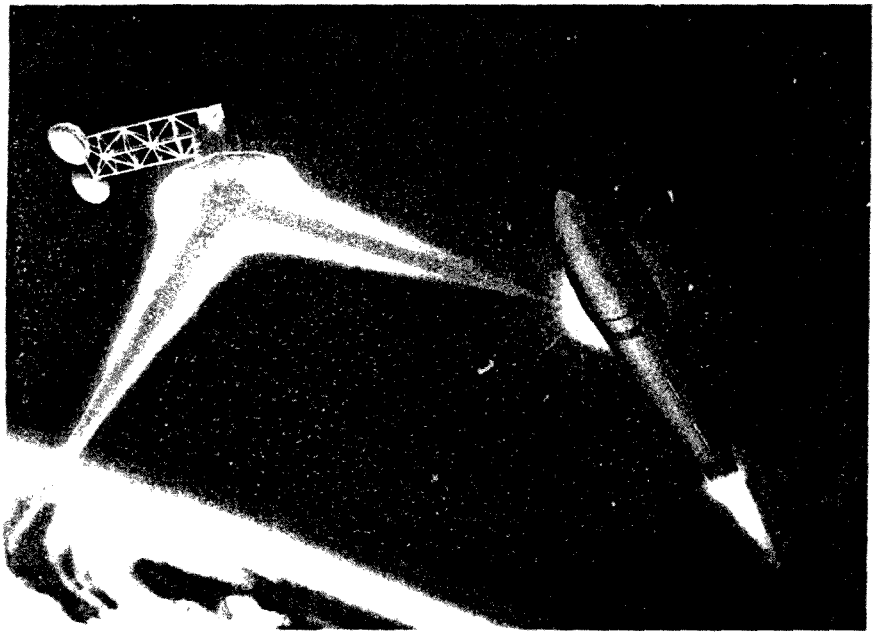
TERMINAL PHASE





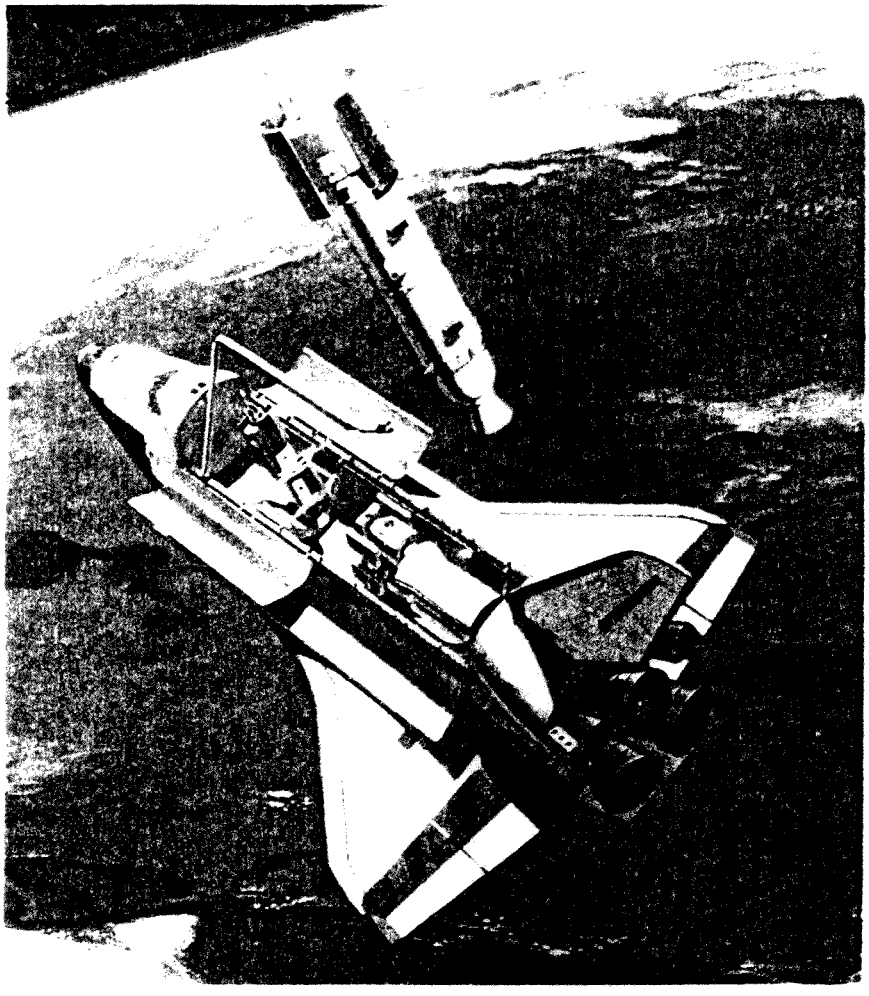
ASAT AIR-LAUNCHED ANTI-SATELLITE MISSILE SYSTEM

Designed to knock out satellites at up to 1,000-km altitudes. The system includes an F-15 fighter aircraft and a two-stage missile (launch weight about 1 t) with an infrared homing miniature interceptor vehicle. The F-15 aircraft takes off on command from the NORAD Space Defense Operations Center. The missile is launched at an altitude of about 15 km in the direction of the designated area in space. Thereupon the miniature vehicle is steered toward the target for a direct hit. Two flight tests were made in 1984. Deployment is to begin in 1987. Two F-15 squadrons (not less than 36 aircraft) are to be activated.



GROUND-BASED LASER HITS ICBM

The laser beam is focussed on the missile by means of a mirror stationed in outer space.



MANNED SHUTTLE SPACESHIP HAULS SATELLITE INTO ORBIT

Spaceship weighs up to 80 t, payload up to 30 t, service altitude up to 600 km. Adapted to manifold uses—testing and placing in orbit various kinds of weapons, such as space-based ABM system elements, as well as reconnaissance and destruction of space objects.

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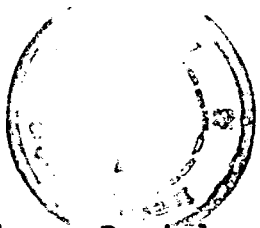

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