The views expressed in this paper are these of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

AD-A263 885

# A NEW DIRECTION FOR NON-PROLIFERATION POLICY: WEAPONS OF MASS DESTRUCTION AND THE THIRD WORLD

A Garage and

BY

# LIEUTENANT COLONEL DARRYL W. KILGORE United States Army

DISTRIBUTION STATEMENT A: Approved for public release. Distribution is unlimited.



STUDY

PROJECT

USANC DUESC DE 1903

Best Available Copy

93-10121

ECURITY CLASSIFICATION OF THIS PAGE		Form Approved			
REPORT DOCUMENTATION PAGE					OMB No. 0704-0188
<ul> <li>REPORT SECURITY CLASSIFICATION Unclassified</li> </ul>	15. RESTRICTIVE MARKINGS				
2a. SECURITY CLASSIFICATION AUTHORITY		3. DISTRIBUTION / AVAILABILITY OF REPORT			
26. DECLASSIFICATION / DOWNGRADING SCHEDULE		Approved for public release. Distribution is unlimited.			
4. PERFORMING ORGANIZATION REPORT NUMBER(S)		5. MONITORING ORGANIZATION REPORT NUMBER(S)			
a. NAME OF PERFORMING ORGANIZATION U.S. Army War College	6b. OFFICE SYMBOL (If applicable)	7a. NAME OF MONITORING ORGANIZATION			
ic. ADDRESS (City, State, and ZiP Code)		75. ADDRESS (Cr	ty State and Zi	P Code)	
Root Hall, Building 122 Carlisle, PA 17013-5050			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
3a. NAME OF FUNDING / SPONSORING ORGANIZATION	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER				
ac. ADDRESS (City, State, and ZIP Code)		10. SOURCE OF	UNDING NUMB	ERS	
		PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO
A New Direction for Non-Proli	feration Policy:	Weapons of M	lass Destru	ction a	nd the Third
Study Project FROM	E COVERED	Weapons of M 14 DATE OF REPC 93 Feb 26	DRT (Year, Mont		nd the Third 5. PAGE COUNT 40
A New Direction for Non-Proli World - Uncl 2. PERSONAL AUTHOR(S) Darryl W. Kilgore, LTC, USA 13a. TYPE OF REPORT Study Project 135. SUPPLEMENTARY NOTATION	E COVERED	14. DATE OF REPC 93 Feb 26	DRT (Year, Mont	h, Day) 11	S. PAGE COUNT 40
A New Direction for Non-Proli World - Uncl 12. PERSONAL AUTHOR(S) Darryl W. Kilgore, LTC, USA 13a. TYPE OF REPORT Study Project 15. SUPPLEMENTARY NOTATION 17. COSATI CODES	E COVERED TO 18. SUBJECT TERMS	14. DATE OF REPC 93 Feb 26 Continue on revers	DRT (Year, Mont	h, Day) 11	S. PAGE COUNT 40
A New Direction for Non-Proli World – Uncl 12. PERSONAL AUTHOR(S) Darryl W. Kilgore, LTC, USA 13a. TYPE OF REPORT Study Project 15. SUPPLEMENTARY NOTATION 17. COSATI CODES FIELD GROUP SUB-GROUP	E COVERED TO TO TO TO TO TO TO TO TO TO	14. DATE OF REPC 93 Feb 26 (Continue on reverse number) on in the Thin hary of non-p to the conclu- ptions are pr l World natio Impact of con- nace policy; a	rd World i. roliferati sion that ovided on ns search tinuing wi nd third.	h, Day) 11 nd identify s a majo on polio the exis potention for the th curro an appro	S. PAGE COUNT 40 • by block number) or national cies along with sting non-prolif al ways and mean ir niche in the ent policies; oach that
A New Direction for Non-Proli World - Uncl 2. PERSONAL AUTHOR(S) Darryl W. Kilgore, LTC, USA 13a. TYPE OF REPORT Study Project 13b. TIM FROM 13b. TIM	E COVERED TO TO TO TO TO TO TO TO TO TO	(Continue on reverse (Continue on reverse) (Continue on	ord World i. roliferati. sion that ovided on ns search tinuing wi nd third, a counter	h, Day) 19 nd identify on polic the exis potentia for the: th curre an appro to seek:	5. PAGE COUNT 40 by block number) or national cies along with sting non-prolif al ways and mean ir niche in the ent policies; oach that ing regional

# USAWC MILITARY STUDIES PROGRAM PAPER

The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

A NEW DIRECTION FOR NON-PROLIFERATION POLICY: Weapons of Mass Destruction and the Third World

#### AN INDIVIDUAL STUDY PROJECT

by

Lieutenant Colonel Darryl W. Kilgore United States Army

> Colonel Mark Walsh Project Advisor

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

U.S. Army War College Carlisle Barracks, Pennsylvania 17013

#### ABSTRACT

AUTHOR: Darryl W. Kilgore, LTC, USA

TITLE: A New Direction for Non-Proliferation Policy: Weapons of Mass Destruction and the Third World

FORMAT: Individual Study Project

DATE: 26 February 1993 PAGES: 40 CLASSIFICATION: Unclassified

The proliferation of weapons of mass destruction in the Third World is a major national security challenge. Although the United States has led world non-proliferation efforts for over four decades, the policies that have evolved, such as export controls and facility inspections, have proven to be ineffective. This ineffectiveness was clearly demonstrated when Iraq, a party to the 1968 Nuclear Non-Proliferation Treaty, blatantly violated treaty commitments by pursuing a clandestine nuclear weapons program. A summary of non-proliferation policies along with a discussion of current world realities lead to the conclusion that the existing non-proliferation regime is losing its potency. Three options are provided on potential ways and means of halting the spread of these weapons as Third World nations search for their niche in the post Cold War world. The options include the impact of continuing with current policies; an aggressive military-oriented forced compliance policy; and third, an approach that envisions nation building and developing economic power as a counter to seeking regional influence through mass destruction weapons.

. 1934 **S** 

Accesion For							
DTIC	ounced						
By Dist: ibution /							
Availability Codes							
Dist	Avail and / or Special						
A-1							

#### INTRODUCTION

The proliferation of weapons of mass destruction is "perhaps the greatest security challenge of the 1990's" according to former Secretary of State James Baker.<sup>1</sup> As a result, the United States recognizes non-proliferation efforts as a national security objective. The current <u>National Security Strategy of the</u> <u>United States</u> states that the U.S. seeks to prevent "...the spread of chemical, biological, and nuclear weapons and associated high-technology means of delivery."<sup>2</sup> The post Cold War rise of Third World countries demands U.S. non-proliferation policy be re-evaluated and new policy alternatives be considered that will achieve the ultimate goal of world peace and stability.

Appendix A illustrates the impact of proliferation in the Third World.<sup>3</sup> It is anticipated that by the year 2000, as many as 20 nations may have long range ballistic missiles possibly armed with chemical, biological, or nuclear warheads. Ambassador Henry Cooper, Director of the Strategic Defense Initiative Organization, recently wrote to Senator Sam Nunn, chairman of the Armed Services Committee, that "the threat to the U.S. homeland from accidental or unauthorized launch is present today, and the technology exists that would enable Third World countries to threaten the U.S. in the future."<sup>4</sup> The spread of weapons in the developing world and the yet unresolved situation with the former Soviet Union's nuclear arsenal, still deployed in at least four of the new republics, complicate the difficult issue of non-proliferation policy. Although the massive arsenals of the two superpowers are already being dramatically reduced, some quantity will continue to exist. The five declared nuclear weapon holders -- the United States, the former Soviet Union, Great Britain, France, and China -- have shown no interest in giving up their arsenals and, as has already been seen, many other states are actively pursuing possession of such weapons. Clandestine programs are ongoing as witnessed by the surprise of United Nations inspectors at the advanced state of Saddam Hussein's nuclear weapons program in Iraq. These events are sufficient to demonstrate that any idealistic hopes of a nuclear-free world are pure fantasy.

Although the United States has pursued a non-proliferation agenda for decades, the current world situation will need a policy with teeth and aggressive direction if it expects to achieve the stated national security objective of preventing the spread of mass destruction weapons.

# Why Nations Want These Weapons

Before tackling policy issues, an examination is warranted as to why developing nations want such weapons. Three basic

motivators appear to drive the desire to build arsenals of one or more of these weapons: to achieve security; to counter neighbors with like weapons; or to gain a position of power in the region.

Security, by itself, as a reason for a nation-state to need weapons of mass destruction, does not stand up. Self defense does not require nuclear or chemical capabilities. The threatening neighbor that possesses such weapons, however, may spark a desire to proliferate as a deterrent. Such a proliferation decision could increase the potential for a pre-emptive strike or trigger a local arms race. In either case, regional stability is weakened.<sup>5</sup> The Director of the U.S. Arms Control and Disarmament Agency, Ronald F. Lehman, realized this as he stated in a speech recently that the Agency's primary proliferation concern "is centered in areas of regional tension, such as the Middle East or South Asia where the desire to acquire modern, deadly weaponry is in large part a manifestation of the underlying political tensions."<sup>6</sup>

A case can then be made that internal security as well as neighbors with like weapons, although to a more limited degree, are not great drivers for a state to desire a mass destruction capability. Such a desire is more appropriately tied to an interest in being a significant regional player. As noted political writer Hedrick Smith states in <u>The Power Game</u>: "To be a player is to have power or influence on some issue."<sup>7</sup> Therefore

a nation is not going to be a major player in regional politics without a significant ability to project power in some way. Unfortunately, weapons of mass destruction provide a power position that is difficult to ignore. The desire for the power these weapons bring may be magnified if a nation does not have a critical geographic location or command a high demand commodity such as oil or precious metals.

# The Genie Is Out Of The Bottle

These reasons for the nation states to seek weapons of mass destruction must be kept in focus during the analysis of potential directions for U.S. policy. Also, it is important to realize that the non-proliferation battle is getting more complicated and even the best diplomatic efforts cannot get the genie back in the bottle. For example, nuclear technologies are almost fifty years old and even the United States is declassifying critical weapon design information and making it available to the world.<sup>8</sup> Large numbers of Third World scientists, engineers and technicians were educated at the best universities in the United States. The brain drain of scientists from the former Soviet Union, that may make their services available to developing nations, also supports the notion that the know-how to build bombs and missiles is readily available.

The bottom line is, like it or not, that virtually any

nation can now acquire weapons of mass destruction. In light of this, three options will be provided as policy positions on this difficult issue: Maintain the Current Course; Forced Compliance; or a Global Security and Regional Development Policy.

# OPTION 1: MAINTAIN THE CURRENT COURSE

#### Nuclear Weapons Background

The United States has led international efforts for nuclear non-proliferation since it became clear that no monopoly could be maintained on the bomb. China exploded a nuclear device in 1964 to join the United States in 1945, Soviet Union in 1949, Great Britain ln 1952, and France in 1960 as powers that had detonated a nuclear weapon.<sup>9</sup> Several other countries are known to have developed a nuclear weapons capability and some others are suspected of seeking such a capability.

In the mid-1960's, the United States, with support of the Soviet Union, pushed measures to control the spread of nuclear weapons resulting in the 1968 Nuclear Non-Proliferation Treaty (NPT). The NPT then joined the International Atomic Energy Agency (IAEA), created in 1957, to form the foundation of a world nuclear non-proliferation regime.

The IAEA is an outgrowth of the 1953 "Atoms for Peace" program that helped nations set up nuclear power projects upon disavowing nuclear weapons.<sup>10</sup> As an autonomous special agency of the United Nations, the mission of the IAEA is to promote the

peaceful uses of nuclear energy through a system of "safeguards" on the nucleir facilities of member nations. The safeguards consist of automatic monitors, surveillance cameras, and on-site inspections, designed to detect whether nuclear materials have been diverted for military purposes.<sup>11</sup>

The NPT requires nonnuclear states, defined as parties that had not deconated a weapon prior to 1967, to pledge not to develop nuclear explosives of any kind and agree to accept IAEA safeguards on their peaceful nuclear activities. The weapon state parties are prohibited from transferring nuclear explosives to nonnuclear states or helping them manufacture weapons. The weapon state parties do not give up their weapons but pledge to make good faith efforts to end the arms race and work toward global disarmament. All five of the declared nuclear weapon states are now under NPT jurisdiction since China and France finally became parties in 1991.

The NPT also requires that any nuclear equipment or materials exported by a signatory to any nonnuclear party must be under IAEA safeguards. This has led to a series of multilateral export controls and nuclear suppliers group agreements.<sup>12</sup>

The first export control effort came shortly after the NPT went into effect in 1970. Several countries agreed to a set of standard procedures for nuclear fuel and equipment exports to

nonnuclear weapon states in order to implement the IAEA safeguards requirement of the treaty. These members were known as the NPT Exporters Committee or more commonly the Zangger Committee. These procedures and a "trigger list" of materials and equipment to be exported only under safeguards was the first major agreement on uniform regulation of nuclear exports.<sup>13</sup>

India's detonation of a nuclear device in May, 1974 proved that a significant loophole existed in the Zangger Committee's export controls on technology which allowed India to build an unsafeguarded replica of a safeguarded power reactor.<sup>14</sup> This resulted in a series of US-led supplier meetings in which Canada, Germany, France, Japan, Great Britain, and the Soviet Union joined the United States in establishing the Nuclear Suppliers Group. This Group expanded the Zangger Committee requirements by imposing safeguards on nuclear technology exports and setting stricter standards on nuclear transfers. These multilateral export controls have been supplemented by unilateral legislation such as the U.S. Nuclear Non-Proliferation Act of 1978 which requires tighter safeguarding procedures than the NPT and also prohibits international transfer of plutonium or plutonium reprocessing technology.<sup>15</sup>

# Chemical and Biological Weapons Background

Chemical and biological weapons were banned in warfare by the 1925 Geneva Protocol. Although agreeing in principle, the United States did not ratify the protocol until 1975 and then reserved the right, as did most states, to retaliate with chemical weapons if an enemy violated the protocol. In essence, the 1925 protocol became a declaration of "no first use" and did not restrict the development or stockpiling of chemical weapons (CW).

Biological arms control has taken a different route. In 1969, President Richard Nixon unilaterally renounced U.S. use of any biological agent in warfare and destroyed all stocks. This action led to the 1972 Biological Weapons Convention (BWC) which extended the Geneva Protocol's "no first use" to a pledge never to develop, produce, or stockpile biological weapons or their means of delivery and was approved by acclamation when presented to the United Nations General Assembly.<sup>16</sup> The BWC contains no provision to verify compliance with treaty provisions. However, since biological agents would be so easy and inexpensive to produce as well as difficult to detect, verification would be an exercise in futility anyway. Also, biological agents have little battlefield utility and as stated by then Director of the Arms Control and Disarmament Agency, Fred Ikle, arguing for the BWC, that these weapons were "particularly repugnant from a moral

point of view [and that the Convention would] discourage some misguided competition in biological weapons.<sup>#17</sup> The United States ratified the BWC in 1975.

1

On February 8, 1982, President Reagan declared that "the ultimate goal of US Policy is to eliminate the threat of chemical warfare by achieving a complete and verifiable ban on chemical weapons."<sup>18</sup> A major milestone toward such a global ban was reached in June, 1990 when Presidents Bush and Gorbachev signed an agreement that calls for verified destruction of 80 percent of both US and Soviet stocks as well as the cessation of chemical weapons production.<sup>19</sup> This agreement also requires the development of verification procedures that will be especially critical to the success of the Chemical Weapons Convention (CWC) which was opened for signature in January, 1993.20 The CWC, upon entry into force, would ban the production, acquisition, stockpiling, and use of chemical weapons. The development of inspection and verification protocols, however, were delayed due to the internal changes in the Soviet Union. Although Russia has assumed responsibility for the destruction program, no start date has yet been specified. Western states have pledged to provide Russia with special financial and technical aid in their disposal program.<sup>21</sup>

Export Controls have also been established on chemicals. The United States is an active participant in the Australia Group

which was established in 1984 as a result of CW use in the Iran-Iraq war. This group of 22 industrialized nations set up controls on 54 chemical weapon precursors and a list of dual-use equipment that could be used in either EW or CW production.<sup>22</sup> Exercising control in this manner is difficult since many nations already have the capability and expertise to develop chemical weapons through existing industrial capabilities. Also, many Third World countries strongly believe such controls are discriminatory and interfere with the development of their own chemical industries.<sup>23</sup>

# Missile Background

Non-proliferation efforts for the previously mentioned mass destruction means have been working for decades. It is only recently, however, that control of the delivery means for these weapons has drawn attention. Though long evident in many Third World countries, missile programs gained special notoriety with Irag's SCUD attacks on Israel and Saudi Arabia during Operation Desert Storm.<sup>24</sup> Regional instability, specifically in the Middle East and South Asia, is fueled by the spread of these missile systems and the potential for arming these systems with nuclear, biological or chemical warheads.

The heart of missile proliferation policy rests in the

Missile Technology Control Regime (MTCR) which was formed in 1987 by the United States and Washington's six economic summit partners-Canada, France, Germany, Italy, Japan, and the United Kingdom. Membership has grown to twenty countries and many others have announced compliance with the regime guidelines of export controls that each partner implements through national legislation. The guidelines restrict transfer of components or technology relating to unmanned delivery systems of a 500 kilogram payload to a minimum distance of 300 kilometers.<sup>25</sup> The regime is currently working to adjust the payload requirements to insure that all possible mass destruction warheads will be included in the restriction.<sup>26</sup>

# Continue the Current Course?

During the cold war years, the US and USSR dominated the nuclear arena with massive arsenals and highly accurate delivery means that allowed "extended deterrence" to allied nations of each side. The superpowers enjoyed a special role that may not be as desirable to Third World states in the post cold war world. However, the prescription for the future appears to be just an extension of the previously outlined policies.<sup>27</sup>

Continuing to pursue and strengthen the past policy is complicated in two ways. First, more nations have the capability

to obtain weapons of mass destruction and secondly, more nations have an incentive to do so. The covert arsenals that Israel and India apparently developed in the late 1970's have had an impact. For example, as a counter to India, Pakistan started a nuclear program. Such events have strained regional politics. By the end of the 1980's, Iraq, Iran, Libya, Algeria, North Korea, Taiwan, South Africa, Brazil, and Argentina were all suspected of having a nuclear weapon or trying to buy one.<sup>24</sup> The last four of these states have specifically renounced their nuclear intentions. Brazil and Argentina have even agreed to confidence building measures within their region by establishing a program of bilateral nuclear facility inspections to be overseen by the IAEA. However, it is noteworthy that both countries continue to reject the NPT as discriminatory.<sup>29</sup>

The unraveling of non-proliferation policy is most obvious in activities found in Iraq after the Gulf War. UN inspectors found evidence that confirmed a program much more advanced than generally expected. Also, the failure of the IAEA to detect the many violations demonstrates that the safeguards have been ineffective.<sup>30</sup> Although a party to the NPT since 1969, this obviously did not dampen Iraq's desire to cheat on an international commitment. Indeed, the sophisticated uranium-enriching process that was found operating in Iraq may not have been detected at all except for information revealed by an Iraqi nuclear engineer that defected after the war.<sup>31</sup> This

also raises serious doubts about the potential for other countries, even under NPT and IAEA supervision, to be developing hidden nuclear weapon programs.

If Iraq were to successfully build a weapon, the incentive for Saudi Arabia, Turkey, Egypt, and perhaps other Middle Eastern countries to develop a counter capability would heighten considerably. The incentive would be motivated by military threat, fear, as well as traditional rivalry.<sup>32</sup> Survival may become the driving factor in many countries abandoning the NPT.

Attempts to control export of equipment, materials, and technology is a major element of mass destruction weapon nonproliferation policy. These attempts have only been marginally successful. As a rule, even in the case of the United States, other economic or political interests would often cause decisions that were counter to non-proliferation efforts. This explains the failure of the United States to effectively respond to weapons programs of Israel, South Africa, India, Pakistan, and even Iraq.<sup>33</sup> For example, the U.S. sought Pakistani cooperation to assist the anti-Soviet insurgents in Afghanistan and then turned a blind eye to much of the Pakistani nuclear program.<sup>34</sup>

Chemical controls are equally difficult. For example, India exports 15 of the 54 restricted precursors of the Australia Group to Middle Eastern countries. Although recently challenged by the

United States on a large shipment of trimethyl phosphate--an ingredient in nerve gases--to Syria, the Indians proposed that the chemical was "dual-use" as a component of insecticides as well.<sup>35</sup> This highlights the problem with Third World countries in the proliferation of chemicals. The CWC will not solve such an issue since the Third World countries caused the restriction on sales of precursors to be removed from the convention with the rationale that such controls would interfere with the development of their chemical industries.<sup>36</sup>

The current non-proliferation mechanism has been reasonably effective over the years. Even with recent successes, such as France and China finally signing the NPT in 1991, revisions will be required for the challenges in the world ahead. Unfortunately, the states that are most dedicated to obtaining weapons of mass destruction are generally the same ones that most countries of the world would least like to see have them. Therefore, the general rules established by our current policies can do little to control the rogue states that will not abide by treaties anyway.

#### **OPTION 2: FORCED COMPLIANCE POLICY**

Realizing that the current non-proliferation regime is losing its effectiveness, the United States could champion a new direction that would extend current diplomatic and export control policies by forcing compliance of the agreements. This policy should be implemented by direction of the United Nations.

The Forced Compliance option would require unannounced IAEA inspections on suspect facilities. Upon confirmation that a party is indeed diverting nuclear materials for military purposes, the party must succumb to supervised destruction of the material. Non-compliance with the destruction requirement could result in military measures to correct the situation once all diplomatic means have been exhausted. Specific military options would be based on the situation and use only the force necessary to accomplish mission objectives. While some situations may be resolved through a simple show of force, other situations may require a full blown pre-emptive strike to achieve a decisive solution. This strategy draws heavily on the example of Israel's 1981 destruction of the Iragi reactor at Osirag.<sup>37</sup>

Various analysts, such as William Lewis and Christopher Joyner of George Washington University, concur that the time may

have come for such coercive arms control.<sup>34</sup> During the Gulf War, one of the declared objectives of the United Nations was the "destruction of Iraq's nuclear, biological, and chemical weapons capabilities" which helped establish a precedent for such a policy.<sup>39</sup> Clearly, the United Nations is the only body that could implement Forced Compliance. The United States would be presumptuous in unilaterally attempting such a policy when the prevailing Third World feeling is that the United States, along with other industrialized nations, are hypocritical in their attempts to restrict developing nations from securing mass destruction weapons and technologies.<sup>40</sup>

Adoption of this policy would highlight the position of the United Nations in preserving peace and stability. As Lewis and Joyner have written:

> "The United Nations is no longer a marginal player on the world political stage. Reactions to Iraq's aggression by the international community in general and the Security Council in particular have cast the world organization back into the role that it was created to play: namely, to be the centerpiece institution for the peaceful resolution of disputes, and failing such resolution, an institution prepared to accept responsibility to initiating (sic) coercive arms control measures."<sup>41</sup>

On the surface, such a strategy may appear to present a hardball method of solving the difficult problem of weapons

proliferation. Proponents may argue that potential proliferators never took the old policy seriously since no coercion provisions existed, Forced Compliance does provide a policy with teeth but it also has some serious drawbacks.

First, the United Nations Security Council will be the decision-maker in such a strategy.<sup>42</sup> A cry of foul can be expected immediately from the UN Third World members in that the five permanent members of the Security Council also happen to be the only states that may legitimately possess nuclear weapons under the NPT. Such power for the Security Council may appear to propagate the issue of discrimination against developing nations in non-proliferation policies and could dash any hope of gaining new members to the Treaty. The Council would also decide which countries should be challenged with the unannounced inspections. Controversial issues, such as what type and how much evidence will be sufficient to assume cheating is on-going, will abound and are probably never going to be answered co any nations satisfaction. This lack of Third World support may weaken the ability of the United Nations to act as an honest broker in other situations.

Another fault is that unannounced IAEA inspections would have little chance of success. The parties that would readily allow and support such inspections are not likely to be the parties that would run a clandestine weapons program. As well,

the potential for military strikes could cause such operations to go underground, further reducing any ability to predict intent or capabilities of such a weapons-producing program. Pre-emptive strikes against these clandestine facilities can neither be certain of target destruction nor that all activities were known in the first place. To solve such a dilemma would require a force on the ground to root out the offensive materials. Such a ground force, however, would likely spark a conflict and be contrary to the original mission of making the world a safer and more secure place.

A complicating problem with conducting a pre-emptive strike against illegal nuclear facilities is the potential for spreading contamination from an operating reactor. A massive air attack, for example, could create a significant radiological contamination problem for the target state as well as neighboring states. Although Israel claimed they were aware, prior to bombing, that the Osirag reactor had not gone critical and therefore posed no contamination threat, the UN decision-makers will probably not have such luxury due to the nature of clandestine programs.<sup>43</sup>

A Forced Compliance policy would be fraught with political difficulties. The United Nations would be putting itself in a position requiring serious value judgements to be made on often unconfirmable evidence. Such decisions, especially if attacks

are later found to have been unwarranted, will severely damage the credibility of the United Nations. The United States, expected to be a primary executor of such a policy for the UN, could also suffer political humiliation and loss of international respect.

#### OPTION 3: GLOBAL SECURITY AND REGIONAL DEVELOPMENT POLICY

The Current Course has not proven to be highly effective and Forced Compliance is an extremely risky policy. The third option, Global Security and Regional Development, addresses the proliferation problem quite differently and proposes a new approach with three basic tenets.

# Strategic Defense

ł

The first tenet of this strategy is a realization that weapons of mass destruction exist and will not go away. These weapons cannot be "uninvented" and the swell of Third World nations desiring such a capability continues to increase. Declassification of atomic research and design information also supports the notion that proliferation is likely to continue. The United States, therefore, must continue to maintain a modern and effective strategic defense capability.

SDIO'S Ambassador Cooper has stated that missiles with a range of 3000 kilometers "are not hypothetical. They have been sold in the world market. And while there are few countries that today threaten the United States, it is only a matter of time before these missiles gain the range to threaten our land. By the year 2000, perhaps 20 nations may have them and some will be

armed with chemical, biological, and possibly even nuclear warheads."<sup>44</sup> The growth of these ballistic missile capabilities in the Third World was the primary driver in the Bush Administration's reorientation of the SDI toward Global Protection Against Limited Strikes (GPALS).<sup>45</sup>

The leap in technology is very short from intermediate range missile systems to developing Intercontinental Ballistic Missiles (ICBM). The capability of many of the developing nations to establish the sophisticated command and control networks that kept the US and USSR in check will likely not exist and thereby increases the potential for inadvertent launches. Large numbers of ICBM's also sit in an uncertain status in the former Soviet Union. As well, the reduction in the relative strength of the U.S. arsenal as the size of the nuclear stockpile continues to decrease could be a vulnerability in a future dispute with a mation whose strength may have achieved a rough parity with the United States.

GPALS is designed to protect against accidental, unauthorized or irresponsible ballistic missile launches. The space-based components of GPALS could begin by the end of the decade which corresponds to the time some Third World countries are expected to be fielding intermediate range ballistic missiles.<sup>46</sup> The United States needs to go forward with GPALS to provide a high degree of protection for American population

centers from a potentially devastating attack. GPALS provides a modern defense mechanism but it is not a deterrent nor will it kill every possible missile that could be targeted at the U.S. Therefore, the United States must also maintain a sufficient nuclear stockpile, while still dramatically reducing the Cold War weapon levels, to insure a credible deterrent exists as a survival and security measure.

#### Strengthen the Current Regime

The second tenet of the Global Security and Regional Development model is to significantly tighten the standards of the existing non-proliferation regime. For example, the IAEA needs to strengthen safeguards and transfer "special inspection" authority to the United Nations Security Council. The Security Council move will give more teeth to the inspections as evidenced by the situation in Iraq after the Gulf War when Security Council Resolution 687 directed the IAEA to develop a plan for "the destruction, removal, or rendering harmless of items specified by the resolution that relates to Iraqi nuclear activities."<sup>47</sup> Empowering the Security Council with this responsibility is especially important now that all permanent members of the council are parties to the NPT. To further illustrate the need to restructure the IAEA, Paul Leventhal of the Nuclear Control

#### Institute writes:

IAEA ispectors, having neither the political authority, the inclination, nor the technical and intelligence resources to ferret out clandestine nuclear activities, have studiously avoided looking for them. Instead, they have confined themselves to confirming nuclear materials balances at declared plants. Unfortunately, these socalled "routine inspections" do nothing to fulfill a fundamental security interest shared by all of these members to uncover the bomb programs of those few who are prepared to cheat on their IAEA and NPT commitments.<sup>48</sup>

Export controls also need to be tightened. These supplyside strategies have not proven effective. The Australia Group, for example, is intensively attempting to control chemical weapon precursors but does not carry any authority to levy sanctions against transgressors. The Group is restricted to public identification of such violators. Political expediency, as in the earlier mentioned arrangements with Pakistan, has also served to undermine these efforts. Enforcement of such controls is obviously difficult but, as Eric Ehrmann notes, "emerging nations are developing ever more creative procedures to circumvent international controls."<sup>49</sup> The United States should take the lead in executing tough export controls with no political exceptions.

Developing nations, as already noted, view these controls as discriminatory which results in a need for very strict

enforcement if such controls are to be successful. Lewis and Joyner have stated that there must be a judicious balance of supply-side restraints which "must take into account Third World allegations that Western industrialized states seek to deny, prejudicially, advanced technology for their armed forces. This is viewed as a paternalistic father-knows-best policy that is insulting to Third World sensitivities."<sup>50</sup> Therefore, a stalemate exists with the very countries where proliferation concerns are most abundant. A new approach is needed to eliminate this problem or risk further proliferation and political instability.

# Eliminate the Desire

1

The third tenet of the strategy is built on the notion that the unsuccessful non-proliferation concepts of the past are not likely to eliminate weapons of mass destruction in the future. Instead, this strategy focuses on eliminating the *desire* to possess these weapons. As noted earlier, a prime motivator for wanting weapons of mass destruction was the measure of power they provided a nation in becoming a "player" in regional politics. This concept orients on nation building measures to develop a country's social and economic power base in order to be influential in their respective region. Supporting measures must be positive and provide potential proliferators a means to

develop an alternative power position that does not rely on mass destruction weapons.

The heart of this policy option is the provision of a positive incentive for developing countries to abandon proliferation interests. This incentive must be developed through regional-level diplomacy. The success of the 1967 Treaty of Tlatalolco, which established a Latin American Nuclear Weapons Free Zone, provides evidence that such regional efforts are plausible.<sup>51</sup> The policy must provide true nation building and not an aid program that does little more than pump money or goods into a country. Metaphorically, the intent is to cure the cause of proliferation and not just treat the symptoms. In order to work, the mission must stay clearly in focus--to build economic and social power in the area--and must not be allowed to lapse into a patronizing "handouts" program.

This option envisions an organization with a vigorous nation-building agenda focused on providing massive training and assistance programs. To take advantage of these programs, countries must dismantle any existing mass destruction weapons or production facilities; abandon any proliferation plans; and pledge to stay free of such weapons. This concept differs with existing non-proliferation initiatives by providing member countries a positive incentive in that, even though losing some level of military power, they can build economic and social

elements of power. The purpose is for Third World countries to develop their economic, financial, and technical status in order to become competitive in their region without resorting to unconventional weapons that only build tensions and siphon off much needed hard currency. The option still provides the necessary power, albeit in a different form, to be a player in local politics.

Although a formidable task, much of the international structure required for this policy is already in place. The World Bank of the United Nations must be a prime mover of this plan. The International Development Association (IDA), International Finance Corporation (IFC), and the International Monetary Fund (IMF), all affiliates of the World Bank are already working to assist developing countries to achieve economic growth, high levels of employment, and an improved standard of living.

The envisioned organization must build on these existing institutions, make them more robust, and provide the coordination necessary for such a wide ranging mission. Dedicated professionals from around the globe must be recruited to work closely with Third World government and business leaders to develop modern infrastructure and improve social services, health care, and education.

The United States should vigorously support such an effort. However, United Nations leadership of this organization is absolutely necessary in order to eliminate any perceptions that the U.S., or any other power, is seeking hegemonic influences in a given region.

This proposed program should fit well with the current direction the United States is moving with respect to foreign aid. As President Bush stated before the United Nations General Assembly in September, 1992: "The notion of the handout to less-developed countries needs to give way to cooperation in mutually productive economic relationships."<sup>52</sup> The President has also stated that promoting economic security, opportunity, and competitiveness will become a primary mission of the State Department.<sup>53</sup> These factors will support efforts toward nation building and economic development but, to be truly credible when tied to arms control provisions, the United Nations must be the proponent of the program.

#### CONCLUSION

The proliferation of weapons of mass destruction is a difficult and complex issue. Effective resolution will require a long-range vision, political determination, and a solid strategy. While three different policy options have been presented, it is obvious that there is no "school solution" to the proliferation problem.

Past policies have depended almost completely on negative programs, such as export controls and formal inspections, that imply distrust at the outset. An effective solution must allow developing nations a positive outlook. Third World countries need a way to develop a power base without resorting to mass destruction weapon systems. The United States non-proliferation policy must take this into account. The proposed Global Security and Regional Development option, though obviously idealistic, offers those positive incentives to Third World countries and its regional focus provides needed flexibility in tailoring area requirements.

Now that the US-USSR rivalry of the past 40 years is over, the United Nations can and should emerge as the primary international peacekeeper as well as policy proponent for such widespread and potentially dangerous problems as weapons

proliferation. The United Nations is undoubtedly the most suitable mechanism for this important and necessary world leadership role.

l

The Cold War has given way to a multi-polar world that requires new approaches to demanding challenges like controlling weapons of mass destruction. The United States, as well as other developed countries, needs to assist the United Nations in maintaining an azimuth on non-proliferation policies that will lead to a more peaceful and stable world. This direction could significantly impact on the future of the planet.

# APPENDIX A

مریک میں میں میں میں میں میں میں این <u>میں این میں میں میں میں میں میں میں میں میں میں</u>						
	<u>Nuclear</u>	<u>Chemical</u>	<b>Biological</b>	<u>Missile</u>		
Middle East						
Algeria	S	-	-	-		
Egypt	-	ם	-	D		
Ethiopia	-	D	-	-		
Iran	S	D	-	-		
Iraq	S	D	D	D		
Israel	D	D	-	D		
Libya	S	D	D	D		
Saudi Arabia	-	-	-	S		
Syria	_	D	D	D		
South/East Asia						
Burma	-	S	-	-		
China	D	D	D	D		
India	D	S	-	D		
North Korea	D	D	D	a		
South Korea	-	S	_	-		
Pakistan	D	S	-	D		
Taiwan	S	D	D	-		
Vietnam	-	S	-			
<u>Other</u>						
Argentina	A	-	-	-		
Brasil	А	-	-	D		
South Africa	A	-		D		

# PROLIFERATION OF WEAPONS OF MASS DESTRUCTION IN THE DEVELOPING WORLD<sup>3</sup>

<u>Key:</u> D--Deployed or highly probable of development S.--Seeking or possibly started development A--Abandoned nuclear programs

#### NOTES

<sup>1</sup> Quoted by Ronald F. Lehman, Jr., Director, U.S. Arms Control and Disarmament Agency, in a speech given to the World Affairs Council at Riverside, California on 1 March, 1991.

<sup>2</sup>George Bush, <u>The National Security Strategy of the</u> <u>United States</u>, (Washington: The White House, 1991), 3.

<sup>3</sup> Data was drawn from Ivo H. Daalder, "The Future of Arms Control" in <u>Survival</u> 34 (Spring 1992):61; Leonard S. Spector, <u>Deterring Regional Threats from Nuclear Proliferation</u> (Carlisle, PA: U.S. Army War College, 1992), Appendix A; and Gordon M. Burck and Charles C. Flowerree, <u>International Handbook on</u> <u>Chemical Weapons Proliferation</u> (New York: Greenwood Press, 1991), 163-169.

<sup>4</sup>Philip C. Clarke, "Civil Defense Roles Include Military and Natural Disasters," <u>ROA National Security Report</u>, November 1992, 55.

<sup>5</sup>A detailed discussion of neighbor state impacts on political decisions is in Bernard Brodie, <u>War and Politics</u> (New York: Macmillan, 1973), 381-386.

<sup>6</sup>Ronald F. Lehman, Jr., Director, Arms Control and Disarmament Agency, Speech given before the World Affairs Council at Riverside, California on 1 March, 1991.

<sup>7</sup>Hedrick Smith, <u>The Power Game</u> (New York: Ballantine, 1988), xv.

<sup>8</sup>William J. Broad, "U.S. is declassifying H-bomb fusion technology," <u>New York Times</u>, 28 September 1992, p. A1.

<sup>9</sup>Arms Control Association, <u>Arms Control and National</u> <u>Security</u> (Washington: Arms Control Association, 1989), 120.

<sup>10</sup>Ibid.

<sup>11</sup>Harvard Nuclear Study Group, <u>Living With Nuclear Weapons</u> (New York: Bantam, 1983), 225.

<sup>12</sup>Arms Control Association, 122.

<sup>13</sup>Leonard S. Spector, <u>The Undeclared Bomb</u> (Cambridge, Mass: Ballinger, 1988), 468.

<sup>14</sup>Ibid., 472.

<sup>15</sup>Arms Control Association, 123.

<sup>16</sup>Victor A. Utgoff, <u>The Challenge of Chemical Weapons</u> (New York: St. Martin's, 1991), 102.

<sup>17</sup>Ibid., 104.

"Arms Control and Disarmament Agency Fact Sheet "Chemical Weapons Arms Control", 1 April 1992.

<sup>19</sup>Arms Control and Disarmament Agency, <u>Annual Report to</u> <u>the Congress 1991</u> (Washington: Arms Control and Disarmament Agency, 1992), 85.

<sup>20</sup>William Drozdiak, "Historic Treaty Bans Chemical Weapons," <u>Washington Post</u>, 14 January 1993, p.A24. This unprecedented disarmament treaty, however, was not signed by Iraq, North Korea, or Vietnam.

<sup>21</sup>Ibid.

<sup>22</sup>Arms Control and Disarmament Agency Fact Sheet "International Export Controls", 15 October 1992.

<sup>23</sup>Michael R. Gordon, "U.S. Accuses India on Chemical Arms," <u>New York Times</u>, 21 September 1992, p.A1.

<sup>24</sup>Janne E. Nolan, <u>Trappings of Power: Ballistic Missiles</u> <u>in the Third World</u> (Washington: Brookings Institution, 1991), 8-9.

<sup>25</sup>Arms Control and Disarmament Agency Fact Sheet, "Existing Non-proliferation Efforts", 13 July 1992.

<sup>26</sup> Moen, LTC, Arms Control and Disarmament Agency, Interview by author, 21 Nov 92 at Washington, D.C.

<sup>27</sup>Susan Burk, Arms Control and Disarmament Agency, Interview by author, 21 Nov 92 at Washington, D.C.

<sup>28</sup>Leonard S. Spector, <u>Deterring Regional Threats From</u> <u>Nuclear Proliferation</u> (Carlisle, Pa: U.S. Army War College), Appendix A.

<sup>29</sup>Ibid., 21.

<sup>30</sup>Leonard S. Spector, "Nuclear Proliferation in the Middle East," <u>Orbis</u> 35, No.2 (Spring 1992):55.

<sup>31</sup>Ibid., 52.

<sup>32</sup>Lewis A. Dunn, <u>Containing Nuclear Proliferation</u>, Adelphi Paper 263 (London: Brassey's, 1991), 9.

<sup>33</sup>Paul L. Leventhal, "Plugging Leaks in Nuclear Export Controls: Why Bother?," <u>Orbis</u> 35, No.2 (Spring 1992), 37.

<sup>34</sup>Ibid.

<sup>35</sup>Gordon, A1.

<sup>36</sup>Ibid.

<sup>37</sup> Iraq purchased a nuclear "research" reactor from France in 1976 and placed it at Osiraq, near Baghdad. In 1980-81, Iraq bought large quantities of natural uranium from Brazil, Portugal, Niger, and Italy. Simultaneously, Iraqi officials were making statements suggesting Iraq's interest in acquiring nuclear arms. Israel mounted a pre-emptive air strike, with U.S. supplied F-16's, that destroyed the Osiraq reactor on 7 June 1981. This episode is described in detail in Leonard S. Spector, <u>The</u> <u>Undeclared Bomb</u>, (Cambridge, Mass: Ballinger, 1988) pp.208-211.

<sup>38</sup>Christopher C. Joyner and William H. Lewis, "Proliferation of Unconventional Weapons: The Case for Coercive Arms Control," <u>Comparative Strategy</u> 10 (Fall 1991): 299.

<sup>39</sup>Ibid., 300.

<sup>40</sup>Nolan, 11. The author cites comments of two Indians in late 1989: "It is fashionable among industrialized nations to deplore acquisition of high technology weapons by developing nations, but this moralistic stand is akin to drug pushers shedding tears about the weaknesses of drug addicts."

<sup>41</sup>Joyner and Lewis, 308.

<sup>42</sup>Ibid., 299.

<sup>43</sup>Joseph F. Pilat, ed., <u>The Non-Proliferation Predicament</u> (New Brunswick, NJ; Transaction Books, 1985), 92.

<sup>44</sup>Clarke, 55.

<sup>45</sup>Michael W. Ellis and Jeffrey Record, "Theatre Ballistic Missile Defense and US Contingency Operations," <u>Parameters</u> 22 (Spring 1992): 23.

<sup>46</sup>Ibid.

<sup>47</sup>Arms Control and Disarmament Agency, <u>Annual Report to</u> <u>Congress 1991</u>, 98. Note that inspections carried out by the IAEA in cooperation with the UN Special Commission uncovered both the production of small amounts of undeclared, unsafeguarded nuclear material and a large-scale effort to produce large quantities of unsafeguarded nuclear material in violation of Iraq's obligations to the NPT. IAEA inspections involved short notice inspections of sites not declared by Iraq which were successfully carried out despite Iraqi efforts to obstruct inspectors and hide equipment. As a result, the IAEA Board of Governors found Iraq to be in noncompliance with the NPT--the first such judgement ever of a safeguards violation by the IAEA.

<sup>48</sup>Correspondence section of <u>Orbis</u> 37, (Fall 1992): 599. Paul Leventhal is responding to a critical letter written by David Fischer, consultant to the IAEA.

<sup>49</sup>Ibid., 603. Eric Ehrmann's letter is critical of "Nuclear Proliferation in the Middle East" by Leonard S. Spector in <u>Orbis</u> 35 (Spring 1992).

<sup>50</sup>Lewis and Joyner, p.308.

<sup>51</sup>Harvard Nuclear Study Group, 230.

<sup>52</sup>George Bush, President of the United States, speaking before the United Nations General Assembly in New York, 22 September 1992.

<sup>53</sup>Ibid.

#### BIBLIOGRAPHY

Arkin, William M. "Little Nuclear Secrets." <u>New York Times</u>, 9 September 1992, p. A21.

Arms Control Association. <u>Arms Control and National Security: An</u> <u>Introduction</u>. Washington: Arms Control Association, 1989.

Association of the United States Army. <u>Our Changing World: A</u> <u>Global Assessment</u>, Arlington, VA: Association of the United States Army, 1991.

Aroesty, J., K.A. Wolf, and E.C. River. <u>Domestic Implementation</u> of a <u>Chemical Weapons Treaty</u>. Santa Monica, CA: RAND Corporation, 1989.

Broad, William J. "US is Starting to Declassify H-Bomb Fusion Technology." <u>New York Times</u>, 28 September 1992, p. A1.

Brodie, Bernard. War & Politics. New York: Macmillan, 1973.

Burck, Gordon M. and Charles C. Flowerree. <u>International Handbook</u> <u>on Chemical Weapons Proliferation</u>. New York: Greenwood Press, 1991.

Bush, George. <u>The National Security Strategy of the United</u> <u>States</u>. Washington: The White House, 1991.

Cordesman, Anthony H. and James Blackwell. <u>Strategy and</u> <u>Technology</u>. Carlisle Barracks, PA: US Army War College, 1992.

Daalder, Ivo H. "The Future of Arms Control." <u>Survival</u> 34 (Spring 1992):51-73.

Douglass, Joseph D. and Neil C. Livingstone. <u>CBW: The Poor Man's</u> <u>Atomic Bomb</u>. Cambridge, Mass: Institute for Foreign Policy Analysis, 1984.

Duetch, John M. "Containing Weapons Proliferation." <u>Technology</u> <u>Review</u>, August/September 1991, 73.

Dunn, Lewis A. <u>Containing Nuclear Proliferation</u>. Adelphi Faper 263. London: Brassey's, 1991.

Drew, Dennis M., and Donald M. Snow. <u>The Eagles Talor's: The</u> <u>American Experience at War</u>. Maxwell Air Force Base, Al: Air University Press, 1988.

Ellis, Michael W. and Jeffrey Record. "Theatre Ballistic Missile Defense and U.S. Contingency Operations." <u>Parameters</u> 22 (Spring 1992):11-26.

Flowerree, Charles C. "The Chemical Weapons Convention: A Milestone in International Security." <u>Arms Control Today</u>, October 1992, 3-7.

George, James L. <u>The New Nuclear Rules: Strategy and Arms Control</u> <u>After INF and START</u>. New York: St. Martin's Press, 1990. 1

Gertz, Bill. "Gates: Russia Made Biological Weapons; Leaders Didn't Know." <u>Washington Times</u>, 2 December 1992, p.5.

Gimlin, Hoyt, ed. <u>Tests of Superpower</u>. Washington: Congressional Quarterly Inc, 1987.

Gordon, Michael R. "US Accuses India on Chemical Arms." <u>New York</u> <u>Times</u>, 21 September 1992, p. Al.

Graham, Thomas W. "Winning the Nonproliferation Battle." <u>Arms</u> <u>Control Today</u>, September, 1991, 8-13.

Harvard Nuclear Study Group. <u>Living With Nuclear Weapons</u>. New York: Bantam Books, 1983.

Hersh, Seymour M. The Samson Option. New York: Random House, 1991.

Joeck, Neil, ed. <u>Strategic Consequences of Nuclear Proliferation</u> in <u>South Asia</u>. London: Frank Cass & Co, 1986.

Jordan, Amos A. and Taylor, William J., Jr. <u>American National</u> <u>Security: Policy and Process</u>. Baltimore: The Johns Hopkins University Press, 1984.

Klare, Michael T. <u>Conventional Arms Transfers: Exporting Security</u> <u>or Arming Adversaries</u>. Carlisle Barracks, PA: US Army War College, 1992.

Knight, Robin. "Easier Said Than Done: Beating Nuclear Swords Into Flowshares is the Newest Arms Challenge." <u>U.S. News and</u> <u>World Report</u>, 2 November 1992: 53-54.

Leventhal, Paul L. "Plugging the Leaks in Nuclear Export Controls: Why Bother?" <u>Orbis</u> 35 (Spring 1992):167-180.

Lewis, William H. and Christopher C. Joyner. "Proliferation of Unconventional Weapons: The Case for Coercive Arms Control." <u>Comparative Strategy</u> 10 (Fall 1991):299-309. Lykke, Arthur F. Jr., ed. <u>Military Strategy: Theory and</u> <u>Application</u>. Carlisle Barracks, PA: US Army War College, 1989. ,

Mahnken, Thomas G. and Timothy D. Hoyt. "The Spread of Missile Technology to the Third World." <u>Comparative Strategy</u> 9 No.3, 1990.

Marwah, Onkar and Ann Schultz, eds. <u>Nuclear Proliferation and the</u> <u>Near Nuclear Countries</u>. Cambridge, Mass: Ballinger, 1975.

May, Michael M. What Do We Do With Nuclear Weapons Now? San Diego: University of California Institute on Global Conflict and Cooperation, 1990.

Mayers, Teena K. <u>Understanding Weapons and Arms Control: A Guide</u> to the <u>Issues</u>. Washington: Brassey's, 1991.

Mazarr, Michael J. "Nuclear Weapons After the Cold War." The Washington Quarterly, Summer 1992, 185-199.

Miller, Steven E., ed. <u>Strategy and Nuclear Deterrence</u>. Princeton, NJ: Princeton University Press, 1984.

Nation, Joseph. <u>The Utility of De-Escalatory Confidence Building</u> <u>Measures</u>. Santa Monica, CA: RAND Corporation, 1989.

Nolan, Janne E. <u>Trappings of Power: Ballistic Missiles in the</u> <u>Third World</u>. Washington: Brookings Institution, 1991.

Nuechterlein, Donald E. <u>America Overcommitted: United States</u> <u>National Interests in the 1980's</u>. Lexington, KY: University Press of Kentucky, 1985.

Pilat, Joseph F., ed. <u>The Nonproliferation Predicament</u>. New Brunswick, NJ: Transaction Books, 1985.

Powell, Colin L. The National Military Strategy of the United States. Washington: Department of Defense, 1992.

Snow, Donald M. <u>National Security: Enduring Problems in a</u> <u>Changing Defense Environment</u>. New York: St. Martin's Press, 1991.

Spector, Leonard S. <u>Deterring Regional Threats from Nuclear</u> <u>Proliferation</u>. Carlisle Barracks, PA: US Army War College, 1992.

Spector, Leonard S. "Nuclear Proliferation in the Middle East." Orbis 35 (Spring 1992): 181-198.

Spector, Leonard S. The Undeclared Borb. Cambridge, Mass: Ballinger, 1988.

Talbott, Strobe. "Toward a Safe World." <u>Time</u>, 7 October 1991:18-20.

ì.

U.S. Arms Control and Disarmament Agency. <u>Annual Report to the</u> <u>Congress 1991</u>. Washington: US Arms Control and Disarmament Agency, 1992.

U.S. Congress. Senate. Committee on Foreign Relations. <u>Hearings</u> on the <u>Treaty on the Nonproliferation of Nuclear Weapons</u>. 90th Congress, 2nd Session, 10, 11, 12, and 17 July 1968.

Utgoff, Victor A. <u>The Challenge of Chemical Weapons: An American</u> <u>Perspective</u>. New York: St. Martin's Press, 1991.

Young, Elizabeth. <u>A Farewell to Arms Control</u>. Baltimore: Penguin, 1972.