

THIS FILE IS MADE AVAILABLE THROUGH THE DECLASSIFICATION EFFORTS AND RESEARCH OF:

# THE BLACK VAULT

THE BLACK VAULT IS THE LARGEST ONLINE FREEDOM OF INFORMATION ACT / GOVERNMENT RECORD CLEARING HOUSE IN THE WORLD. THE RESEARCH EFFORTS HERE ARE RESPONSIBLE FOR THE DECLASSIFICATION OF THOUSANDS OF DOCUMENTS THROUGHOUT THE U.S. GOVERNMENT, AND ALL CAN BE DOWNLOADED BY VISITING:

[HTTP://WWW.BLACKVAULT.COM](http://www.blackvault.com)

YOU ARE ENCOURAGED TO FORWARD THIS DOCUMENT TO YOUR FRIENDS, BUT PLEASE KEEP THIS IDENTIFYING IMAGE AT THE TOP OF THE .PDF SO OTHERS CAN DOWNLOAD MORE!



DEPARTMENT OF THE NAVY  
OFFICE OF NAVAL RESEARCH  
875 NORTH RANDOLPH STREET  
SUITE 1425  
ARLINGTON, VA 22203-1995

IN REPLY REFER TO:

5720  
Ser BD04C/031  
FOIA ONR 14-073

September 10, 2014

Mr. John Greenwald

Mr. Greenwald:

This is a final reply to your Freedom of Information Act (FOIA) request to the Office of Naval Research (ONR) dated August 14, 2014. We received your request from the Department of the Navy on September 3, 2014. You were seeking a report from the Center for Naval Analyses titled "Strategic Views on SDI (Strategic Defense Initiative)."

The information you requested is attached and is being released to you in its entirety.

If you have questions about this letter please feel free to contact Mr. Jason Towns at (703) 696-5361 or [jason.towns.ctr@navy.mil](mailto:jason.towns.ctr@navy.mil). Please reference FOIA ONR-14-073 when discussing this case.

Best Regards,



Curtis Howard  
Acting Director  
Corporate Logistics, (BD04)

# **The Carl Beck Papers**

## **in Russian and East European Studies**

---

No. 601

**SOVIET VIEWS ON SDI**

Mary C. FitzGerald

---

**University of Pittsburgh Center for  
Russian and East European Studies**

Mary C. FitzGerald is a Ph.D. candidate in International Relations at Georgetown University. She is currently an analyst on the Associate Research Staff of the Center for Naval Analyses in Alexandria, Virginia, specializing in Soviet military strategy and capabilities. She is the author of *Changing Soviet Doctrine on Nuclear War*, *The New Revolution in Soviet Military Affairs*, and numerous journal articles focusing on Soviet military affairs.

This study is dedicated to the memory of Colonel Charles Gerard FitzGerald, Arms Control Negotiator (1918-1986).

May 1987

ISSN 0889-275X

Submissions to *The Carl Beck Papers* are welcome. Manuscripts must be in English, double-spaced throughout, and less than 70 pages in length. Acceptance is based on anonymous review. Mail submissions to: Editor, *The Carl Beck Papers*, Center for Russian and East European Studies, 4E23 Forbes Quadrangle, University of Pittsburgh, Pittsburgh, PA 15260.



## INTRODUCTION

On 27 March 1983, the following exchange was published in *Pravda* :

- *Pravda* Correspondent: "On March 23, . . . President Reagan declared that he had devised a new, defensive concept. What does it boil down to in practice?"
- Yu. V. Andropov: "On the face of it, laymen may find it even attractive as the president speaks about what seem to be defensive measures . . . . In fact, the U.S. strategic offensive forces will continue to be developed and upgraded at full tilt, and along quite a definite line at that; namely, to acquire a first nuclear strike capability. Under these conditions, the intent to secure for itself the possibility of destroying, with the help of missile defenses, the corresponding strategic systems of the other side, that is, of rendering it incapable of dealing a retaliatory strike, is a bid to disarm the Soviet Union in the face of the U.S. nuclear threat."<sup>1</sup>

The culprit, of course, was President Reagan's "Strategic Defense Initiative" (SDI). As the late General Secretary's response indicates, the Soviet campaign against SDI began punctually and without equivocation. From Andropov to the present, it has been characterized by high degrees of both intensity and consistency over time. About two years after Andropov's exchange, the newly installed General Secretary, M. S. Gorbachev, voiced similar concerns in *his Pravda* interview:

They talk about defense but are preparing for attack; they advertise a space shield but are forging a space sword; they promise to eliminate nuclear weapons, but in practice are building up and improving them. They promise the world stability, but are moving towards disrupting the military

equilibrium.<sup>2</sup>

Daniel S. Papp has suggested that "all American assessments of MDB must proceed not only from the vantage point of American intentions, but also from the outlook of Soviet perceptions."<sup>3</sup> Since 27 March 1983, Soviet political, military, and other elite commentators have generally echoed the Andropov-Gorbachev themes. In the fall of 1984, the Committee of Soviet Scientists for Peace and Against the Nuclear Threat published a document that presented an extensive laundry list of scientific-technical, economic, military-strategic, and international-political reasons for the infeasibility of SDI.<sup>4</sup> In no way inconsistent with the Politburo line on SDI, these themes are likewise echoed by a host of prominent commentators.

In the 1960s and 1970s, several books and pamphlets were written about U.S. space weapons. The military use of space was mentioned in several volumes of the "Officer's Library" series of books that were published between 1965 and 1973.<sup>5</sup> Much of the U.S. weaponry discussed in the 1980s in conjunction with SDI had already been described in considerable detail by these and other Soviet writers.<sup>6</sup>

Soviet commentators have long devoted attention to the possible military applications of the U.S. Shuttle program.<sup>7</sup> Col. V. Gorenko contends that the results of the complex scientific and technical tasks accomplished in the course of the Shuttle program would serve as the basis for future development "of even more powerful means for propelling military cargoes into space, and at the turn of the century, for the creation of a new generation of manned space ships . . . for the direct conduct of armed combat."<sup>8</sup> Continued attention is also being directed to the Unified Space Command, perceived to be "vested with broad powers extending from theoretical research and planning to the direct use of military space systems."<sup>9</sup>

Since 23 March 1983, Soviet commentators have reiterated a series of charges regarding the implications of SDI for strategic stability.

The analyst is justified in concluding that many of these charges are perennially trotted out to counter any U.S. politico-military initiative. Writing in *Pravda* in 1983, Marshal Ustinov, then Soviet Minister for Defense, asserted that "the intensive development of space warfare systems is also a component of U.S. military preparations. A command that is designed to administer space systems for military aims is already in operation."<sup>10</sup> As a theme, the "militarization of space" by the United States was alive and well in the late 1960s-early 1970s, in discussions on anti-missile defense and the Outer Space Treaty.<sup>11</sup>

At the same time, the Soviet anti-SDI campaign includes only negligible references to Soviet military activities in space. Available statements generally constitute denials: the Soviet Union has neither developed nor does it intend to develop any space-based offensive weapons. The Soviets also maintain that existing Soviet space systems do not violate existing arms control agreements. Throughout the anti-SDI campaign, Soviet writings in fact reflect a single, unified line that excludes self-criticism and self-analysis. Western treatments of the Soviet efforts are more comprehensive. The 1987 edition of *Soviet Military Power*, published by the Defense Department, provides a comprehensive discussion of current and projected Soviet programs in the sphere of strategic defense.<sup>12</sup> But disagreement among Western analysts on the aims and effectiveness of Soviet strategic defense efforts warrants a full-fledged debate on these issues.<sup>13</sup>

Despite the predictable Soviet reliance on both anti-American and self-absolving rhetoric, however, the present review of Soviet writings suggests that it is possible to examine several recurrent themes as real Soviet perceptions of SDI, primarily because they reflect certain cornerstone tenets of current Soviet military thought. Echoed with consistency over time by prominent Soviet political, military, and other elite commentators, the selected themes contest the most popular arguments of the Reagan administration in defense of SDI.<sup>14</sup>

- *SDI is Defensive*: The Reagan administration has repeatedly

stated that the SDI program is not offensive in nature. The Soviets, in turn, assert that SDI is a program to acquire "military superiority," that is, a first-strike capability. Current Soviet military thought holds that neither side can achieve "military superiority" in present-day conditions, and that strategic parity is the cornerstone of U.S.-Soviet strategic stability.

- *SDI Will Render Nuclear Weapons "Impotent and Obsolete"*: To the Reagan administration's original assertion that SDI will ultimately provide us with a world free of nuclear weapons, the Soviets retort that SDI will serve as the "catalyst" of an arms race in all directions. The administration has since stated, less ambitiously, that SDI will "save lives and limit damage."<sup>15</sup> The Soviets maintain that SDI will neither prevent a Soviet retaliatory strike nor provide reliable population defense because it is technically infeasible. According to Soviet military thought, the dialectic of arms development will be tilted in the future in favor of offensive weapons.
- *SDI Will Enhance Classic Deterrence*: The Reagan administration has consistently stated that SDI does not seek to replace classic deterrence, but to strengthen it in the face of the growing Soviet threat.<sup>16</sup> The Soviets in turn have contended unremittingly that SDI will undermine mutual deterrence and increase the risk of a nuclear cataclysm. Soviet military thought has long held that mutual deterrence is rooted in the *mutual* assured capability to deliver an annihilating retaliatory strike after subjection to a first strike.

Peter A. Clausen argues that "[t]he strategic arguments for the SDI rest on two fundamentally flawed premises: an unfounded technological optimism about the effectiveness of space-based missile defenses, and a

striking lack of realism about Soviet reactions to the program."<sup>17</sup> Indeed the balance of judgment appears to hold that the technical feasibility of a leak-proof population defense is "exceedingly remote, if not impossible."<sup>18</sup> Accordingly, Clausen maintains that the military-strategic and arms control implications of SDI, rather than the endless debate on feasibility, will be pivotal in determining its fate.

The most pivotal of these implications is Moscow's response. Advocates of SDI argue that the Soviets can be educated or pressured into accompanying the United States on its "defensive transition," into abandoning their long-standing offense-dominated force structure.<sup>19</sup> SDI opponents contend that it would be nothing short of idiocy to expect the Soviet Union to participate in the veritable dismantling of its most powerful deterrent forces. This study will trace Moscow's articulation of the probable Soviet response to SDI.

For reasons that include a penchant for secrecy, Soviet writers use a rigorous system of esoteric communication techniques whose decoding requires an equally rigorous cryptology. This study will therefore apply to Soviet sources certain methodological criteria that have proved in the past to help discriminate between propaganda and true belief in Soviet writings. Only those major, officially sanctioned Soviet publications that are designated for internal audiences are cited in the text, and these were reviewed in original Russian. Selection of author/speaker has been restricted to Politburo members and Central Committee elites, prominent military figures, and influential "institutchiki." [NOTE: The most prominent commentators are identified in the text; Soviet sources and other commentators are listed alphabetically and identified in Appendixes A and B.]

Each of these Soviet elites appears to play his own role in the anti-SDI campaign. First, Politburo members have generally enunciated certain themes that have constituted Moscow's recurring line on SDI, such as Andropov's "bid to disarm the Soviet Union," and Chernenko's "catalyst of an arms race." They have also presented Soviet arms control

proposals for space. Second, the top military leadership has articulated a common and concrete line on Moscow's probable military response to SDI. Finally, many discussions on the technical feasibility of SDI have been conducted by "institutchiki" such as A. G. Arbatov, Ye. Velikhov, and A. Kokoshin. These individuals boast substantial expertise in U.S. military-strategic doctrine and the physical sciences.

While there has long been dispute in the West over the purpose of Soviet writings, doctrinal statements have often been subsequently confirmed in Soviet hardware, exercises, and operational behavior.<sup>20</sup> James McConnell maintains that "[i]f disinformation be defined as a communication that the Soviet elite, skilled in reading the literature of its specialty, would declare to be an untruth, then there is very little disinformation in the Soviet press."<sup>21</sup> Among others, Richard Pipes and Leon Goure have asserted that the Soviets say what they mean, and usually mean what they say.<sup>22</sup>

Some Western analysts will nonetheless contend that the Soviet statements under examination in this study are merely a "commodity for export;"<sup>23</sup> it should be emphasized that the contrary contention has likewise been alive and well over time. In 1975, Frank R. Barnett argued that "it would be inconceivable that the Moscow regime would risk deluding its own military personnel on such a mass scale, simply to confound the West."<sup>24</sup> About a decade later, Benjamin Lambeth affirmed that "it has long been recognized by Western analysts that the Soviets can scarcely lie to their own officers charged with implementing Soviet defense guidance merely in order to deceive outsiders."<sup>25</sup> Numerous Western researchers of all persuasions, in fact, are convinced that Soviet writings provide an expansive display-case for *de facto* elite perceptions.<sup>26</sup>

## SDI AND STRATEGIC PARITY

Since President Reagan's so-called "Star Wars" speech, Soviet commentators have dwelt increasingly on the unique, double-edged nature of defense in a nuclear age. In 1983, G. Gerasimov, the deputy chairman of *Novosti*, argued that "anti-missile defense can do almost nothing for a country subjected to a nuclear surprise attack; it most suits an attacking country trying to reduce the strength of a retaliatory strike."<sup>27</sup> A specialist on U.S.-Soviet politico-military issues at the Institute of World Economics and International Relations (IMEMO), A. G. Arbatov explained further in 1984 that

Given the accumulated arsenals of nuclear weapons, defense is not primarily based on the capability for direct protection against these weapons, but on the capability to inflict an annihilating counterstrike in the event of an opponent's attack. The means of protection turn into their very opposite, that is, they serve the purpose of aggression inasmuch as they are able to degrade or neutralize the counterstrike of the side that has been subjected to an attack.<sup>28</sup>

The linchpin of Soviet views on SDI is that its offensive aspects outweigh its proclaimed function as a defensive system. As perceived by Soviet elites, the offensive nature of SDI consists primarily in the U.S. intentions that inform it. Writing in 1981 in *Kommunist*, Marshal N. V. Ogarkov, then Chief of the Soviet General Staff, articulated a perennial concern of the Soviet military: The United States "is seeking to change in its own favor the approximate military balance prevailing at the present time. . . ."<sup>29</sup> Col. L. Semeyko, an expert at the Institute of the USA and Canada (IUSAC), explained that "[t]he military and strategic equilibrium existing between the Soviet Union and the United States clearly does not suit the U.S. leadership."<sup>30</sup> Moreover, he asserts, Washington has a global policy "for achieving military superiority by approximately the end of this century . . . ."<sup>31</sup>

The Soviets frequently charge that SDI is a program designed to acquire "military superiority." As recently as October 1986, General Secretary M. S. Gorbachev noted that the main danger of SDI lies in the attempt to place offensive weapons in space, and thereby to achieve "military superiority."<sup>32</sup> In his answers to a TASS correspondent's questions, Defense Minister S. L. Sokolov announced the following:

The Pentagon is now rushing into space. What for? Once again, to attempt to achieve military superiority over the Soviet Union, this time through space. President R. Reagan's so-called "Strategic Defense Initiative" is only called "defensive" as camouflage, while it is in fact aimed at creating a new class of weapon, a space strike weapon.<sup>33</sup>

In his 1985 *Pravda* article commemorating the Russian Revolution, Marshal Sokolov reiterated the charge: "The White House is seeking ways of achieving military superiority . . . by developing a fundamentally new type of weapon, space strike weapons."<sup>34</sup> Among others, Politburo member V. V. Grishin asserted that "the U.S. government is obsessed by the idea of opening up a gigantic new field of nuclear competition in space. And all of this is with the very same objective of upsetting the existing military-strategic parity to its advantage."<sup>35</sup>

Taken at face value, this theme has a palpable propaganda content. But Soviet military thought on the concepts in question indicates that over time they have acquired a quite specific military significance independent of their prominence in Soviet propaganda scripts.<sup>36</sup>

Raymond L. Garthoff has observed that throughout the 1970s, both the Soviet and American military acknowledged that "while each side has certain areas of superiority, these balance out to yield an overall parity. Nevertheless, there remain uncertainties as to the future."<sup>37</sup> The Soviets rely on a variety of interchangeable terms to express the notion of parity.<sup>38</sup> Col. G. Lukava has defined it as "the approximate balance of combat potentials (of strategic nuclear forces, medium-range nuclear forces, and conventional forces) of the Warsaw Pact and the NATO



bloc."<sup>39</sup> The present section will demonstrate that when the Soviets refer to strategic parity, they mean the capability of both sides to deliver an annihilating retaliatory strike even after subjection to a first strike.

The Soviet military leadership has been quite explicit in its affirmations that parity exists between the United States and the Soviet Union on all force levels. Writing in 1982 in *Pravda*, the then Defense Minister D. F. Ustinov specifically confirmed the existence of parity in the principal U.S. and Soviet forces: "whether you take strategic nuclear arms, or medium-range nuclear weapons in Europe, or the conventional forces of NATO and the Warsaw Pact, in every case an approximate parity exists between the sides."<sup>40</sup> Chief of the General Staff since 1984, Marshal S. F. Akhromeyev has explained that while some differences exist, "[t]he truth is that an approximate equilibrium exists between the Soviet Union and the United States in strategic arms."<sup>41</sup> He stressed further that approximate equality is also the necessary basis for the process of limiting nuclear arms.

Marshal Ogarkov has consistently referred to the fact of parity in his writings: "the existing, approximate equilibrium in the correlation of the sides' military forces" (1978); "the existing, approximate equality in medium-range nuclear means in Europe" (1980); "parity between the United States and the Soviet Union in the quantitative correlation of strategic arms" (1982); "the balance of forces on a regional, European, and global scale" (1983); and "the approximate equality in nuclear arms between the United States and the Soviet Union" (1985).<sup>42</sup>

Col. Semeyko linked parity and the unthinkability of nuclear war in a 1984 article in *Izvestiya*. "A situation has been established that is often called the 'nuclear impasse' in the West," he advises. "The balance of forces nevertheless ensures strategic stability: from a purely military point of view, a nuclear war under its conditions is simply unthinkable."<sup>43</sup> In referring to "the military-strategic equilibrium between the Soviet Union and the United States, between the Warsaw Pact and NATO," Marshal Sokolov stressed in 1985 that "[e]normous efforts and means were

demanding of the Soviet people and the peoples of the other socialist countries to achieve this equilibrium. We will not permit its disruption."<sup>44</sup> The written evidence thus indicates that the Soviets accept the reality of strategic parity in present-day conditions.<sup>45</sup>

## MILITARY SUPERIORITY

How then do the Soviets define "military superiority?" The answer to this question is crucial for understanding Soviet views on SDI. Prior to the existence of parity, attained by the Soviets in the late 1960s-early 1970s, "superiority" was used either as an amorphous concept or in the traditional sense of an overwhelming preponderance of nuclear might. With few exceptions, this ragged usage prevailed until General Secretary L. I. Brezhnev's January 1977 speech at Tula.

At Tula, Brezhnev denied that the Soviet Union was striving for military superiority with the aim of delivering a first strike.<sup>46</sup> "First strike" was understood in the Western sense: a unilateral damage-limiting capacity in all-out nuclear war, achieved through some combination of offensive means and active and passive defensive means (ABM, counterforce against land and sea, civil defense).<sup>47</sup> Soviet military thought had now concluded that neither side could achieve a unilateral damage-limiting capability; defense of the population against the inevitable retaliatory strike was unattainable.

In a 1978 interview, L. I. Brezhnev described the declining utility of superiority: "The Soviet Union on its part feels that approximate equality and parity are enough for defense needs. We do not set for ourselves the goal of achieving military superiority. We know also that this very concept no longer makes sense given the present enormous arsenals of nuclear weapons and the means for their delivery already accumulated."<sup>48</sup> Writing in *Pravda* in 1984, Foreign Minister Andrei Gromyko agreed that in present-day conditions, "[c]alculations on achieving military superiority are untenable and without prospect."<sup>49</sup>

A. G. Arbatov impugns the value of superiority in present-day

conditions when he stresses that the real politico-military meaning of counterforce superiority has been eroded "because, with the present balance of forces, it cannot signify a disarming strike capability."<sup>50</sup> In his 1984 book, Arbatov reaffirms the standard formulation. Military superiority in the real sense of the word "has become unattainable, and one or another partial advantage in strategic forces cannot be transformed into a means of political pressure."<sup>51</sup> Among others, O. Bykov, deputy director of IMEMO, has emphasized that regardless of "the differences in structure of the strategic forces opposing each other, a balance has emerged, excluding the possibility of one side's achieving a decisive superiority over the other."<sup>52</sup>

As for the military leadership, Marshal Ogarkov cited the no-superiority formula a month after Tula, and has consistently echoed it throughout his writings.<sup>53</sup> Marshal Ustinov announced later that "relying on military superiority is completely hopeless. And it is also senseless in conditions where available arms are more than enough to make biological life on earth impossible."<sup>54</sup> Gen.-Maj. R. Simonyan, an expert on U.S. national security policy, was no less explicit: "In fact, given the equality in strategic forces, when both sides have weapons capable of destroying all life on earth many times over, neither the addition of new weapons systems nor the enhancement of their destructive power can yield any substantial military, much less political advantage."<sup>55</sup> Col. Semeyko reiterated the Tula message in a 1984 article in *Krasnaya zvezda*. In present-day conditions, he insisted, "strategic nuclear superiority, like military superiority in general, is unattainable."<sup>56</sup> Many other authoritative commentators have echoed the no-superiority theme.<sup>57</sup>

Since Tula, Soviet elites have obediently equated "military superiority" with a first-strike capability, in both the military and civilian media. Marshal Ustinov offered an accurate definition of superiority in his 1983 book: "Superiority is solely understood to be the attainment of the capability to inflict a strike on the Soviet Union where and when Washington considers it expedient, reckoning on the fact that a retaliatory strike on the United States will be smaller in magnitude than under other

conditions."<sup>58</sup>

A review of Soviet writings on SDI indicates that the anti-SDI campaign represents both a resurrection and clear-cut continuation of the Tula line on these politico-military concepts. Shortly before his death, General Secretary K. U. Chernenko made the following statement to CNN's Stuart Loory: "To put it simply, the aim [of SDI] is to acquire the capability to deliver a nuclear strike counting on impunity with an anti-missile defense 'shield' to protect against retaliation. This is the same old policy to achieve decisive military superiority . . . ." <sup>59</sup> V. V. Shcherbitskiy asserted in 1985 that the United States "is attempting to achieve decisive military superiority, and to guarantee for itself conditions allowing it to deliver a first nuclear strike while counting on impunity."<sup>60</sup>

A military reviewer for *Krasnaya zvezda*, Col. V. Chernyshev has confirmed that SDI is linked to "[t]he course of attaining military superiority, . . . the strategy of being the first to deliver a nuclear strike."<sup>61</sup> Col. V. Viktorov published an article in 1984 that focused on the Pentagon's work in the area of antisatellite (ASAT) weapons. The latter resulted from the U.S. quest for military superiority over the Soviet Union, a quest for the potential to inflict "a first, disarming strike."<sup>62</sup> Also writing in 1984, Col. M. Ponomarev, a military-political reviewer for *Krasnaya zvezda*, provided one of the most explicit statements to date of the interchangeability of these concepts: U.S. plans to create an extensive anti-missile defense system "are an integral part of the policy of using a first strike, of attaining military superiority."<sup>63</sup> According to Col. E. Buynovski, the Reagan administration is concerned not with defense, but with acquiring "a nuclear first-strike capability . . . , and attainment of military superiority."<sup>64</sup>

## FIRST-STRIKE CAPABILITY

In 1983, General Secretary Andropov described SDI as follows:

The adventurism and danger of this undertaking stem from the fact that all of these plans are based on the expectation of impunity, on the assumption that a first nuclear strike can be made . . . . The temptation to push the button is not far away.<sup>65</sup>

Over time, many Soviet commentators have echoed the view that SDI is a program to acquire a first-strike capability. In 1985, M. S. Gorbachev charged that the essence of SDI is "to acquire the potential to deliver a first nuclear strike, and to deliver it with impunity."<sup>66</sup> In 1984, Marshal Ustinov affirmed that "[t]his 'anti-missile decision' by R. Reagan is aimed at securing for U.S. militarists the ability to deliver a first nuclear strike against the Soviet Union with impunity."<sup>67</sup> In his 1985 *Pravda* article on the ABM Treaty, Marshal Akhromeyev asserted that the proposed SDI "is giving the United States the capability to deliver a first strike in hopes that a retaliatory strike on American territory will be prevented."<sup>68</sup> Akhromeyev reiterated the concern later in 1985: the essence of "Star Wars" is "to acquire for the United States the capability to deliver a first nuclear strike on the Soviet Union with impunity . . . ."<sup>69</sup> General of the Army V. M. Shabanov, Deputy Minister for Armaments, echoed Akhromeyev *verbatim* in a later article in *Krasnaya zvezda*.<sup>70</sup> Engr.-Col. M. Rebrov has charged that "the space anti-missile system is intended not only for the destruction of the 'opponent's' satellites and strategic missiles *after* they have been launched. Pentagon strategists hope to deliver a first (!) strike with impunity. And this is the main point."<sup>71</sup> Gen.-Lt. D. Volkogonov, deputy chief of the Main Political Administration (MPA) of the Soviet Army and Navy, noted that "if the United States succeeded in developing such a system . . . the American aggressors would have an opportunity to choose a particularly convenient moment for a preemptive strike."<sup>72</sup>

Throughout the anti-SDI campaign, Soviet commentators have

consistently stressed that a first-strike capability issues from the *conjunction* of U.S. offensive and defensive systems. In 1983, Lt. Col. Yu. Mikhaylov noted that "[p]lans to develop a large-scale anti-missile defense system, with a simultaneous buildup of nuclear arms, pursue the aim of preparing to deliver a nuclear first strike."<sup>73</sup> Ye. Velikhov, vice-president of the Academy of Sciences, has expanded on the theme: SDI is a means of ensuring a first-strike capability because, "[a]t the same time, [the U.S.] is pursuing an entire range of measures aimed at building up its first-strike potential (deploying medium-range missiles in Western Europe; developing the MX, Trident II, and Navstar systems; and others)."<sup>74</sup> General of the Army Shabanov has charged that in practice, "the United States is 'combining' efforts on the SDI program with the development and expansion of offensive systems."<sup>75</sup> Marshal Akhromeyev asserted that the projected SDI "is a most important element in the integrated offensive potential of the side that has created it . . . and provides an opportunity for the United States to deliver a first strike . . . ."<sup>76</sup> Numerous other Soviet elite commentators have echoed the perception that SDI is a program to acquire a first-strike capability.<sup>77</sup>

The recurrent Soviet charge that SDI is a program to disarm the Soviet Union stems logically from this perception of SDI's role in a U.S. first-strike capability. Yu. V. Andropov leveled it first in his initial response to Reagan's speech, but prominent Soviet commentators have echoed the concern. In 1985, K. U. Chernenko stressed that SDI is an attempt "to disarm the other side, to deprive it of the capability to deliver a retaliatory strike in the event of nuclear aggression against it."<sup>78</sup> M. S. Gorbachev has charged that SDI is designed "to paralyze the Soviet Union's strategic weapons" to ensure the delivery of a nuclear strike with impunity.<sup>79</sup> Marshal Sokolov contends that "the anti-missile shield is designed to thwart a retaliatory strike from the Soviet Union, and to 'get' in flight, so to speak, the Soviet missiles that have survived a U.S. first nuclear strike."<sup>80</sup> Marshal Akhromeyev has argued that the essence of "Star Wars" is "to deprive it [the Soviet Union] . . . of the capability for a retaliatory strike."<sup>81</sup> General of the Army V. Shabanov, and Cols. V.

Chernyshev and L. Semeyko,<sup>82</sup> among others, have likewise reiterated the original Andropov formula.

Writing in 1984, A. G. Arbatov explained in greater detail why the utility of SDI is contingent upon subjecting the Soviet Union to a first, "disarming" strike:

... under the conditions of any scale of deployment or degree of effectiveness of the space-based anti-missile defense system, it would be much more difficult with its aid to ensure protection against a massive and coordinated missile strike than to repel a less orderly and less powerful "scattered," so to speak, nuclear strike. Consequently, the space-based system would primarily create a possibility, or the illusion of a possibility, to screen the aggressor against the retaliatory strike of an opposing side that has been degraded to the maximum by a preemptive nuclear strike against its strategic weapons and its guidance and communication systems.<sup>83</sup>

A major component of the Soviet perception that SDI is primarily offensive is the contention that the space-based systems will have the capability of striking ground targets. Marshal Ustinov, for one, warned of this capability in a 1983 *Pravda* article: "the Soviet Union has suggested to the United States that no strike weapons should be deployed in space, and it is awaiting a response. If there is no response, then we will be unable to disregard the U.S. intentions to turn space into a theater of war by deploying in it strike forces capable of aiming not only at targets in space, but also at our entire planet."<sup>84</sup> Marshal Sokolov agreed in 1985: "What is Washington really planning? To create an anti-missile defense shield over the United States and, at the same time, to deploy first-strike strategic offensive arms and new space-based strategic forces designed to strike targets on earth, at sea, in the atmosphere, and in space."<sup>85</sup> Marshal Akhromeyev has asserted that the SDI systems "are in fact strike weapons for strikes against targets that belong to the probable opponent

in all spheres."<sup>86</sup> In his November, 1985 post-summit press conference, M. S. Gorbachev noted that space weapons can be used "against missiles, against satellites, and against targets on earth."<sup>87</sup>

The writings of Col. Semeyko are representative of the Soviet charge that SDI will have the capability to strike ground targets: "The practical implementation of this scenario could, or so they claim, not only result in the destruction of the Soviet Union's Armed Forces, its key industrial targets, and its points of state and military command and control, but also, at the same time, protect the United States against the consequences of a nuclear catastrophe."<sup>88</sup>

In 1984, A. G. Arbatov claimed that the orbital combat stations would be able to strike various targets on land, in the oceans, and in the air, including "the military and political leadership, the armed forces, the population, the industrial and superstructure installations."<sup>89</sup> His 1984 book on military-strategic parity alleged that "nothing will hinder the use of these systems directly in a first strike, that is, for destroying armed forces in their starting positions, the command-and-control complex, the economy, the infrastructure, and the population of the other side."<sup>90</sup> In their 1984 book, A. Gromyko and V. Lomeyko, first deputy chief of the Press Department of the Foreign Ministry, included nonmilitary targets located in space, as well as "numerous air and ground objectives."<sup>91</sup> A. Kozyrev has mentioned targets in dense layers of the atmosphere, and specified the means to be used: "MIRVed warheads prohibited by the Soviet-American ABM Treaty."<sup>92</sup>

The record of written evidence indicates that the Soviet contention regarding the offensive nature of SDI springs logically from post-Tula military thought. The cornerstone message of Tula was the unattainability of "military superiority," which in Soviet doctrine was equated with a first-strike capability. First-strike capability was in turn understood as a unilateral damage-limiting capacity in all-out nuclear war, a defense against nuclear weapons ensuring that only acceptable damage would be sustained in the course of an exchange. The Soviets view SDI as an attempt to



secure such a first-strike capability for the United States. Their perception is further strengthened by the simultaneous expansion of U.S. offensive systems, as well as by the projected potential of space-based weapons to strike vital ground targets.

## **SDI AND THE ARMS RACE**

To the original claim by the Reagan administration that SDI will provide us with a world free of nuclear weapons, the Soviets have replied by maintaining that SDI will in fact be the "catalyst" of an uncontrollable race in both offensive and defensive arms. Shortly before his death, in an interview with CNN's Stuart Loory, General Secretary K. U. Chernenko set the line by predicting that "[t]he militarization of space . . . will become the catalyst of an uncontrollable arms race in all directions."<sup>93</sup> In his 1985 *Pravda* interview, M. S. Gorbachev observed that "[j]ust as the emergence of nuclear weapons . . . only generated an intensified race in nuclear and conventional arms, so the creation of space weapons will have but one result: the arms race will become even more intensive and will encompass new spheres."<sup>94</sup>

Variations on the "catalyst" theme, like those on the themes of "military superiority"/first-strike capability, have functioned as propaganda devices in past anti-American campaigns. Like the others, however, the "catalyst" theme proceeds from one of the cornerstones of Soviet military thought: it is the layman's version of the Marxist-Leninist law of unity and struggle of opposites, or dialectic of arms development.

## **DIALECTIC OF ARMS DEVELOPMENT**

This dialectic -- the process wherein every means of attack generates a new means of defense, and every means of defense generates a new means of attack -- has proved crucial for shaping long-term Soviet force development programs. From 1965 to 1976, the proponents of nuclear force development held center stage precisely because of the open-ended nature of the dialectic of arms development.

While they were prepared to concede that all-out nuclear war would result in unacceptable damage in present-day conditions, they deemed it "indisputable that, in all countries that have nuclear weapons, means and methods of active and passive defense against these weapons and their carriers will be perfected."<sup>95</sup>

In late 1965, Col. Ye. Rybkin, now a theorist at the Institute of Military History, clarified the premise: "There is a possibility of developing and creating new means of waging war, which are capable of reliably parrying an opponent's nuclear strikes."<sup>96</sup> Over a decade later, Col. V. M. Bondarenko, then a theorist at the Lenin Military-Political Academy, was even more explicit:

Granted the potential opponents do have the weapons for mutual destruction, then the side that first manages to create a means of defense against them will acquire a decisive advantage. The history of military-technological development is replete with examples wherein weapons that seemed irresistible . . . have, within a certain time, been countered by sufficiently effective means of defense. . . .<sup>97</sup>

L. I. Brezhnev enunciated two elements of Soviet military policy in his 1977 address at Tula. First, he defined "military superiority" as the possession of a first-strike capability. This was understood as a unilateral damage-limiting capacity in all-out nuclear war; achieved through some combination of offensive means and active and passive defensive means (ABM, counterforce against land and sea, civil defense).<sup>98</sup> Second, he pronounced the impossibility of either side's attaining "military superiority," or limiting damage in an all-out nuclear war to acceptable levels, and thus pronounced the impossibility of either side's developing Bondarenko's "sufficiently effective means of defense." As V. I. Zamkovoï explained: "The historical struggle . . . between weapons of attack and weapons of defense will apparently be tilted in the future in favor of weapons of attack." Under these circumstances, "the very idea of achieving military superiority . . . becomes absurd . . . ." The ineluctable

development of nuclear weapons "has led to their beginning, in a certain sense, to negate themselves . . . ." <sup>99</sup>

Western analysts sometimes assert that the Soviets have never viewed offensive nuclear forces as absolute weapons. <sup>100</sup> Neither have the Soviets viewed defensive weapons as absolute: it is the nature of the dialectic of arms development to be continuous. Since Tula, however, authoritative Soviet political, military, and other commentators have consistently reiterated the Brezhnev formula: neither side can achieve "military superiority"/"first-strike capability"/"sufficiently effective means of defense" because the dialectic of arms development will be tilted in the future in favor of offensive weapons.

The dialectic of arms development is the process wherein every means of attack generates a new means of defense. But the process continues: every means of defense then generates a new means of attack, and so on. In other words, every weapon breeds its own counter-weapon. Soviet references to this phenomenon began to emerge en masse after the "Star Wars" speech. In his very first statement on the proposed U.S. program, Yu. V. Andropov reminded the world that "[w]hen the Soviet Union and the United States began discussing the problem of strategic arms, they agreed that there is an inseverable interconnection between strategic offensive and defensive weapons. And it was not by chance that the treaty on limiting strategic offensive arms was simultaneously signed by our countries in 1972 [year of the ABM Treaty]." <sup>101</sup> In his 1985 *Time* interview, M. S. Gorbachev stated that the interdependence of defensive and offensive arms is obvious and requires no proof. <sup>102</sup>

This inseverable connection between defensive and offensive weapons, between every weapon and its counter-weapon, has been stressed by numerous elite commentators during the anti-SDI campaign, including the then Foreign Minister A. Gromyko. <sup>103</sup> A. G. Arbatov has likewise noted that "the dialectical interdependence between the development of defensive and of offensive weapons is real in the sphere

of strategic weapons . . . ." <sup>104</sup> In 1985, A. Kokoshin, deputy director of IUSAC, wrote that creation of the space-based systems will inevitably lead to the emergence of "systems for resisting those weapons, after which more weapons to combat those systems will appear." <sup>105</sup> Kokoshin has also summarized the view of numerous Soviet elite commentators: "After all, the entire history of creating new weapons proves that for every weapon, a counter-weapon is always found." <sup>106</sup> An authoritative political observer for *Izvestiya*, A. Bovin has articulated post-Tula doctrine on the dialectic of arms development: "The experience of the development of military hardware shows that offensive weapons ultimately gain the upper hand over defensive ones. And there are no grounds for hoping that everything will be the opposite in the given case." <sup>107</sup>

In his 1985 *Pravda* article, Marshal Sokolov observed that

In signing the termless ABM Treaty, the sides agreed at that time that an indissoluble interconnection exists between strategic offensive and defensive arms. It was recognized at that time that only mutual restraint in the sphere of ABM systems can contain the arms race and make it possible to advance along the road of limiting and reducing strategic offensive weapons. <sup>108</sup>

Marshal Akhromeyev agreed that "[a] close interconnection objectively exists between offensive and defensive strategic systems." <sup>109</sup> Moreover, he emphasized, this "interconnection . . . is enduring and objective in nature, irrespective of the technical level of development reached by those [offensive and defensive] arms." <sup>110</sup> General of the Army Shabanov likewise referred to this objective interconnection, and reiterated that it was indeed reflected in the preamble of the Soviet-American ABM Treaty. <sup>111</sup> Among others, Col. V. Chernyshev has charged that the development of SDI "will lead only to an expansion of the arms race according to the law 'action generates counter-action'." <sup>112</sup>

The preceding section has focused on a theoretical discussion of the dialectic of arms development. The general conclusion of this

dialectic, that offensive weapons ultimately gain the upper hand over defensive ones, has found a more concrete expression in another recurrent theme of the Soviet anti-SDI campaign. Since post-Tula doctrine holds that the historical contest between weapons of attack and weapons of defense will be tilted in the future in favor of weapons of attack,<sup>113</sup> it follows that the Soviets will judge SDI to be technically infeasible.

## TECHNICAL FEASIBILITY

In the course of the Soviet anti-SDI campaign, commentators have been known to move freely among various levels of conviction regarding SDI's technical infeasibility. A. Kokoshin of IUSAC has stated on different occasions that the development of a reliable space-based anti-missile defense system is doubtful, practically impossible, and impossible. In 1983 he wrote that "the overwhelming majority of American specialists have doubts, from a scientific and technological point of view, about the very possibility of creating any sort of reliable defense of this type."<sup>114</sup> He has likewise attributed doubts to the Soviet leadership, which "has acknowledged the illusoriness of hopes for creating an 'absolutely reliable defense' from space . . . ."<sup>115</sup> A. G. Arbatov of IMEMO has voiced doubts regarding the development of a "sufficiently reliable" means of territorial defense "in the foreseeable future,"<sup>116</sup> and "at the moment."<sup>117</sup>

In subscribing to the next level of conviction regarding SDI's technical infeasibility, A. Kokoshin explains the origin of the "practically impossible" formulation:

Leading Soviet scientists, responding to the aforementioned speech by President Reagan [March 23, 1983], have addressed an open letter to all people of good will, and especially to scientists, in which they declare with all sincerity that there are no effective defensive measures in a nuclear war, and that it is practically impossible to create them.<sup>118</sup>

This formulation of SDI's technical infeasibility by leading Soviet

scientists has been repeated *verbatim* by numerous elite writers since its inception.<sup>119</sup>

In the course of the Soviet anti-SDI campaign, the most definitive formulations for the technical infeasibility of a space-based anti-missile defense system have been variations on the general theme that a leak-proof system is impossible. In his 1985 *Time* interview, M. S. Gorbachev stated that assertions regarding SDI's potential to guarantee a defense against nuclear attack are "a fantasy, an empty dream."<sup>120</sup> Ye. Velikhov has argued that

the plans for creating an absolutely impregnable anti-missile defense system with space-based components are an illusion not confirmed by any modern scientific or technical notions. The scientists' conclusions, based on profound knowledge of the fundamental laws of nature and a comprehensive assessment of the state of and prospects for developing the technology, rule out all variant readings and different interpretations. They are categorical and the arguments are conclusive.<sup>121</sup>

The Soviet perception that a leak-proof anti-missile defense system is impossible is acquiring an ever-wider constituency over time.<sup>122</sup> A. G. Arbatov has written that at present "a system of this kind cannot be 100 percent reliable and effective."<sup>123</sup> According to A. Kokoshin, "no expenditure, and no scientific discoveries and technical tricks can lead to the creation of an entirely reliable anti-missile defense system."<sup>124</sup> S. Kulik not only echoes Kokoshin, but also adds that this applies to an anti-missile defense system "with or without space-based components."<sup>125</sup>

Among military commentators, Col. E. Buynovskiy contends that the contemporary level of the development of science and technology has not yet revealed the specific ways of solving the tasks connected with creating laser weapons in space.<sup>126</sup> General of the Army Shabanov, Deputy Minister for Armaments, has written that

The hope of developing an anti-missile defense system that is capable of intercepting 100 percent of the missiles is illusory. The history of armed combat and the dialectic of the development of the means of attack and defense confirm this, . . . . The destruction of a single ballistic missile and even of its warhead, . . . will not create the actual preconditions for accomplishing the task of repelling a mass strike of missiles. The absolute weapon does not exist.<sup>127</sup>

In the Soviet view, one of the most important implications of SDI's technical infeasibility is that it cannot prevent a Soviet retaliatory strike on the United States. As Ye. Velikhov asserted in 1984, "the hopes of U.S. strategists, who consider that their anti-missile defense system could save the United States from an annihilating retaliatory strike, are also illusory."<sup>128</sup> This theme has been a recurrent component of the Soviet anti-SDI campaign,<sup>129</sup> and A. Kokoshin is representative in this regard: "This 'defensive weapon' would be of virtually no benefit even to the country that resorts to the first strike: it will be unable to protect the overwhelming majority of the population because it cannot prevent a retaliatory strike."<sup>130</sup>

Another recurrent theme that stems from SDI's alleged technical infeasibility is that such a system cannot provide reliable population defense. As A. G. Arbatov explained in early 1985:

The point is that there is no, nor can there be, a weapon that is 100 percent reliable and effective, even in purely theoretical terms . . . . In view of the colossal destructive force of even a relatively small quantity of nuclear weapons, an anti-missile defense system to protect the population must either be 100 percent reliable, or else it becomes completely meaningless.<sup>131</sup>

The Soviet perception that SDI is not a feasible proposition for damage limitation has also been consistent over time in the anti-SDI campaign.<sup>132</sup> A. G. Arbatov, for one, has repeatedly stressed that SDI

"will not ensure a 'reliable defense' of the peaceful population. Most likely, it is exactly the opposite: improving offensive weapons with a view to overcoming the defense will lead to an even greater absolute increase in losses in the event of a war."<sup>133</sup> A. Kokoshin has written that "[s]uch 'defensive weapons' can provide hardly anything to a country that has been subjected to a sudden, massive attack, since they are not capable of defending the overwhelming majority of the populace."<sup>134</sup>

Writing in 1984, A. Tolkunov was somewhat more explicit than the majority of Soviet commentators. Even if the United States could effect a miracle, he wrote, "and manage to destroy 95 percent of enemy missiles, the remaining 5 percent will be sufficient to destroy tens of millions of Americans, and wreak indescribable havoc and irreversible ecological damage."<sup>135</sup> Many other Soviet commentators have judged SDI to be technically infeasible based on the law of unity and struggle of opposites.<sup>136</sup>

In his 1985 book, Marshal Ogarkov made a statement that was groundbreaking for Soviet doctrine on strategic defense in a nuclear age. Prior to 1985, Ogarkov had faithfully subscribed to the mainstream Soviet line on the dialectic of arms development. In his 1978 *Kommunist* article, he explained that

the history of war convincingly testifies, for example, to the constant contradiction between the means of attack and defense. The appearance of new means of attack has always [inevitably] led to the creation of corresponding means of counteraction, and this in the final analysis has led to the development of new methods for conducting engagements, battles, and operations [and the war in general] . . . . *This also applies fully to nuclear-missile weapons, whose rapid development stimulated military-scientific theory and practice to actively develop means and methods of counter-action. The appearance of means of defense against weapons of mass destruction in turn prompted the improvement of*



*nuclear-missile means of attack.*<sup>137</sup>

The above passage was repeated *verbatim* in Ogarkov's 1982 book, with the addition of the words in brackets.<sup>138</sup> But in the 1985 book, *History Teaches Vigilance*, Ogarkov made several significant changes in his standard discussion of this dialectical law. First, the sentences that are italicized above did not appear in the book. Second, he added a discussion that had never appeared before. World War I, he said, had led to a situation wherein the defense proved to be stronger than the offense. In the course of World War II, however, a new contradiction arose: the means of offense proved to be stronger than the means of defense. As a result, during the war and especially in the post-war period, "means of defense were developed at an accelerated rate . . . whose skillful use at a certain stage balanced the means of offense and defense to some degree."<sup>139</sup>

By excising the italicized sentences of 1978 and 1982, and replacing them with the notion of a "balance" in nuclear means of offense and defense in 1985, Ogarkov may be affirming that he sees no military utility in the further "improvement of nuclear-missile means of attack."<sup>140</sup> This is supported by his 1985 removal of a sentence that had always appeared in his previous discussions of the law of unity and struggle of opposites: "This [the law] applies fully to nuclear-missile weapons . . . ."

Ogarkov may in fact be referring to a neutralization of nuclear weapons in general. In his 1985 book, he wrote that throughout the 1950s and 1960s, nuclear weapons were few and viewed only as a means of supplementing the firepower of troops. Here it should be recalled that the 1960s belonged to Sokolovskiy. In the 1970s and 1980s, however, the rapid quantitative growth of nuclear weapons and the development of long-range, precision delivery means had led to "a fundamental reassessment of the role of these weapons, and to a break in previous views on their place and importance in war, on the methods of conducting engagements and operations, and even on the possibility of waging war at all with the use of nuclear weapons."<sup>141</sup> Soviet

military thought has perhaps not offered a stronger statement on the diminishing military utility of nuclear weapons. A review of Soviet writings since 1977 moreover reveals Ogarkov to be the chief architect of Moscow's conventional high-tech option for modern war.<sup>142</sup>

The record of written evidence indicates that the Soviet perception of SDI as the "catalyst" of an arms race in all directions is firmly rooted in the Marxist-Leninist dialectic of arms development. By pronouncing the unattainability of a damage-limiting capacity in all-out nuclear war, Tula closed the door on a debate that had lasted for over a decade in Soviet military thought. The ineluctable development of nuclear weapons had led to a situation wherein the dialectic of attack and defense would henceforth be tilted in favor of weapons of attack: defense against the inevitable retaliatory strike was unattainable.

## SDI AND DETERRENCE

The intricate relationship between anti-missile defense and strategic stability actually became an issue about two decades ago. As Raymond Garthoff has explained: "Also by late 1969, the political and military leaders of both the United States and the Soviet Union had concluded that the greatest possible danger to (and certain cost in maintaining) the strategic arms balance was the conjunction of possibilities for the development of both ABM and MIRV. Either of them could be destabilizing; both would surely be . . . . [T]he leaders both in Moscow and Washington had by that time decided that ABM limitation was the more feasible and the more necessary of the two, and that MIRV control was both less feasible and less surely desirable."<sup>143</sup>

According to Garthoff, the most obvious aspect of the Soviet-American strategic relationship relevant to the SALT objectives was the attainment and recognition by both sides of a state of parity in mutual deterrence: each side must be able to respond with a devastating retaliatory strike even if the other were to launch a massive surprise attack.<sup>144</sup> Writing in 1980, G. Trofimenko, an expert at IUSAC, observed

that the creation by the Soviet Union of a strategic arsenal comparable to the U.S. strategic arsenal, not only in the number of systems but also in quality, had radically changed the strategic picture. The American force was neutralized by the Soviet Union's force, he explained, "and the trend towards mutual deterrence of the sides, not in words but in fact, came to be dominant."<sup>145</sup>

Garthoff has also noted that during the key formative period of Soviet arms control policy, "there were a number of very clear and explicit endorsements in *Military Thought* by influential Soviet military leaders of the concepts of mutual assured retaliation and mutual deterrence."<sup>146</sup> He has likewise clarified the connection between these concepts. Mutual deterrence in Soviet writings "is usually expressed in terms of assured retaliatory capability which would devastate the aggressor, . . . . This formula avoids identification with the specific content of the American concept of 'mutual assured destruction,' often expressed in terms of a countervalue capability for destroying a specified percentage of the opponent's industry and population. This American interpretation is much more limited than the Soviet recognition of mutual deterrence resting on mutual capability for devastating retaliation unacceptable to a rational potential initiator of war, without calculations of arbitrary industrial and population losses which theoretically would be acceptable costs."<sup>147</sup>

Writing in *Kommunist* in 1981, A. G. Arbatov articulated the Soviet acceptance of "Mutual Assured Destruction" (M.A.D.) with an explicitness rarely encountered in Soviet writings: "Let us recall that by the end of the 1960s, as strategic parity took shape between the Soviet Union and the United States, the U.S. leadership was compelled to acknowledge that the Soviet Union had acquired an indisputable ability to destroy a hypothetical aggressor by a retaliatory strike. This possibility was called a capacity for 'assured destruction' as a result of retaliation, and the United States could not help reckon with the fact that it had arisen more or less symmetrically for the two sides."<sup>148</sup>

G. Gerasimov, then deputy chairman of *Novosti*, subsequently announced that "then, as now, both sides in the nuclear confrontation possessed an assured capability to inflict an annihilating retaliatory strike on the aggressor (*the Soviet formula*), or to inflict 'unacceptable damage' on the attacking party as long as the situation for 'mutual assured destruction' exists (*the American formula*)."<sup>149</sup>

## MUTUAL ASSURED DESTRUCTION

As already indicated, the cornerstone message of Tula was the unattainability of "military superiority"/first-strike capability by either of the sides. This formula, by Gerasimov's admission the Soviet formula for M.A.D., is repeated with consistency by the Soviet military leadership. Marshal Ogarkov, for one, has grown more explicit over time regarding this formula. In 1983, he published an article in *Krasnaya zvezda* that included a concrete acknowledgement of M.A.D.: "Given the modern development and spread of nuclear arms in the world, a defender will always retain that quantity of nuclear means which are capable of inflicting 'unacceptable damage,' as former U.S. Defense Secretary R. McNamara once put it, on an aggressor in a retaliatory strike. . . . In present-day conditions, therefore, only suicides can gamble on a nuclear first strike."<sup>150</sup> Ogarkov announced the following in his 1984 interview in *Krasnaya zvezda*: "The fact is that, with the quantity and diversity of nuclear-missile means already achieved, it is no longer possible to destroy them [the opponent's nuclear-missile means] with one strike. An overwhelming retaliatory strike on an aggressor with even a limited number of the nuclear warheads left to a defender, a strike inflicting unacceptable damage, is inevitable in present-day conditions."<sup>151</sup>

Writing in 1986 in *Krasnaya zvezda*, Col. Semeyko of IUSAC spoke of M.A.D. with an explicitness rarely provided by Soviet military men. Quantitative improvements in the latest means of armed combat, he noted, have led to an unprecedented phenomenon: "the potential for the repeated destruction of each of the sides."<sup>152</sup> Elsewhere in the article he refers to "the inevitability of mutual destruction" and "the danger of

mutual nuclear destruction." With the implementation of SDI, he continued, "U.S. acknowledgement of the inevitability of mutual destruction as a result of nuclear war would be replaced by a stake on the destruction of only one side."

Variations on the aforementioned formula for M.A.D. have become standard fare in post-Tula Soviet thought. Writing in 1980, O. Bykov of IMEMO noted that various improvements "in the correlation of nuclear forces . . . gave rise to a new global strategic situation. The impossibility of a disarming nuclear-missile attack, and the inevitability of an annihilating retaliatory strike on an aggressor came to be its main characteristics."<sup>153</sup> A. G. Arbatov agreed in his 1984 book: "the mutual capability of both powers to inflict unacceptable damage upon each other even with a retaliatory strike made a first nuclear strike senseless and brought about a stability of the strategic balance."<sup>154</sup> In his report to the 27th Party Congress, M. S. Gorbachev warned further that nuclear weapons "can wipe the human race from the face of the earth."<sup>155</sup>

Soviet elite commentators have strongly condemned the Reagan administration's contention that SDI is more stabilizing than M.A.D. As already indicated, President Reagan's controversial initiative has incited a revival of Soviet discussions on the law of unity and struggle of opposites, or the dialectic of arms development. SDI has likewise provoked a flurry of Soviet statements on mutual vulnerability and M.A.D. One of the linchpins of the entire anti-SDI campaign, in fact, is the charge that SDI is inherently destabilizing precisely because it threatens to undermine the more equalizing reality of M.A.D. in present-day conditions.

SDI has evoked one of the most explicit Soviet statements on M.A.D. As indicated earlier, G. Gerasimov, now head of the Information Department of the USSR Ministry of Foreign Affairs, wrote in 1983 that the mutual assured capability to inflict unacceptable damage on the aggressor constituted the American formula for M.A.D. In turn, the mutual assured capability to inflict an annihilating retaliatory strike on the aggressor constituted the Soviet formula for M.A.D. Gerasimov then

emphasized that "[t]his capability is determined, apart from everything else, by very restricted limitations on developing missile defense in the Soviet Union and the United States."<sup>156</sup>

A. G. Arbatov of IMEMO has further clarified the issue in a lengthy 1984 article on the problems of and prospects for limiting anti-missile defense systems. What is specifically involved in this connection, he wrote, is that "the broad public bases its notions on the belief that, in view of the ability of each of the sides to execute a retaliatory strike against the opponent under any circumstances, nuclear aggression cannot be committed with impunity. What is also involved is a wide-spread belief in the destabilizing role of anti-satellite defense as a means aimed at liquidating the retaliatory strike capability of the other side, and at ensuring that nuclear aggression *can* be committed with impunity."<sup>157</sup>

In 1985, G. A. Trofimenko of IUSAC stated clearly that (1) the SALT II Treaty has enshrined the premises of M.A.D., (2) strategic parity is rooted in M.A.D., and (3) mutual deterrence is synonymous with mutual vulnerability: "But was it the Soviet Union . . . that scrapped the SALT II agreement, which confirmed the situation of mutual assured destruction at the level of complete parity? Is it the Soviet Union . . . that nurtures the idea of liquidating the ABM Treaty, which . . . represents the best guarantee of preserving the mutual vulnerability of the two sides, and thereby also deterrence through its realistic function of persuading the two sides of the need to refrain from a first strike?"<sup>158</sup>

A. Borovik reminded his readers that "it was then [1972] tacitly recognized, as a result of prolonged arguments about anti-missile defenses, that the military doctrine of so-called 'mutual assured destruction' forms the foundation of international security at the contemporary stage. In criticizing it, and developing wild plans for creating an 'absolute anti-missile defense,' Reagan is leading the world down a nuclear blind alley."<sup>159</sup> In early 1985, F. Burlatskiy, political observer for *Izvestiya* and head of the Philosophy Department in a Central Committee institute, left his readers with the following rhetorical

question:

Can it be denied that the so-called "defensive weapons" will not only fail to supplement the concept of mutual deterrence but, on the contrary, will undermine its foundations? On what is the concept of mutual deterrence based? It presupposed that a country subjected to a nuclear attack has the capability to deliver a devastating retaliatory strike against the opponent. But if an adequately efficient shield is really developed, what kind of retaliatory strike can we talk about?<sup>160</sup>

### STRATEGIC STABILITY

Among the varied reasons cited by the Soviets to account for the destabilizing nature of SDI, four other themes have also received extensive play. The first is that SDI will permit the United States to implement its long-standing intention to fight a limited or protracted war in Europe. Writing in the precise context of SDI, Col. V. Chernyshev of *Krasnaya zvezda* contended that the United States plans to conduct " 'limited' nuclear wars at a significant distance from America's shores, and above all in Europe. . . ." <sup>161</sup> Writing in *Krasnaya zvezda* in 1985, Capt. 2nd Rank V. Kuzar' maintained that "overseas, they have not renounced the idea of waging a 'limited' nuclear war on the European continent. Siting its first-strike nuclear weapons in Western Europe and creating a space anti-missile defense system with its allies' help, the Pentagon might resort to such a war in practice." <sup>162</sup> A. G. Arbatov hypothesized in 1985 that

[t]he anti-missile defense system that is now being proposed is by no means needed by the U.S. to deliver a retaliatory strike, but rather as the potential for unleashing "limited or protracted" nuclear war, and is intended to shield the means necessary to conduct precisely this kind of action using "MX" and "Midgetmen" missiles, B-1 and "Stealth" bombers, anti-satellite systems, and a sophisticated system to control all these weapons. <sup>163</sup>

For obvious reasons, writes V. I. Bogachev, a military affairs commentator for TASS, "Star Wars" proponents do not consider it convenient to link SDI with the old American strategy of a limited nuclear war in Europe: Since Washington's concept of a nuclear war at a significant distance from American shores is based on ensuring the relative security of those shores against a "retaliatory strike of retribution," the plans for SDI originate in the concept of a limited nuclear war:

An anti-missile shield for the aggressor means a "limited nuclear war" for Europe. . . . [I]f the United States calculated before, without sufficient grounds, on relatively unpunished aggression owing to the distance of its territory from potential theaters of military action in Europe, then now, according to its scheme, the "desirability" and even "expediency" of plans for nuclear adventures on this continent must be reinforced by a large-scale anti-missile system for the entire territory of the United States.<sup>164</sup>

In mid-1985, A. Kokoshin of IUSAC maintained that a multi-element U.S. anti-missile defense system that transgressed the bounds of the 1972 ABM Treaty and its 1974 protocol would be destabilizing as one of the most important means for "providing logistical support for the concept of 'protracted' and 'limited' nuclear wars." After all, say U.S. strategists, "the anti-missile defense 'shield' will do its work and limit the counterstrike."<sup>165</sup> Writing in *Izvestiya* in 1985, Chief of the General Staff Akhromeyev summarized the official Soviet view when he wrote unequivocally that in present-day conditions, military conflicts cannot be limited by territory. It will be impossible to direct the conflagration of a war into a narrow channel. "And this applies especially to nuclear war," he stressed. "If the imperialists unleash it, it will inevitably assume a general and global character."<sup>166</sup>

Another reason cited consistently by the Soviets to account for the destabilizing nature of SDI is that such a system will facilitate the



achievement of victory in a nuclear war. Since General Secretary Brezhnev's speech at the 26th Party Congress in 1981, Soviet doctrine has held that "to count on victory in nuclear war is dangerous madness."<sup>167</sup> The Soviet allegation that the United States believes in victory in nuclear war has been brandished before, most recently during the campaign against the U.S. deployment of Pershing IIs and GLCMs in Western Europe. In the context of the SDI campaign, the theme of victory is often connected with the aforementioned notion of limited war. In 1984, Gen.-Lt. D. Volkogonov of the MPA linked SDI with a hypothetical, U.S.-inspired war in the European theater:

In endeavoring to turn Europe into the epicenter of a nuclear clash, the Pentagon strategists see the future space anti-missile defense system in their plans as that previously missing element of "ensuring victory."<sup>168</sup>

Referring specifically to SDI, Col. Semeyko wrote in 1983 that "[t]he calculation on victory, however reckless it is, emerges here in its boldest form."<sup>169</sup> Writing also in the context of SDI, Col. V. Chernyshev charged that, having overcome the other side's defenses, the United States plans "to deliver a disarming nuclear strike and . . . win a nuclear war."<sup>170</sup> Col. M. Ponomarev of *Krasnaya zvezda* has noted that "[t]hese are the same old attempts, as illusory as they are dangerous, to gain for the United States the capability of not only waging nuclear wars, but also winning them."<sup>171</sup>

A. G. Arbatov noted in 1984 that "[i]n the past decade, the strict quantitative and qualitative limitations imposed on anti-missile defense [by the ABM Treaty] have to a considerable extent deprived strategic concepts, such as reduction of American losses in nuclear war to an acceptable level, of their material basis and, consequently, rendered the very idea of victory in such a war groundless."<sup>172</sup> Many other Soviet commentators have noted a U.S. intention to use SDI for achieving victory in nuclear war.<sup>173</sup>

A third reason cited often by the Soviets to account for SDI's

destabilizing nature is that possession of such a system by one of the sides will increase the risk of war. As Col. Semeyko of IUSAC put it in 1984, "[t]he illusory hope of combining an 'absolutely reliable shield' and an 'undeflectible sword' may spawn the temptation to unleash a nuclear war."<sup>174</sup> In his 1985 *Time* interview, M. S. Gorbachev warned that SDI would spur the arms race in all directions, which means that the threat of war will grow.<sup>175</sup> Defense Minister Sokolov noted that in signing the ABM Treaty, the United States and the Soviet Union "officially stated then that the acquisition by one of the sides of ABM means over and above what is authorized by the ABM Treaty will inevitably lead to the disruption of strategic parity, and to an increase in the risk of nuclear war."<sup>176</sup> Col. V. Chernyshev warned that the deployment of an anti-missile defense system "would lead to an increased danger of a deliberate unleashing of a nuclear war."<sup>177</sup> In late 1985, General of the Army V. M. Shabanov, Deputy Minister for Armaments, was even more explicit in a *Krasnaya zvezda* article:

The deployment of anti-satellite weapons would exert a destabilizing influence on the strategic situation. Any attack on a satellite . . . would lead to the most serious consequences. Moreover, the accidental failure of a man-made satellite as a result of technical irregularities, especially in a period of increasing tension, could be perceived as the opposite, and be the cause of a sharp conflict situation.<sup>178</sup>

Among others, Ye. Velikhov of the Academy of Sciences and A. Bovin of *Izvestiya* have likewise pointed to SDI's role in increasing the risk of a nuclear cataclysm.<sup>179</sup> In 1983, F. Burlatskiy of *Izvestiya* went so far as to assert that "space weapons are provocative weapons, and undoubtedly a 'casus belli' for nuclear war."<sup>180</sup>

A final reason cited by the Soviets to explain the destabilizing nature of SDI is its negative impact on the arms control process. Shortly before his death, General Secretary Chernenko predicted that "[t]he militarization of space would not only mean in effect the end of the

process of nuclear arms limitation and reduction, but would also become the catalyst of an uncontrollable arms race in all directions."<sup>181</sup> Marshal Akhromeyev maintains that "any attempts to limit strategic offensive armaments while creating space strike means are futile."<sup>182</sup>

Since President Reagan's so-called "Star Wars" speech, Moscow has contended that SDI is a direct threat to the integrity of the ABM treaty. M. S. Gorbachev announced in 1985 that the appearance of space strike means could undermine one of the most important bases for arms limitation: the ABM Treaty.<sup>183</sup>

In the course of his answers to a TASS correspondent's questions, Defense Minister Sokolov explained that

Meanwhile, they [people in Washington] . . . conceal the interconnection that objectively exists between offensive and defensive arms, which is the basis of the termless Soviet-U.S. ABM Treaty of 1972. They remain silent about the fact that the creation by one of the sides of a large-scale anti-missile defense system breaks this interconnection, destabilizes the strategic situation, and forces the other side to restore the situation. . . .<sup>184</sup>

Here it should be noted that the Soviet statements expressing this theme vary substantially in terms of the precise U.S. activity that is perceived to constitute a violation or breach: from the most inchoate ("any move in the direction of the creation"<sup>185</sup>) to the most concrete ("creation"<sup>186</sup>).

In his 1985 article in *Pravda*, Marshal Sokolov further clarified the Soviet position. The development of SDI, he wrote, "is precisely a *de facto* undermining of the ABM Treaty. First, because work is being done on developing an ABM defense system for the country's entire territory and, furthermore, for the territory of U.S. allies, which is banned by Article I of the treaty."<sup>187</sup> Second, he emphasized, "because it is a question of a space-based ABM system, which is banned by Article V."

Marshal Akhromeyev has asserted that "by embarking on the practical implementation of a large-scale anti-missile defense system with space-based elements, Washington is working directly to undermine the treaty." He went on to stress that "[a]ll of this so-called 'research work' is in contravention of the ABM Treaty." The Chief of the General Staff has further maintained that SDI "is a territorial and even a global . . . system that is totally prohibited by the treaty. Therefore, the creation of laser, beam, and other such destructive components for that system is a direct violation of the treaty."<sup>188</sup> In his 1985 *Pravda* article, Marshal Akhromeyev emerged as a most vocal proponent of preserving the ABM Treaty:

The military-political significance of the Soviet-U.S. ABM Treaty is extremely great. This treaty is one of the foundations on which relations between the sides are based. By signing it, the Soviet Union and the United States recognized that in the nuclear age, only mutual restraint in the sphere of anti-missile defense systems will make it possible to advance along the path of limiting and reducing nuclear arms, that is, to curb the strategic arms race as a whole. . . . The ABM Treaty . . . serves the interests of both sides' security, lessens the danger of a nuclear war breaking out, and is conducive to progress in further limiting and reducing strategic offensive arms. If the treaty between the Soviet Union and the United States . . . were to lapse for any reason, the foundation on which talks between the sides on nuclear arms limitation could be based and conducted would disappear. This would effectively mean the collapse of talks and an uncontrolled arms race for decades.<sup>189</sup>

In a later *Pravda* article, Akhromeyev reiterated that the ABM Treaty "is of fundamental importance to the entire process of limiting nuclear arms, and what is more, it is the foundation on which strategic stability and international security are based."<sup>190</sup> Judging by Marshal Sokolov's subsequent article, this position has become the current line:

The ABM Treaty is of fundamental importance for nuclear arms limitation, strategic stability, and international security. It is the foundation and basis of strategic relations between the Soviet Union and the United States, imposing clear limitations on the quantitative composition, structure, qualitative characteristics, and deployment of the authorized ABM systems of our two countries.<sup>191</sup>

Of all the recurrent themes that constitute the Soviet anti-SDI campaign, perhaps the most significant, in terms of what it portends for a strategic stability rooted in arms control, is the demonstrable concern of the Soviet political and military leadership for preserving the ABM treaty. The Soviet rationale for signing the treaty is most probably as operative today as it was in 1972. A persuasive body of evidence indicates that four perennial interests of the Soviet Union served then, and would again, as the determining ones: (1) to avoid a technology-dominated arms competition with the United States that it would most likely lose; (2) to avoid what promises to be a monumental strain on industries and resources already severely strained; (3) to ensure the effectiveness of its ICBMs -- indeed, of its entire strategic structure -- by inhibiting the development of U.S. anti-missile defense systems; and (4) to ensure for the Soviet Union the time required to eliminate or at least decrease the U.S. lead in BMD-related technology.

Throughout the anti-SDI campaign, in fact, the Soviets seem to be communicating a sense of *deja vu*: after all, didn't we settle this back in 1972? Even SDI disciples Keith Payne and Colin Gray have confirmed that "[d]uring the early 1970s the Soviet Union chose to limit U.S. superiority in ABM technology through arms control rather than by relying upon offensive countermeasures alone."<sup>192</sup> In an article in the *Bulletin of the Atomic Scientists*, Michael Krepon and D. Geoffrey Pick have predicted that "[g]iven current deficiencies in Soviet defenses, and growing U.S. offensive capabilities, the Kremlin is unlikely to break out of the ABM Treaty. The Soviets are far more likely to pursue hedges against prospective deployments of U.S. strategic defenses, while leaving

a decision to abrogate or amend the treaty up to the United States."<sup>193</sup>

Whether or not the Soviets accept M.A.D. as a reality in present-day conditions has perhaps emerged as the most contentious issue in Western debate on Soviet military policy. When Brezhnev rejected at Tula the possibility of developing a means of defense against nuclear weapons, he thereby rejected the possibility of limiting the destructive consequences of a nuclear exchange to acceptable levels. The Soviets themselves have described the Soviet formula for M.A.D. as the possession by "both sides" of an assured capability to deliver an annihilating retaliatory strike on an aggressor. According to the Soviets, strategic parity is in fact a parity in M.A.D., whose preservation is rooted in strict limitations on anti-missile defense. The Soviets thus view SDI as destabilizing primarily because it threatens to undermine the more equalizing reality of mutual vulnerability in present-day conditions.

In short, the essence of the Tula line was a downgrading of all nuclear contingencies. When the Soviets accepted M.A.D. as a present-day reality, the Soviet debate on the viability of nuclear war as an instrument of policy was resolved by a consensus: nuclear war is so unpromising and dangerous that it remains an instrument of policy only in theory, an instrument of policy that cannot be used. A growing body of evidence thus indicates that in 1977, coincidentally with Tula, Moscow designated an independent conventional war option as its long-term military development goal. Numerous Western analysts continue to present evidence of changes in Soviet strategy, operational art, force structure, weapons modernization, and operational behavior that clearly point to a Soviet preference for conventional warfare.

Since Tula, the highest political, military, and academic figures in the Soviet Union clearly present a consensus on the diminishing politico-military utility of nuclear war in present-day conditions. While this consensus represents a ground-breaking shift in Soviet doctrine since the heyday of Marshal Sokolovskiy, there is scant evidence of any dispute on the new correlation of war and policy in a nuclear age. Sokolovskiy has,

on the contrary, been quietly displaced by a new revolution in Soviet military affairs. Marshal N. V. Ogarkov and other hard-minded Soviet military figures have themselves emerged as the architects of the Soviet shift away from nuclear contingencies and toward an independent, conventional, high-tech option.

## THE SOVIET MILITARY RESPONSE

Since 23 March 1983, numerous Soviet elite commentators have discussed the Soviet military response to SDI. While H. Grunwald has maintained that "the Soviets seem genuinely afraid of a technological race with the United States in space defense,"<sup>194</sup> Soviet writings have consistently portrayed a consensus on the resilience of the Soviet economic, scientific, and technical potential. Ye. Velikhov's statement is representative of this conviction: "The Soviet Union has repeatedly proved that its existing economic, scientific, and technical potential enables it to respond adequately and in the briefest period of time to any threat against its security."<sup>195</sup> A. Kokoshin has been somewhat more precise: "[T]he Pentagon has no chance of gaining an advantage over the Soviet Union in this area in light of the USSR's achievements in the corresponding scientific and technological spheres."<sup>196</sup> Most recently, M. S. Gorbachev announced that "[o]ur material and intellectual potential ensures that the Soviet Union has the capability to develop any type of weapon if we are compelled to do so."<sup>197</sup> Judging from past Soviet behavior, scarce resources will in fact be galvanized to meet the perceived military requirements for countering SDI.

The present review of Soviet writings on SDI has yielded, among a multitude of statements on the ways in which SDI might be overcome, few explicit references to the possible development of a matching system by the Soviet Union. Writing in 1984, A. G. Arbatov of IMEMO affirmed that "under these conditions, the security of all sides will be substantially undermined, including that of the United States, especially in view of the Soviet Union's ability to build a space-based anti-missile

defense system in response to the U.S. program."<sup>198</sup>

In his answers to a TASS correspondent, however, Defense Minister Sokolov did make mention of Moscow's possible intention to develop its own defensive systems:

If the United States begins to militarize space, and thereby undermines the existing military-strategic equilibrium, the Soviet Union will be left with no choice but to adopt countermeasures to rectify the situation. These could be measures in the spheres of both defensive and offensive arms.<sup>199</sup>

In his 1985 *Pravda* article, Sokolov explained further that people in the United States are perfectly well aware that the deployment of a large-scale ABM system by one side "will inevitably prompt retaliatory actions by the other in the form of the quantitative and qualitative growth of strategic offensive weapons, and the development of a large-scale ABM defense for the country, which also means the development of means for neutralizing ABM defenses."<sup>200</sup>

Chief of the General Staff Akhromeyev included the following in his 1985 *Pravda* article: "[The Soviet Union] is left with no choice: it will be forced to ensure the restoration of the strategic balance, and to build up its own strategic offensive forces, supplementing them with means of defense."<sup>201</sup> Akhromeyev warned later that if "Star Wars" continues, the Soviet Union will have no choice other than "to adopt retaliatory measures in both offensive and other spheres, not excluding defensive arms, and including space-based [arms]."<sup>202</sup> The present review of the literature indicates that the Soviets will nonetheless place priority on the reinforcement of offensive forces and various countermeasures.

While Tula closed the door on the possibility of a damage-limiting capacity in nuclear war, the Soviets have not lost all interest in strategic defense. That interest, however, has been limited to developing conventional ballistic missile defense within the framework of the ABM



Treaty.<sup>203</sup> Rather than being a crash program, the Moscow ABM system has developed in a deliberate manner for about 20 years. The Soviets maintain a minimum commitment to strategic defense against accidental and third-country nuclear attacks, but have not pursued a comprehensive defense against any determined U.S. effort to penetrate their systems. Soviet efforts and capabilities, particularly in air defense, could serve largely as protection against the devastation of modern conventional wars.<sup>204</sup>

## REINFORCEMENT OF THE OFFENSE

Writing in 1984, A. G. Arbatov summarized the Soviet consensus that SDI will lead to a buildup of offensive arms: "Precisely: the development and introduction of defense against nuclear-missile weapons lead to an increase in and perfecting of offensive weapons which, in turn, not only neutralize defense improvements, but also whip up the arms race even more. . . ."<sup>205</sup>

In affirming that offensive and defensive arms are inseparably interrelated, Chief of the General Staff Akhromeyev warned that if "Star Wars" develops without restriction, "an uncontrollable race in both strategic offensive and space arms will begin." This, he continued, "is the objective reality."<sup>206</sup> General of the Army Shabanov, Deputy Minister for Armaments, explained that "the development of defensive systems inevitably provokes the qualitative and quantitative improvement of offensive weapons systems."<sup>207</sup> He emphasized that the development and deployment of strike arms in space would essentially lead "not only to the quantitative, but also to the qualitative growth of nuclear, and above all strategic offensive arms." Col. Semeyko of IUSAC pointed out that even Western experts agree: "one side's attempts to create an anti-missile defense shield would force the other side to reinforce its means of overcoming it. And the reinforcement of the latter . . . would bring about further improvements in strategic defensive systems."<sup>208</sup> But he stressed that "the creation and deployment of anti-missile defense

weapons in space would inevitably give rise to the intensification of the offensive arms race."<sup>209</sup>

Among others, Col. V. Chernyshev of *Krasnaya zvezda* has stressed the Soviet position. Not only will SDI not lead to any reduction in nuclear weapons, he wrote in a 1985 article, but "there will arise a need to increase offensive means in order to compensate for potential disruptions of the balance of forces caused by the anti-missile defense."<sup>210</sup>

As indicated throughout this study, M. S. Gorbachev has reiterated the major Soviet themes regarding the implications of SDI for strategic stability. In the most authoritative statement to date on the Soviet military response to SDI, the General Secretary warned that "[i]f preparations for 'Star Wars' continue, we will be left with no choice but to take countermeasures -- including, of course, the reinforcement and upgrading of offensive nuclear arms."<sup>211</sup> He has also announced that the Soviet response will be "asymmetrical,"<sup>212</sup> and not necessarily in space.<sup>213</sup> Marshal Akhromeyev likewise stressed offensive arms in a 1985 *Kommunist* article. The attempt to develop SDI, he wrote, will provoke the corresponding counteractions of the other side: "Then no limitation and reduction of strategic offensive weapons will be possible. The sides will, on the contrary, continue to improve and deploy them. This is the reality."<sup>214</sup>

## COUNTERMEASURES

Among others, A. Gromyko and V. Lomeyko have addressed the issue of the survivability of SDI components in the face of countermeasures: "any space antisatellite systems, as well as other space types of arms, would themselves be exceedingly vulnerable to various means of counteraction."<sup>215</sup> Writing in 1985, V. Falin, a political observer for *Izvestiya*, pointed out that "the anti-missile complexes are no less sensitive to the very same technologies they will possess."<sup>216</sup> Ye. Velikhov and A. Kokoshin agreed in 1985 that "the space tiers of an anti-missile defense system will be highly vulnerable to various means of

counteraction, both active and passive." They went on to emphasize that "an effective network of such means could be built much more quickly, and would cost much less than the anti-missile defense system itself. . . ." <sup>217</sup> A. G. Arbatov has likewise noted that the means of counteraction will be "much less costly and much simpler" than the space-based system itself. <sup>218</sup>

Writing in 1985, Ye. Velikhov of the Academy of Sciences summarized the Soviet certitude that SDI can be overcome by active and passive countermeasures:

Even if we assume that it will be possible to solve certain tricky (from the scientific-technical viewpoint) "defense" problems, the anti-missile defense system will turn out to be highly vulnerable to various countermeasures. The point is that there are always simpler and cheaper methods of overcoming the most sophisticated "defense systems." The creation of a space anti-missile defense system would quickly <sup>219</sup> lead to the development of offensive means to overcome it.

Writing in 1984, A. G. Arbatov of IMEMO listed the following possible countermeasures: "The passive means of this type can include . . . the masking of launchings with a smokescreen and the multi-layered ablating and repelling means of covering the missiles. The active means of this kind include ballistic interceptor missiles of high starting acceleration to hit the stations, 'space mines,' land-based laser beams of great intensity, 'clouds' of obstacles along the trajectory of combat stations, and so forth." <sup>220</sup>

Arbatov explained further that "[d]ifficulties will grow immeasurably in view of the possible countermeasures against a space anti-missile defense system, measures ranging from simply increasing the number of objects (the real ballistic missiles and all kinds of false targets) that the system is expected to intercept, and various passive methods for both defending against the space anti-missile defense system and overcoming it, to a special weapons system that knocks out the orbital

laser stations and various elements of their guidance, communications, and supply."<sup>221</sup>

Writing in 1985, V. Falin of *Izvestiya* observed that "[t]here is absolutely no need to double or treble the number of strategic delivery vehicles of the present type to make the 'strategic shield' lose credibility. Scientists calculate that this would be achieved at a fraction of the expenditure by using heat shields, making missiles rotate, coating them with wave- and light-absorbing materials, and so forth."<sup>222</sup> Elsewhere he has asserted that "there are many different ways to devalue, to use Washington's terminology, the 'space umbrella' ":

The simplest is to fill space with a mass of garbage that will liken a sophisticated detection and identification system to a bloodhound forced to follow a trail dusted with a mixture of tabasco and pepper. . . . But it is not difficult to imagine something a little more complex. Rocket bases on the moon, for example. . . . There are also the options of semiorbital and orbital rockets, the only defense against which is not to have such systems. The desire for a first strike could also be removed by the deployment of superheavy missiles at the bottom of reservoirs, or by the creation of devices to paralyze all communications systems and systems for monitoring space, air, and water, and perhaps also electricity supply lines.<sup>223</sup>

*Foreign Military Review* wrote in 1984 that in terms of countermeasures, individual warheads do not offer any substantial advantages over multiple warheads. But single warheads could overload the radio-electronic devices of an anti-missile defense system, thereby ensuring that a number of ballistic missiles penetrated the defense.<sup>224</sup> Writing in March 1985, Col. Chernyshev of *Krasnaya zvezda* charged that the United States was developing means of overcoming the anti-missile defense system of a potential opponent. These means included maneuverable warheads for strategic missiles, reflectors dispersed on the

missile's trajectory to confuse the sensors of the defense, decoys, and means for radio-electronic combat.<sup>225</sup>

In their public statements, Soviet military commentators have repeatedly focused on bombers, cruise missiles, and depressed-trajectory missiles as effective counters to an anti-missile defense system. The most authoritative statement on countermeasures came in late 1985 from Marshal V. I. Petrov, then First Deputy Minister. In referring to "the Pentagon's" development of means to overcome an anti-missile defense system, he listed the improvement of both dummy warheads for ballistic missiles and the technology for maneuverable ICBM and SLBM warheads, as well as the search for ways to reduce that portion of the missile's trajectory most vulnerable to a space-based anti-missile system. Petrov focused first, however, on the "U.S." development of "high-speed cruise missiles that could avoid beam weapons by their low altitudes, and ballistic missiles traveling at altitudes too low for space-based beam weapons."<sup>226</sup>

Marshal Petrov has not been alone in focusing on cruise and depressed-trajectory missiles as counters to SDI. In his 1984 book, A. G. Arbatov also pointed to the difficulty of defending against cruise missiles.<sup>227</sup> Writing in *Krasnaya zvezda* in early 1985, Capt. 2nd Rank V. Kuzar' agreed that even if a space-based defense were actually developed, "the opponent can sharply increase the number of cruise missiles . . . or develop a new type of missile with a depressed trajectory."<sup>228</sup> Also writing in 1985, Col. Chernyshev of *Krasnaya zvezda* asserted that "no system of anti-missile defense can guarantee a close to 100-percent defense against ballistic missiles, and [no system] can limit the effectiveness of other delivery vehicles such as bombers and cruise missiles."<sup>229</sup>

In a 1986 *Krasnaya zvezda* article, V. Pustov warned that the United States was emphasizing the development of bombers equipped with "Stealth" technology, which cannot be detected by modern air defense means. According to this military observer, Reagan had also

instructed the Pentagon to accelerate its development of long-range cruise missiles equipped with the same "Stealth" technology. Owing to both the new technology and their endo-atmospheric altitudes, wrote Pustov, the United States is counting heavily on such missiles to overcome any Soviet air defense means.<sup>230</sup>

The record of written evidence indicates that the Soviets are not planning to develop a matching space-based anti-missile defense system. They have opted for overcoming rather than matching such a system because the former is judged to be considerably cheaper.<sup>231</sup> A persuasive body of evidence moreover indicates that the Soviets do indeed fear a technological lag in the requisite technology, or an "SDI Gap." At the same time, post-Tula Soviet doctrine is firmly rooted in the following tenets:

- The historical dialectic between weapons of attack and weapons of defense will be tilted in the future in favor of weapons of attack.
- Neither side can achieve "military superiority"/first-strike capability because neither side can achieve Bondarenko's "sufficiently effective means of defense."
- Strategic defense as envisioned in SDI is inherently destabilizing because it undermines the Soviet formula for M.A.D.: a mutual assured capability to inflict an annihilating retaliatory strike on an aggressor even after subjection to a first strike.

During a 1985 interview in which he outlined the Soviet response to SDI, Defense Minister Sokolov included the following statement: "I consider it necessary to stress quite definitely that our measures will be adequate to the threat that could be created against the Soviet Union and its allies."<sup>232</sup> Not long ago, variations on the following statement by General Secretary Andropov dominated Soviet elite writings: "[T]he

question is that of deploying analogous Soviet means . . . which, with respect to characteristics, will be adequate to the threat that American missiles being deployed in Europe are creating against us and our allies."<sup>233</sup>

Sokolov has considered it necessary to "stress quite definitely" the precise formulation that was extensively employed to characterize the then-impending Soviet response to the U.S. deployment of Pershing IIs and GLCMs in Western Europe. The implication is clear: what Moscow *SAYS* is what Moscow *DOES*.

## CONCLUSION

The record of written evidence indicates that the Soviet contention regarding the offensive nature of SDI springs logically from post-Tula Soviet doctrine. The cornerstone message of Tula was the unattainability of "military superiority," which in Soviet military thought was equated with a first-strike capability. First-strike capability was in turn understood as a unilateral damage-limiting capacity in all-out nuclear war, a defense against nuclear weapons ensuring that only acceptable damage would be sustained in the course of an exchange. The Soviet Union views SDI as an attempt to secure such a first-strike capability for the United States. This perception is further strengthened by the simultaneous expansion of U.S. offensive systems, as well as by the projected potential of space-based weapons to strike vital ground targets.

The evidence further indicates that the Soviet perception of SDI as the catalyst of an arms race in all directions is firmly rooted in the Marxist-Leninist dialectic of arms development. By pronouncing the unattainability of a damage-limiting capacity in all-out nuclear war, Tula closed the door on a debate that had lasted for over a decade in Soviet military thought. The ineluctable development of nuclear weapons had led to a situation wherein the dialectic of attack and defense would henceforth be tilted in favor of weapons of attack: defense against the inevitable retaliatory strike was unattainable.

The present study also provides evidence that the Soviets have long presented a consensus on the mutuality of vulnerability to nuclear annihilation in present-day conditions. When Brezhnev rejected at Tula the possibility of developing a means of defense against nuclear weapons, he thereby rejected the possibility of limiting the destructive consequences of a nuclear exchange to acceptable levels. In the Soviet view, strategic parity is in fact a parity in M.A.D. The Soviets themselves have described the Soviet formula for M.A.D. as the possession by "both sides" of an assured capability to deliver an annihilating retaliatory strike on an aggressor even after subjection to a first strike. Hence Moscow views SDI as inherently destabilizing precisely because it threatens to undermine the more equalizing reality of M.A.D. in present-day conditions.

In their public statements on the probable Soviet military response to SDI, the highest Soviet political and military leaders have fully concurred with mainstream Soviet military thought. Offensive weapons will retain their edge over defensive weapons in the nuclear age, both technologically and financially. As a result, Soviet writings and capabilities provide evidence of a Soviet focus on bombers, cruise missiles, and depressed-trajectory ballistic missiles whose effectiveness cannot be checked by SDI. Official declaratory policy moreover indicates that the Soviets will expand their offensive forces and merely supplement them with defensive systems. The alternative would mean a surrender of their most powerful deterrent forces to an opponent perceived to be seeking a new brand of unilateral disarmament.



## APPENDIX A

### MAJOR SOVIET PERIODICALS REVIEWED

*Aviatsiya i kosmonavtika* (Aviation and Cosmonautics): Official monthly journal of the Soviet Air Forces. Established in 1918. Published by the Soviet Air Forces. Editor-in-chief: O. A. Nazarov.

*Izvestiya*: Official newspaper of the Soviet government. Established in 1917. Published by the Presidium of the U.S.S.R. Supreme Soviet.

*Kommunist*: Official theoretical and political journal of the Central Committee of the C.P.S.U. Established in 1924. Published by "Pravda" of the C.P.S.U. Central Committee. Editor-in-chief: I. T. Frolov. Circulation: 1,098,000.

*Kommunist vooruzhennykh sil* (Communist of the Armed Forces): Official military-political journal of the Main Political Administration of the Soviet Army and Navy. Established in 1920. Published by "Krasnaya zvezda." Editor-in-chief: A. I. Skryl'nik.

*Krasnaya zvezda* (Red Star): Official newspaper of the U.S.S.R. Ministry of Defense. Established in 1924. Published by "Krasnaya zvezda." Editor-in-chief: I. M. Panov.

*Literaturnaya gazeta*: Official newspaper of the U.S.S.R. Writers' Union. Established in 1929. Editor-in-chief: A. Chakovskiy.

*Mirovaya ekonomika i mezhdunarodnyye otnosheniya* [MEMO] (World Economics and International Relations): Official monthly journal of the Institute of World Economics and International Relations, U.S.S.R. Academy of Sciences. Established in 1957. Published by "Pravda" of the C.P.S.U. Central Committee. Editor-in-chief: Ya. S. Khavinson. Circulation: 27,000.

*Morskoi sbornik* (Naval Digest): Official monthly journal of the Soviet Navy. Established in 1848. Published by "Krasnaya zvezda."

Editor-in-chief: A. S. Pushkin.

*Pravda*: Official newspaper of the Central Committee of the C.P.S.U. Established in 1912. Published by the C.P.S.U. Central Committee.

*Sovetskaya Rossiya*: Official newspaper of the Central Committee of the C.P.S.U., and the RSFSR Supreme Soviet and Council of Ministers. Established in 1956. Published by "Pravda" of the C.P.S.U. Central Committee.

*SShA: ekonomika, politika, ideologiya* [SShA] (U.S.A.: Economics, Politics, Ideology): Official monthly scientific and socio-political journal of the Institute of the U.S.A. and Canada, U.S.S.R. Academy of Sciences. Established in 1970. Published by "Nauka."

*Tyl i snabzheniye Sovetskykh vooruzhennykh sil* (Rear and Supply of the Soviet Armed Forces): Official monthly journal of the Soviet Rear Services. Established in 1940. Published by "Krasnaya zvezda." Editor-in-chief: P. I. Altunin.

*Vestnik protivovozdushnoi oborony* (Air Defense Herald): Official monthly journal of the Soviet Air Defense Troops. Established in 1931. Published by "Krasnaya zvezda." Editor-in-chief: K. Ya. Chermashentsev.

*Voprosy filosofii* (Problems of Philosophy): Official scientific-theoretical journal of the Institute of Philosophy, U.S.S.R. Academy of Sciences. Established in 1947. Published by "Pravda" of the C.P.S.U. Central Committee. Editor-in-chief: V. S. Semenov. Circulation: 25,800.

*Voprosy istorii* (Problems of History): Official monthly journal of the History Department, U.S.S.R. Ministry of Higher and Intermediate Special Education, U.S.S.R. Academy of Sciences. Established in 1926. Published by "Pravda" of the C.P.S.U. Central Committee. Editor-in-chief: V. G. Trukhanovskiy. Circulation: 16,000.

*Voyenno-istoricheskiy zhurnal* (Military-historical Journal): Official monthly journal of the U.S.S.R. Ministry of Defense. Established in 1959.

Published by "Krasnaya zvezda." Editor-in-chief: A. G. Khor'kov.

*Voyennyi vestnik* (Military Herald): Official monthly journal of the Soviet Ground Forces. Established in 1921. Published by "Krasnaya zvezda." Editor-in-chief: I. A. Skorodumov.

*Zarubezhnoye voyennoye obozreniye* (Foreign Military Review): Official monthly practical military journal of the U.S.S.R. Ministry of Defense. Established in 1921. Published by "Krasnaya zvezda."

## **APPENDIX B**

### **SOVIET SPOKESMEN AND LEADERS CITED**

*Akhromeyev, MSU S.F.:* Chief of the General Staff (1984- )

*Arbatov, A. G.:* Specialist on U.S.-Soviet politico-military issues at Institute of World Economics and International Relations

*Bogachev, V. I.:* Prolific military affairs commentator for TASS

*Bondarenko, V. M.:* Theorist at the Lenin Military-Political Academy

*Bovin, A.:* Authoritative political observer for *Izvestiya* and member of C.P.S.U. Central Auditing Commission

*Burlatskiy, F.:* Political observer for *Izvestiya*, deputy director of an institute in Academy of Sciences, and head of Philosophy Department in a Central Committee institute

*Bykov, O. N.:* Deputy director of Institute of World Economics and International Relations

*Chernyshev, Col. V.:* TASS military reviewer for *Krasnaya zvezda*

*Falin, V.:* Important political observer for *Izvestiya*

*Gerasimov, G.:* Head of Information Department of U.S.S.R. Ministry of Foreign Affairs

*Gorbachev, M. S.:* General Secretary of the Central Committee of

the C.P.S.U. (1985- )

*Grishin, V. V.:* Full Politburo member

*Gromyko, A.:* Director of the African Institute

*Kokoshin, A.:* Deputy chairman of Committee of Soviet Scientists for Peace, Against Nuclear Threat, and deputy director of Institute of U.S.A. and Canada

*Kondratkov, Col. T.:* Instructor in Marxism-Leninism Department of General Staff Academy

*Lomeyko, V.:* First deputy head of Press Department of U.S.S.R. Ministry of Foreign Affairs

*Losev, S.:* Director of TASS and member of C.P.S.U. Central Auditing Commission

*Lukava, Col. G.:* Professor and Doctor of Philosophy

*Ogarkov, MSU N. V.:* Chief of the General Staff (1977-84); commander of the Western strategic axis (1984- )

*Petrov, MSU V. I.:* Deputy Minister for Ground Troops (1980-84); First Deputy Minister (1985-86)

*Ponomarev, Col. M.:* Military-political reviewer for *Krasnaya zvezda*

*Rybkin, Col. Ye.:* Theorist at Institute of Military History

*Semeyko, Col. L.:* Specialist on U.S. national security policy at Institute of U.S.A. and Canada

*Shabanov, General of the Army V. M.:* Deputy Minister for Armaments (1978- )

*Simonyan, Gen.-Maj. R.:* Specialist on U.S. national security policy

*Sokolov, MSU S. L.:* Minister of Defense (1984- )

*Trofimenko, G.:* Specialist on U.S.-Soviet strategic issues at Institute of U.S.A. and Canada

*Ustinov, MSU D. F.:* Minister of Defense (1976-84)

*Velikhov, Ye.:* Vice-President of Academy of Sciences and Chairman of Committee of Soviet Scientists for Peace, Against Nuclear Threat

*Volkogonov, Gen.-Lt. D.:* Deputy Chief of the Main Political Administration of the Soviet Army and Navy

*Zhilin, Gen.-Lt. P.:* Director of Institute of Military History

<sup>1</sup>"Yu. V. Andropov's Answers to a *Pravda* Correspondent's Questions," *Pravda*, March 27, 1983, 1.

<sup>2</sup>"M. S. Gorbachev's Interview With the Editor of the Newspaper *Pravda*," *Pravda*, April 8, 1985, 1.

<sup>3</sup>Daniel S. Papp, *Ballistic Missile Defense, Space-Based Weapons, and the Defense of the West*, Strategic Issues Research Memorandum ACN 83031 (Carlisle Barracks, PA: Strategic Studies Institute, 1983), 23.

<sup>4</sup>Committee of Soviet Scientists for Peace, *Against the Nuclear Threat, A Space-Based Anti-Missile System With Directed-Energy Weapons: Strategic, Legal, and Political Implications* (Moscow, 1984).

<sup>5</sup>For example, see MSU V. D. Sokolovskiy, *Voyennaya strategiya* (Moscow: Voenizdat, 1968).

<sup>6</sup>For example, see I. I. Anureyev, *Oruzhiya protivoraketnoi i protivokosmicheskoi oborony* (Moscow: Voenizdat, 1971).

<sup>7</sup>For example, see Col. E. Buynovskiy and Col. M. Krymov, "The Space Shuttle: Plans and Hopes," *Aviatsiya i kosmonavtika*, No. 9, 1984, 36-37; Engr.-Col. M. Rebrov, "Strategy of Space Madness," *Krasnaya zvezda*, May 11, 1984.

<sup>8</sup>Col. V. Gorenko, "The 'Shuttle' Space System in the Pentagon's Plans," *Zarubezhnoye voyennoye obozreniye*, No. 4, 1985, 45.

<sup>9</sup>Col. M. Ponomarev, "What Kind of 'Initiative' is the White House Pushing?" *Krasnaya zvezda*, February 3, 1985, 3.

<sup>10</sup>MSU D. F. Ustinov, "Struggle for Peace, Strengthen Combat Capabilities," *Pravda*, November 19, 1983, 4.

<sup>11</sup>For example, see Y. Listvinov, "Space Research, American Style," *International Affairs*, No. 11, 1968.

<sup>12</sup>*Soviet Military Power* (Washington, D.C.: GPO, 1987), 45-61.

<sup>13</sup>For example, see Michael Krepon and D. Geoffrey Pick, "Another Alarm on Soviet ABMs," *Bulletin of the Atomic Scientists*, June-July, 1985, 34-36.

<sup>14</sup>"The Strategic Defense Initiative," U.S. Department of State Special Report No. 129, June 1985, 3-5.

<sup>15</sup>Peter A. Clausen, "SDI in Search of a Mission," *World Policy Journal*, Vol. II, No. 2, Spring 1985, 250.

<sup>16</sup>*Ibid.*

<sup>17</sup>*Ibid.*, 268.

<sup>18</sup>*Ibid.*, 250.

<sup>19</sup>David B. Rivkin, Jr., "What Does Moscow Think?" *Foreign Policy*, No. 59, Summer 1985, 85.

<sup>20</sup>See Mary C. FitzGerald, *The New Revolution in Soviet Military Affairs* (Pergamon-Brassey's International Defense Publishers, Inc., forthcoming.)

<sup>21</sup>James M. McConnell, "Shifts in Soviet Views on the Proper Focus of Military Development," *World Politics*, Vol. XXXVII, No. 3, April 1985, 319.

<sup>22</sup>Richard Pipes, "Why the Soviet Union Thinks It Could Fight and Win a Nuclear War," *Commentary*, Vol. 64, No. 1, July 1977, 22; and Leon Goure, et al., *The Role of Nuclear Forces in Current Soviet Strategy* (University of Miami, FL: Center for Advanced International Studies, 1974), 24.

<sup>23</sup>Pipes, "Why," 22.

<sup>24</sup>Frank R. Barnett, "Preface," in William F. Scott, *Soviet Sources of Military Doctrine and Strategy* (NY: Crane, Russak, and Co., Inc., 1975), vii.

<sup>25</sup> Benjamin S. Lambeth, *The State of Western Research on Soviet Military Strategy and Policy*, RAND Report #N-2230-AF (Santa Monica, CA: RAND, 1984), 51.

<sup>26</sup> For example, see Robert L. Arnett, *Soviet Attitudes Toward Nuclear War Survival (1962-1977): Has There Been a Change?*, unpublished Ph.D. dissertation, The Ohio State University, 1979, 14; William R. Van Cleave, "Soviet Doctrine and Strategy: A Developing American View," in Lawrence L. Whetten (ed.), *The Future of Soviet Military Power* (NY: Crane, Russak, and Co., Inc., 1976), 43-44; William T. Lee, *Understanding the Soviet Military Threat: How CIA Estimates Went Astray* (NY: National Strategy Information Center, 1977), 37; and Robert Axelrod and William Zimmerman, *The Soviet Press on Foreign Policy: A Usually Reliable Source* (Final Report to the National Council for Soviet and East European Research), University of Michigan, 2.

<sup>27</sup> G. Gerasimov, "Current Problems of World Policy," *Mirovaya ekonomika i mezhdunarodnyye otnosheniya* (hereafter cited as *MEMO*), No. 7, 1983, 100.

<sup>28</sup> A. G. Arbatov, "Limiting Anti-Missile Defense Systems: Problems, Lessons, and Prospects," *SShA: ekonomika, politika, ideologiya* (hereafter cited as *SShA*), No. 12, 1984, 17.

<sup>29</sup> MSU N. Ogarkov, "On Guard Over Peaceful Labor," *Kommunist*, No. 10, 1981, 82.

<sup>30</sup> Col. L. Semeyko, "In Pursuit of Superiority," *Krasnaya zvezda*, August 5, 1983, 3.

<sup>31</sup> Col. L. Semeyko, "Stability or Destabilization? Two Approaches to the Path of Development of the Modern World," *Izvestiya*, June 14, 1984, 5.

<sup>32</sup> M. S. Gorbachev, Speech, *Partiynaya zhizn'*, No. 21, 1986, 6.

<sup>33</sup> "Answers of USSR Defense Minister MSU S. L. Sokolov, to



TASS Correspondent's Questions," *Krasnaya zvezda*, May 5, 1985, 1.

<sup>34</sup>MSU S. L. Sokolov, "Preserving What Has Been Achieved in the Sphere of Strategic Arms Limitation," *Pravda*, November 6, 1985, 4.

<sup>35</sup>"Comrade V. V. Grishin's Address," *Izvestiya*, October 30, 1983, 2. See also Col. M. Ponomarev, "Preventing a Nuclear Catastrophe," *Krasnaya zvezda*, April 10, 1983, 3; "A Large-Scale Provocation Against Peace," *Pravda*, March 23, 1984, 5.

<sup>36</sup>Mary C. FitzGerald, *Changing Soviet Doctrine on Nuclear War* (Academic International Press, forthcoming).

<sup>37</sup>Raymond L. Garthoff, "Mutual Deterrence and Strategic Arms Limitation in Soviet Policy," *Strategic Review*, Vol. X, No. 4, Fall 1982, 45.

<sup>38</sup>For example: "ravnovesiye sil" ("equilibrium of forces"), "balans sil" ("balance of forces"), "ravenstvo" ("equality"), and "paritet" ("parity").

<sup>39</sup>Col. G. Lukava, "The Military Equilibrium and the Security of Peoples," *Kommunist vooruzhennykh sil*, No. 23, 1984, 20.

<sup>40</sup>MSU D. F. Ustinov, "Averting the Threat of Nuclear War," *Pravda*, July 12, 1982, 4.

<sup>41</sup>MSU S. Akhromeyev, "Washington's Assertions and the Actual Facts," *Pravda*, October 19, 1985, 4.

<sup>42</sup>See the following by MSU N. V. Ogarkov: "The Great Feat of the Soviet People," *Izvestiya*, May 9, 1978, 3; "In the Interests of Raising Combat Readiness," *Kommunist vooruzhennykh sil*, No. 14, 1980, 26; *Vsegda v gotovnosti k zashchite Otechestva* (Moscow: Voenizdat, 1982), 15; "A Reliable Defense to Peace," *Krasnaya zvezda*, September 23, 1983, 2; *Istoriya uchit bditel'nosti* (Moscow: Voenizdat, 1985), 88.

<sup>43</sup>Semeyko, "Stability or Destabilization?," 5.

<sup>44</sup>MSU S. Sokolov, "The Great Victory," *Kommunist*, No. 6, 1985,

67.

<sup>45</sup>For example, see MSU V. Petrov, "For Mutual Restraint," *Pravda*, December 28, 1985, 4; General of the Army Yu. P. Maksimov, "In Constant Combat [Readiness]," *Sovetskiy voin*, No. 21, 1985, 2; Gen.-Lt. D. Volkogonov, "The Strategy of Adventurism," *Zarubezhnoye voyennoye obozreniye*, No. 5, 1984, 8; Col. T. P. Kondratkov, "A Neo-Conservative Ideology in the Service of Militarism," *Voprosy filosofii*, No. 5, 1984, 98; Ponomarev, "Nuclear Catastrophe," 3.

<sup>46</sup>"Comrade L. I. Brezhnev's Speech," *Pravda*, January 19, 1977, 2.

<sup>47</sup>McConnell, "Shifts in Soviet Views," 330.

<sup>48</sup>"Comrade L. I. Brezhnev's Answers to Questions From the German Social Democratic Weekly, *Vorwärts*," *Izvestiya*, May 4, 1978, 1.

<sup>49</sup>"A. A. Gromyko's Address," *Pravda*, September 28, 1984, 4.

<sup>50</sup>A. G. Arbatov, "The Strategy of Nuclear Madness," *Kommunist*, No. 6, 1981, 105-106.

<sup>51</sup>A. G. Arbatov, *Voyenno-strategicheskiy paritet i politika SShA* (Moscow: Politizdat, 1984), 198.

<sup>52</sup>O. Bykov, "The Main Problem of Mankind in General," *MEMO*, No. 3, 1980, 6.

<sup>53</sup>See the following by MSU N. V. Ogarkov: "Military Strategy," in *Sovetskaya Voyennaya Entsiklopediya*, Vol. 7 (Moscow: Voenizdat, 1979), 564; "Socialism Is Able To Defend Itself," *Krasnaya zvezda*, February 23, 1979, 3; "The Myth of the 'Soviet Military Threat' and Reality," *Pravda*, August 2, 1979, 5; "On Guard," 88-89; *Vsegda*, 56-57; "The Unfading Glory of Soviet Weapons," *Kommunist vooruzhennykh sil*, No. 21, 1984, 24.

<sup>54</sup>Ustinov, "Averting Threat," 4.

<sup>55</sup>Gen.-Maj. R. Simonyan, "On the Risk of Confrontation," *Pravda*,

June 14, 1977, 5.

<sup>56</sup>Col. L. Semeyko, "A Stake on Undermining Stability," *Krasnaya zvezda*, November 1, 1984, 3.

<sup>57</sup>For example, see Gen.-Lt. P. Zhilin, "U.S.A. -- Bulwark of Reaction and Militarism," *Mezhdunarodnaya zhizn'*, No. 4, 1982, 82.

<sup>58</sup>MSU D. F. Ustinov, *Radi mira na zemlye* (Moscow, 1983), 184.

<sup>59</sup>"K. U. Chernenko's Answers to the Questions of S. Loory, American Cable News Network Correspondent," *Sovetskaya Rossiya*, February 2, 1985, 1.

<sup>60</sup>V. V. Shcherbitskiy, Speech, *Pravda*, March 8, 1985, 4.

<sup>61</sup>Col. V. Chernyshev, "Sinister Deception," *Krasnaya zvezda*, April 4, 1985, 3.

<sup>62</sup>Col. V. Viktorov, "The U.S. on the Path of Militarizing Space," *Zarubezhnoye voyennoye obozreniye*, No. 9, 1984, 44.

<sup>63</sup>Col. M. Ponomarev, "Washington's Militarist Provocations," *Krasnaya zvezda*, April 15, 1984, 3.

<sup>64</sup>Col. E. Buynovski and L. Tkachev, "'Star' Weapons," *Aviatsiya i kosmonavtika*, No. 8, 1984, 11.

<sup>65</sup>Cited in V. V. Zhurkin, "Who Is Undermining Stability," *SShA*, No. 7, 1983, 5.

<sup>66</sup>M. S. Gorbachev, Speech, *Pravda*, April 28, 1985, 2.

<sup>67</sup>Ustinov, "Struggle for Peace," 4.

<sup>68</sup>MSU S. Akhromeyev, "The ABM Treaty -- An Obstacle in the Path of the Strategic Arms Race," *Pravda*, June 4, 1985, 4.

<sup>69</sup>Akhromeyev, "Washington's Assertions," 4.

<sup>70</sup>General of the Army V. M. Shabanov, "Prohibiting the

Militarization of Space," *Krasnaya zvezda*, November 14, 1985, 3.

<sup>71</sup> Engr.-Col. M. Rebrov, "Space Adventurism," *Krasnaya zvezda*, May 23, 1984, 3.

<sup>72</sup> Volkogonov, "Adventurism," 7.

<sup>73</sup> Lt. Col. Yu. Mikhaylov, "For Space Without Weapons," *Aviatsiya i kosmonavtika*, No. 12, 1983, 45.

<sup>74</sup> Ye. Velikhov, "Space Ambitions -- Earthly Threats," *Pravda*, April 20, 1984, 6.

<sup>75</sup> Shabanov, "Prohibiting," 3.

<sup>76</sup> Akhromeyev, "ABM Treaty," 4.

<sup>77</sup> For example, see Arbatov, "Limiting," 26; A. Bovin, "Fantasies and Reality," *Izvestiya*, April 21, 1983, 5.

<sup>78</sup> "Chernenko's Answers to Loory," 1.

<sup>79</sup> M. S. Gorbachev, Speech, *Izvestiya*, June 27, 1985, 2.

<sup>80</sup> "Answers of Sokolov," 3.

<sup>81</sup> Akhromeyev, "Washington's Assertions," 5.

<sup>82</sup> General of the Army V. Shabanov, "What Stands Behind the 'Technological Dash' Into Space?" *Izvestiya*, July 24, 1985, 5; Col. V. Chernyshev, "Preventing the Militarization of Space -- A Key Problem," *Krasnaya zvezda*, March 17, 1985, 3; and Semeyko, "Stability or Destabilization?" 5.

<sup>83</sup> Arbatov, "Limiting," 25-26.

<sup>84</sup> Ustinov, "Struggle for Peace," 4.

<sup>85</sup> "Answers of Sokolov," 3.

<sup>86</sup> Akhromeyev, "ABM Treaty," 4. See also A. Kokoshin, "Illusions and Dangers: Who Benefits by the Plans for Militarizing Space?" *Pravda*,

October 22, 1984, 6.

<sup>87</sup>"M. S. Gorbachev's Press Conference," *Pravda*, November 22, 1985, 3.

<sup>88</sup>Semeyko, "Pursuit of Superiority," 3.

<sup>89</sup>Arbatov, "Limiting," 26-27.

<sup>90</sup>Arbatov, *Voyenno-strategicheskiy paritet*, 235-236.

<sup>91</sup>A. Gromyko and V. Lomeyko, *Novoye myshleniye v yadernyi vek* (Moscow: "Mezhdunarodnyye Otnosheniya," 1984), 71.

<sup>92</sup>A. Kozyrev, "Militarists in Space," *Pravda*, March 28, 1983, 5.

<sup>93</sup>"Chernenko's Answers to Loory," 1.

<sup>94</sup>"Gorbachev's Interview with *Pravda*," 1.

<sup>95</sup>McConnell, "Shifts in Soviet Views," 328.

<sup>96</sup>Lt. Col. Ye. Rybkin, "On the Essence of World Nuclear-Missile War," *Kommunist vooruzhennykh sil*, No. 17, 1965, 54ff.

<sup>97</sup>V. M. Bondarenko, *Sovremennaya nauka i razvitiye voyennovo dela* (Moscow, 1976), 131-132.

<sup>98</sup>McConnell, "Shifts in Soviet Views," 330.

<sup>99</sup>V. I. Zamkovoï and M. N. Filatov, *Filosofiya agressii* (Alma-Ata: "Kazakhstan," 1981), 230, 270, 276, 288.

<sup>100</sup>For example, see Rivkin, "What Does Moscow Think?" 99.

<sup>101</sup>"Andropov's Answers to *Pravda* Correspondent," 1.

<sup>102</sup>"M. S. Gorbachev's Replies to the American *Time* Magazine," *Krasnaya zvezda*, September 3, 1985, 1.

<sup>103</sup>A. A. Gromyko, "On the International Situation and the Soviet Union's Foreign Policy," *Izvestiya*, June 17, 1983, 2.

- <sup>104</sup> Arbatov, "Limiting," 21.
- <sup>105</sup> A. Kokoshin, "Space and Security," *Pravda*, January 29, 1985, 4.
- <sup>106</sup> A. Kokoshin, "Space Is Not an Arena for Confrontation," *Vek xx i mir*, No. 12, 1983, 21. See also Yu. Cheplygin, "Space: Alarm and Hopes," *Pravda*, December 3, 1984, 6.
- <sup>107</sup> Bovin, "Fantasies and Reality," 5.
- <sup>108</sup> Sokolov, "Preserving," 4.
- <sup>109</sup> Akhromeyev, "ABM Treaty," 4.
- <sup>110</sup> *Ibid.*, 4.
- <sup>111</sup> Shabanov, "Prohibiting," 3.
- <sup>112</sup> Col. V. Chernyshev, "In the Role of Petitioner for the 'Space Umbrella,'" *Krasnaya zvezda*, February 6, 1985, 3.
- <sup>113</sup> Zamkovoï and Filatov, *Filosofiya*, 230.
- <sup>114</sup> Kokoshin, "Space Is Not an Arena," 22.
- <sup>115</sup> *Ibid.*, 23.
- <sup>116</sup> A. G. Arbatov, "Military-Strategic Equilibrium and the Policy of the Reagan Administration," *MEMO*, No. 10, 1984, 7.
- <sup>117</sup> A. G. Arbatov, "The Mirages of 'Strategic Defense,'" *Sovetskaya Rossiya*, February 22, 1985, 5.
- <sup>118</sup> Kokoshin, "Space Is Not an Arena," 20.
- <sup>119</sup> For example, see Gerasimov, "Current Problems," 100.
- <sup>120</sup> "Gorbachev's Replies to *Time*," 1.
- <sup>121</sup> Ye. Velikhov, "The Illusions of 'Star Wars,'" *Sovetskaya Rossiya*, April 21, 1985, 5.

<sup>122</sup>For example, see Kokoshin, "Space and Security," 4; Zhurkin, "Who Is Undermining," 5; Bovin, "Fantasies and Reality," 5; F. Aleksandrov, "How the 'Star Wars' Are Being Prepared," *Krasnaya zvezda*, March 8, 1985, 5.

<sup>123</sup>Arbatov, "Limiting," 25.

<sup>124</sup>Kokoshin, "Illusions and Dangers," 7.

<sup>125</sup>S. Kulik, "Deliberate Deception: That Is the Thrust of the Propaganda Campaign Unleashed in the U.S. Around the 'Star Wars' Program," *Krasnaya zvezda*, February 26, 1985, 3.

<sup>126</sup>Buynovskiy and Tkachev, "Star Weapons," 10-11.

<sup>127</sup>Shabanov, "Prohibiting," 3.

<sup>128</sup>Velikhov, "Space Ambitions," 6.

<sup>129</sup>For example, see Kokoshin, "Space Is Not an Arena," 20; Kokoshin, "Illusions and Dangers," 6; Zhurkin, "Who Is Undermining," 5-6; "Large-Scale Provocation," 5.

<sup>130</sup>A. Kokoshin, "U.S. Debates on Plans for Creating a Space Anti-Missile System," *SShA*, No. 11, 1983, 45.

<sup>131</sup>Arbatov, "Mirages," 5.

<sup>132</sup>For example, see V. Falin, "Space -- The Moment of Truth," *Izvestiya*, December 14, 1984, 5.

<sup>133</sup>Arbatov, *Voyenno-strategicheskiy paritet*, 235.

<sup>134</sup>Kokoshin, "Space Is Not an Arena," 20.

<sup>135</sup>A. Tolkunov, "Sermon of Space Adventures," *Pravda*, May 24, 1984, 4.

<sup>136</sup>For example, see FitzGerald, *New Revolution*.

<sup>137</sup>Ogarkov, "Military Science and the Defense of the Socialist

Fatherland," *Kommunist*, No. 7, 1978, 117.

<sup>138</sup> Ogarkov, *Vsegda*, 36.

<sup>139</sup> Ogarkov, *Istoriya*, 49.

<sup>140</sup> I am indebted to Ambassador Raymond L. Garthoff for this point.

<sup>141</sup> Ogarkov, *Istoriya*, 51.

<sup>142</sup> See Mary C. FitzGerald, "Marshal Ogarkov on the Modern Theater Operation," *Naval War College Review*, Vol. XXXIX, No. 4, Autumn 1986.

<sup>143</sup> Raymond L. Garthoff, "SALT I: An Evaluation," *World Politics*, Vol. XXXI, No. 1, October, 1978, in *Current News* (Special Edition), No. 409, April 19, 1979, 3.

<sup>144</sup> *Ibid.*, 5.

<sup>145</sup> G. Trofimenko, "Washington's Strategic Gambles," *SShA*, No. 12, 1980, 54.

<sup>146</sup> Garthoff, "Deterrence and Arms Limitation," 43.

<sup>147</sup> *Ibid.*, 42.

<sup>148</sup> Arbatov, "Strategy of Madness," 102-103. Not all Westerners agree that the Soviet Union accepts M.A.D. as a reality in present-day conditions.

<sup>149</sup> Gerasimov, "Current Problems," 99.

<sup>150</sup> Ogarkov, "Reliable Defense," 2.

<sup>151</sup> MSU N. V. Ogarkov, "Defense of Socialism: The Experience of History and the Present," *Krasnaya zvezda*, May 9, 1984, 3.

<sup>152</sup> Col. L. Semeyko, "Dangerous Feature," *Krasnaya zvezda*, January 23, 1986, 3.



<sup>153</sup> Bykov, "Main Problem," 6.

<sup>154</sup> Arbatov, *Voyenno-strategicheskiy paritet*, 196-197.

<sup>155</sup> M. S. Gorbachev, *Politicheskiy Doklad Tsentral'noy Komiteta KPSS XXVII S'ezdu Kommunisticheskoy Partii Sovetskogo Soyuza* (Moscow: Politizdat, 1986), 80.

<sup>156</sup> Gerasimov, "Current Problems," 99. See also G. Gerasimov, "For Space Without Wars: The Earth is the Pentagon's Hostage," *Komsomol'skaya pravda*, May 23, 1984, 3.

<sup>157</sup> Arbatov, "Limiting," 18.

<sup>158</sup> G. A. Trofimenko, "U.S. Military Strategy -- Instrument of an Aggressive Policy," *SShA*, No. 1, 1985, 15.

<sup>159</sup> A. Borovik, "Don't Make the Stars a Target," *Sovetskaya Rossiya*, July 3, 1984, 3.

<sup>160</sup> F. Burlatskiy, "Geneva Realism and Space Weapons," *Literaturnaya gazeta*, January 23, 1985, 9.

<sup>161</sup> Chernyshev, "Space Umbrella," 3.

<sup>162</sup> Capt. 2nd Rank V. Kuzar', "The Threat From Space," *Krasnaya zvezda*, March 20, 1985, 3.

<sup>163</sup> Arbatov, "Mirages," 5.

<sup>164</sup> V. I. Bogachev, "The Dubious Conclusions of 'Star Wars' Proponents," *SShA*, No. 5, 1985, 69-70.

<sup>165</sup> A. Kokoshin, "In Pursuit of Illusions: The Shaky Arguments of 'Star Wars' Proponents," *Pravda*, June 14, 1985, 4.

<sup>166</sup> MSU S. F. Akhromeyev, "The Great Victory and Its Lessons," *Izvestiya*, May 7, 1985, 2.

<sup>167</sup> "Report of the General Secretary of the C.P.S.U. Central

Committee, Comrade L. I. Brezhnev," *Pravda*, February 24, 1981, 4. See also FitzGerald, *Changing Soviet Doctrine*.

<sup>168</sup>Volkogonov, "Adventurism," 7.

<sup>169</sup>Semeyko, "Pursuit of Superiority," 3.

<sup>170</sup>Chernyshev, "Space Umbrella," 3.

<sup>171</sup>Ponomarev, "Initiative," 3.

<sup>172</sup>Arbatov, "Limiting," 19.

<sup>173</sup>For example, see Ponomarev, "Initiative," 3; Kokoshin, "Space and Security," 4.

<sup>174</sup>Col. L. Semeyko, "A First-Strike Potential is Being Created," *Krasnaya zvezda*, November 2, 1984, 3.

<sup>175</sup>"Gorbachev's Replies to *Time*," 1.

<sup>176</sup>Sokolov, "Preserving," 4.

<sup>177</sup>Chernyshev, "Preventing Militarization," 3.

<sup>178</sup>Shabanov, "Prohibiting," 3.

<sup>179</sup>Velikhov, "Illusions," 5; see also Bovin, "Fantasies and Reality," 5; Yu. Sadov, "One Against All: U.S. Plans for Militarizing Space," *Pravda*, February 28, 1984, 4; "Bringing Peace to Space," *Izvestiya*, August 11, 1984, 1.

<sup>180</sup>F. Burlatskiy, "Military Games," *Literaturnaya gazeta*, August 10, 1983, 10.

<sup>181</sup>"Chernenko's Answers to Loory," 1.

<sup>182</sup>Akhromeyev, "ABM Treaty," 4.

<sup>183</sup>"General Secretary M. S. Gorbachev's Report," *Pravda*, November 28, 1985, 1.

- <sup>184</sup>"Answers of Sokolov," 3.
- <sup>185</sup>Velikhov, "Illusions," 5.
- <sup>186</sup>P. Pavlov, "Space: Washington's Words and Ambitions," *Izvestiya*, July 28, 1983, 5.
- <sup>187</sup>Sokolov, "Preserving," 4.
- <sup>188</sup>Akhromeyev, "ABM Treaty," 4.
- <sup>189</sup>*Ibid.*
- <sup>190</sup>Akhromeyev, "Washington's Assertions," 5.
- <sup>191</sup>Sokolov, "Preserving," 4.
- <sup>192</sup>Keith B. Payne and Colin S. Gray, "Nuclear Policy and the Defensive Transition," *Foreign Affairs*, Spring, 1984, 835.
- <sup>193</sup>Krepon and Pick, "Another Alarm," 36.
- <sup>194</sup>H. Grunwald, "Foreign Policy Under Reagan II," *Foreign Affairs*, Winter 1984-1985, 224.
- <sup>195</sup>Velikhov, "Space Ambitions," 6.
- <sup>196</sup>Kokoshin, "Illusions and Dangers," 6. See also Lt. Col. S. Sergeyev, "Washington's Space Plans," *Krasnaya zvezda*, September 26, 1984, 3.
- <sup>197</sup>M. S. Gorbachev, Speech, *Pravda*, January 16, 1986, 1.
- <sup>198</sup>Arbatov, "Limiting," 26. See also Gen.-Maj. Yu. Lebedev, "The U.S.: A Stake on Military Superiority," *Zarubezhnoye voyennoye obozreniye*, No. 1, 1987, 9.
- <sup>199</sup>"Answers of Sokolov," 3.
- <sup>200</sup>Sokolov, "Preserving," 4.
- <sup>201</sup>Akhromeyev, "ABM Treaty," 4.

- <sup>202</sup> Akhromeyev, "Washington's Assertions," 5.
- <sup>203</sup> FitzGerald, *New Revolution*.
- <sup>204</sup> I am indebted to Raymond L. Garthoff for this discussion.
- <sup>205</sup> Arbatov, "Limiting," 21.
- <sup>206</sup> Akhromeyev, "Washington's Assertions," 5.
- <sup>207</sup> Shabanov, "Prohibiting," 3.
- <sup>208</sup> Col. L. Semeyko, "Counting on Impunity -- On the New Militarist Concept of the White House," *Krasnaya zvezda*, April 15, 1983, 3.
- <sup>209</sup> Col. L. Semeyko, "Real and Imaginary Interconnections: Two Approaches to Disarmament Problems," *Sovetskaya Rossiya*, July 25, 1984, 5.
- <sup>210</sup> Col. V. Chernyshev, " 'New' Concept, Old Position," *Krasnaya zvezda*, February 22, 1985, 3.
- <sup>211</sup> M. S. Gorbachev, Speech, *Pravda*, April 28, 1985, 2.
- <sup>212</sup> "M. S. Gorbachev's Press Conference," *Krasnaya zvezda*, October 14, 1986, 3.
- <sup>213</sup> "Comrade M. S. Gorbachev's Speech," *Politicheskoye Samoobrazovaniye*, No. 5, 1986, 3.
- <sup>214</sup> MSU S. Akhromeyev, "The Superiority of Soviet Military Science and Soviet Military Art as One of the Most Important Factors of Victory in the Great Patriotic War," *Kommunist*, No. 3, 1985, 61.
- <sup>215</sup> Gromyko and Lomeyko, *Novoye myshleniye*, 72.
- <sup>216</sup> V. Falin, "Fact and Fancy," *Izvestiya*, April 10, 1985, 5.
- <sup>217</sup> Ye. Velikhov and A. Kokoshin, "Nuclear Weapons and the Dilemmas of International Security," *MEMO*, No. 4, 1985, 39.

<sup>218</sup>Arbatov, "Limiting," 26.

<sup>219</sup>Velikhov, "Illusions," 5.

<sup>220</sup>Arbatov, "Limiting," 26.

<sup>221</sup>*Ibid.*, 25.

<sup>222</sup>Falin, "Fact and Fancy," 5.

<sup>223</sup>Falin, "Space," 5.

<sup>224</sup>Capt. 3rd Rank A. Smirnov and Lt. A. Smirnov, "Ballistic Missiles for Nuclear-Powered Submarines," *Zarubezhnoye voyennoye obozreniye*, No. 8, 1984, 73.

<sup>225</sup>Col. V. Chernyshev, "Preparing a First Nuclear Strike," *Krasnaya zvezda*, March 28, 1985, 3.

<sup>226</sup>Petrov, "For Mutual Restraint," 4.

<sup>227</sup>Arbatov, *Voyenno-strategicheskii paritet*, 235.

<sup>228</sup>Kuzar', "Threat from Space," 3.

<sup>229</sup>Chernyshev, "Preventing Militarization," 3.

<sup>230</sup>V. Pustov, "Washington: A Policy of Recklessness," *Krasnaya zvezda*, June 22, 1986, 3.

<sup>231</sup>FitzGerald, *New Revolution*.

<sup>232</sup>"Answers of Sokolov," 3. Sokolov's formulation has since been echoed by numerous elite commentators. For example, see Gen.-Maj. A. Federov, "What Is Hidden Behind the Billboard," *Krasnaya zvezda*, July 2, 1985, 3.

<sup>233</sup>Cited by Ogarkov in "Press Conference in Moscow," *Pravda*, December 6, 1983, 4. See also "MSU D. F. Ustinov's Address," *Krasnaya zvezda*, December 15, 1983, 1-2; Admiral S. Gorshkov, "Remember the War," *Morskoi sbornik*, No. 5, 1984, 7; Gen.-Lt. D. A. Volkogonov, "The

Logic of Retaliatory Measures," *Komsomol'skaya pravda*, December 14, 1983, 3; G. Shakhnazarov, "The Logic of Political Thinking in the Nuclear Age," *Voprosy filosofii*, No. 5, 1984, 65.

1

1984