POST-WAR EFFORTS TO CONTROL THE SPREAD OF NUCLEAR WEAPONS

POST-WAR EFFORTS TO CONTROL THE SPREAD OF NUCLEAR WEAPONS: THE NPT REGIME IN HISTORICAL PERSPECTIVE

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SHEILA KAUR SINGH

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AUTHOR: Sheila K. Singh, B.A. (University of Calgary)

SUPERVISOR: Dr. K.R. Nossal

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ABSTRACT

The 1968 Nuclear Non-Proliferation Treaty, together with the International Atomic Energy Agency's safeguard system, stands at the center of international efforts to control the spread of nuclear weapons. The NPT, in particular, represents the culmination of a decade long debate on the question of non-dissemination. It seeks primarily to halt the spread of nuclear weapons to states not already possessing them, and at the same time, seeks to halt and reverse the existing arms race. Negotiated in the mid-1960's, it was largely a product of its time. More than two decades have elapsed since the NPT was open for signature, and the nuclear environment has changed profoundly.

This study investigates the evolution of the NPT regime from the immediate aftermath of World War II, to the present. It is an attempt, above all, to recapture the historical negotiating context of the NPT in order to account for its provisions, and assess its current stability in light of a new and changing environment.

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INTRODUCTION

> Today the majority of the people of the world are helpless, uninformed, and concerned mainly with finding enough food. In these respects they are like babies. One does not give explosives to babies, and one does not invoke the baby's right to full and unfettered satisfaction to all its curiosities.[1]

> The nuclearization of non-alignment would mean not only using nuclear explosives for peaceful purposes, but using that power to reduce the danger of East-West convulsion... For these countries (i.e. Nigeria, Black majority government in South Africa, and Zaire) going nuclear would be a new initiation, an important right of passage, a recovery of adulthood. No longer will the Great Powers be permitted to say that such and such a weapon is not for Africans and children under 16.[2]

> Mankind has discovered the genius to disintegrate the atom. It must now find the genius to reintegrate mankind.[3]

The history of efforts to control the spread of nuclear weapons is as old as efforts to develop them. While the U.S. was engaged in its early bomb project, its scientists and statesmen saw implications for this new weapon of mass destruction beyond its immediate objective of winning the war: if one state could develop them, in a matter of time, others could too. This problem was complicated by the fact that the technology used to develop these weapons could also be used for peaceful purposes, most notably in the generation of

electricity. In areas where traditional fossil fuel based energy sources were scarce, atomic energy seemed to offer new and unlimited possibilities.

In the decades following the first atomic test at Los Almorgordo, New Mexico, a network of bilateral and multilateral arrangements evolved which aimed at addressing the problem posed by the dual nature of this technology. These include the Nuclear Non-Proliferation Treaty (NPT), the International Atomic Energy Agency (IAEA), the Euratom Commission, the Treaty of Tlatelolco, the Partial Test Ban Treaty, the Nuclear Supplier Group (NSG) Guidelines, individual supplier state nuclear export policies, as well as bilateral nuclear co-operation agreements. Taken together, these comprise what scholars have labeled as the "non-proliferation regime". The NPT is usually accorded a privileged position within the regime on account of its near universal membership.

The "non-proliferation regime" evolved slowly and sporadically. Halting the spread of nuclear weapons did not emerge as an area independent from disarmament concerns until the early 1960's. Even then, it did not become the subject of serious international negotiations until the mid-1960's. While the superpowers waited until relatively late in the nuclear game to formulate a common response to halting the spread of nuclear weapons - "non-proliferation" was not seen as a pressing issue until <u>after</u> the Chinese detonated a

nuclear device in 1964 - the amount of academic scholarship and inquiry into the area lagged even farther behind. Academic interest remained negligible until 1974 when India detonated a nuclear explosive, and blossomed after the 1981 Israeli attack on an Iraqi research reactor.

Today the "non-proliferation" literature is composed mainly of edited volumes and journal articles. There have been relatively few book-length monographs on the subject. Substantively, the literature reflects a concern for certain "problem" states or regions thought to be on or close to the nuclear precipice. Discussions of the political aspects of the regime and the NPT more specifically tend to fall into one of three categories.

The first category is composed of Western scholars and commentators who have a decided bent toward disarmament. They tend to evaluate the stability of the NPT in terms of superpower progress in the area of disarmament. They maintain that the lack of progress under Article VI of the NPT - which bids Nuclear Weapon States (NWS) to engage in "good faith" negotiations for General and Complete Disarmament - has posed the most fundamental strain on the NPT. They believe that a Comprehensive Test Ban (CTB) is needed not only for the fulfilment of NWS obligations under Article VI, but most importantly, to save the NPT altogether.[4]

The second category of scholarship on the "regime" is composed of academics and commentators from the developing

nations. They maintain that it is discriminatory in two key respects. First, it freezes the nuclear status quo. Under the NPT, Non-Nuclear Weapon States (NNWS) are obliged to give up their right to develop nuclear weapons, while NWS may have indefinite free reign with respect to their own nuclear arsenals. Second, they maintain that the NPT further disadvantages the NNWS, because they cannot gain civilian atomic technology emanating as a byproduct from a military atomic program. Like the first camp, this group tends to hold grave predictions for the future of the NPT. However, where the first sees the NPT as necessary and good (if each party could just live up to its part of the "bargain"), this group tends to reject the NPT outright.[5]

The third and dominant group of "non-proliferation" scholars are the Western analysts who emphasize concerns relating to the spread of civilian atomic technology. They focus on issues relating to nuclear supply, supply controls, the efficacy of the IAEA safeguard system, the spread of civilian atomic capabilities, as well as the spread of nuclear related technologies (i.e. nuclear submarines, ballistic missile technology and other potential nuclear delivery systems).[6]

This group tends to view the NPT in more hopeful terms than the others. The NPT is seen as the cornerstone of a "non-proliferation regime" which is at least coherent, if incomplete. The NPT is assumed to be positively related to

other elements of the "regime", all of which work in consort, and without contradiction, to further the grand and underlying principle that the spread of nuclear weapons is not a good thing. This, however, is not only hailed as the uniting principle of the "non-proliferation regime", it is also the normative position which inspires their scholarship. Those elements of the regime that do not seem to fit "nicely" are either ignored altogether, or dismissed as politically opportune linkages. In a sense, their understanding of the negotiating history of the "regime" is coloured by preferred policy positions. History is read in hindsight.

The purpose of this thesis is to trace the evolution of the various component parts of the "non-proliferation regime" with a view to elucidating current problems and difficulties associated with it. More specifically, it is an attempt to delineate the parameters of the regime so that current tensions and strains can be accounted for. It is written as a corrective to the third and dominant group in the "non-proliferation" literature. The normative position that the spread of nuclear weapons is bad is tentatively bracketed. The key question of this investigation is not how best to stop the spread of nuclear weapons, but rather, what are the forces at work within the current mechanisms which purport to halt the spread, and how stable are they.

Before turning to the negotiating history of the "non-proliferation regime", a discussion on the terms

"non-proliferation" and "regime" is in order. Although much has been written on the "non-proliferation regime", the term is largely an empty label. Instead of being used as the starting point of inquiry, its meaning tends to be assumed. In the "non-proliferation" literature, the term "non-proliferation" is commonly taken to mean the spread of nuclear weapons to states not already possessing them. This is a contested definition, although clarification of meaning is largely a matter of semantics.

Prior to 1965, the term "non-dissemination" was used to denote both the transfer of nuclear weapons to states not already possessing them, as well as the independent acquisition of nuclear weapons by non-nuclear weapon states (NNWS) through indigenous manufacture. The U.S. preferred the term "non-proliferation" to "non-dissemination" and began using it in international negotiating forums in 1965, although the terms were effectively synonymous. Shortly thereafter, Indian physicist, Mr. Homi Bhaba coined the term "horizontal proliferation" to refer to the transfer or acquisition of nuclear weapons by states not already possessing them (i.e. non-dissemination), and "vertical proliferation" to refer to an increase in the number of weapons possessed by the nuclear powers, as well as the deployment of nuclear weapons owned and controlled by one state, on the territory of another.[7] This distinction between horizontal and vertical proliferation subsequently gained widespread usage. For the purposes of

this study, the term "non-dissemination" will be used to denote the acquisition of nuclear weapons (through indigenous development, or transfer by others), by states not already possessing them (i.e. NNWS). The term "horizontal proliferation" will be used synonymously with non-dissemination although non-dissemination will be the preferred term. Where the term "horizontal proliferation" does arise it will usually be offered in conjunction with the term "vertical proliferation" which will explicitly refer to the nuclear activities of the NWS, and the arms race between the superpowers in particular. Unless specified to the contrary, vertical proliferation will be taken to mean both the further development of nuclear weapons by NWS as well as the deployment of these weapons beyond their borders. The term "proliferation" refers to both vertical and horizontal proliferation.[8]

This thesis deals with the narrower problem of non-dissemination, although it explores how other issues became linked with it. This leads to a discussion of the second term, "regime", which has been used in the literature as a veritable catch-all. Anything of or related to this narrow problem of non-dissemination tends to be lumped under this label. It seems to be used more out of convenience, than with explicit reference to any conceptual implications the term carries with it. Nonetheless, the literature does draw on the terminology of regime theory, and although the

conceptual apparatus it offers has not been systemically applied to the specific case of non-proliferation, the dominant school of thought on "non-proliferation" tends largely to be inspired by its assumptions. Hence, in order to critique the "non-proliferation" literature, the conceptual apparatus of regime theory must be examined.

International relations is characterized by the absence of a supreme authority which regulates and enforces interstate behaviour. The dominant perspective in international relations theory, realism, has traditionally cast this state of affairs in Hobbesian terms: in the absence of an effective international government, international relations can be characterized as the "war of all against all". Regime theory is largely an attempt to transcend the Hobbesian underpinnings of realism. Regime theorists argue that realism fails to capture the new complexity of interstate relations in the post-World War II era. While realists posit that the state is a "rational, unified actor" - the primary actor on the international scene - regime theorists counter that the primacy of the state has been eroded by non-state actors such as multinational corporations, transnational social movements and international organizations.[9] Non-governmental organizations have been stretching their tentacles throughout the world, maintaining loyalty not to the host state, but to the organization itself. As Ernst Haas

puts it, "the channels of international communication are more numerous, decentralized, and diverse than ever".[10]

Apart from the arrival of new actors to the international scene, regime theorists further argue that the world has undergone an unprecedented reliance on science and technology to solve problems relating to economic welfare. The quest to benefit from international trade in science and technology has thus led to a generalized recognition that national self-reliance is, at the very least, an expensive policy goal.[11] This recognition has provided the impetus for interstate collaboration.

Finally, regime theorists argue that the traditional realist "zero-sum" approach to power hardly does justice to the actual level of collaboration between states. States have become reluctant to use military force as the primary means for settling disputes. Power is seen less in terms of raw military might, but rather, in terms of capabilities. Or, as Keohane and Nye put it, "the resources that produce power capabilities have become more complex".[12] As a result, the traditional realist dichotomy between "high politics" (i.e. military security), and "low politics" (i.e. economics) has become blurred. The global agenda is no longer dominated by a clear hierarchy of issues headed by concerns relating to military security. Instead, governments recognize that there are complex cause and effect linkages between issues, in the sense that an occurrence in one area of international

relations may have ramifications in another area formerly considered distinct. As such, different coalitions are generated by different issues, both within governments and across them.[13]

These three criticisms of the realist perspective form the basis of the regime theory's core concept of "complex interdependence". The condition of complex interdependence is said to exist when a) there are multiple channels of communication which connect societies; b) military force is not the central mechanism for dispute resolution within the region, or on the issues; and as a result, c) there is no hierarchy of issues.[14] Regime theorists see the world not in terms of the "state of nature", but in terms of complex interdependence. The world of complex interdependence forms the basis of a "weak" international society which underlies the efforts of states to a) understand the reality that confronts them, and b) adapt to it through collaboration.[15]

International regimes are formed as management devices which serve to regularize behaviour and achieve desired outcomes, in this weak international society. The regime theory literature itself is replete with definitions, but for demonstrative purposes, we can draw on Stephen Krasner's definition, for it seems to be the most widely followed:

> Regimes can be defined as sets of implicit or explicit principles, rules, and decision making procedures around which actors' expectations converge in a given area of international relations.[16]

Krasner further defines the substantive elements of principles, norms, rules and decision making procedures: "Principles are beliefs of fact, causation, and rectitude. Norms are standards of behaviour defined in terms of rights and obligations. Rules are prescriptions and proscriptions for action. Decision-making procedures are prevailing practices for making and implementing public choice"[17]

On Krasner's account, regimes are held together by more than short-term calculations of self-interest. Rather, they are based on a sense of generalized obligation, or expectation of reciprocity:

> When states accept reciprocity, they will sacrifice short-term interests with the expectation that others will reciprocate in the future, even if they are not under a specific obligation to do so.[18]

A regime is thus said to exist when there is a general commitment to principles and norms which constrain short-term or immediate behaviour. Regime members will be willing to incur the opportunity costs of forgoing immediate gain on the expectation that others will engage in regime-supporting behaviour. It is the commitment to the "beliefs of fact, causation, and rectitude" and concomitant "standards of behaviour" which provide the defining characteristics of a regime. Locating the principles and norms of a regime thus constitute the starting point for determining the existence of a regime.

In accounting for regime creation, stability, and change, regime theory draws heavily from the theory of hegemonic stability and collective goods analyses. The theory of hegemonic stability posits that regimes are created by a hegemon ("one state powerful enough to maintain the essential rules governing interstate relations and willing to do so"), for the purpose of providing an international public good.[19] The hegemon provides the public good because it alone has the resources to do so; collective action in the absence of the hegemon would be impossible. The collective good is assumed to be unquestionably good for all, and its benefits can be derived by various states at the same time. As such, the key problem becomes those actors which benefit from the collective good, without contributing to its maintenance. The regime suffers on account of the "free rider", who benefits from the public good, but nonetheless chooses to remain outside the regime. While this poses an ongoing problem for regime maintenance, the creation and erosion of a regime is directly related to the robustness of the hegemon. A regime will exist as long as the hegemon exists, it will erode as the hegemon erodes.[20]

This conceptualization of international regimes is not without empirical and normative difficulties.[21] Krasner's definition of regimes, along with hegemonic stability and collective goods analysis more generally, is severely limited when it comes to explaining a) the substantive content of

regime principles and norms; and b) why they evolved in the first place. This difficulty points to the more abiding problem of accounting for regime creation and stability.

Since regime principles and norms are the defining characteristics of a regime, it is imperative that we develop some criteria for locating, identifying, and distinguishing them from one another. Krasner's definition does not seem to offer much guidance. As Haggard and Simmons note:

> Despite the care in which this complex hierarchy of components is defined, principles (which include not only beliefs in fact and causation, but also of "rectitude"), shade off into norms, "standards of behaviour defined in terms of rights and obligations." Norms, in turn, are difficult to distinguish from rules, "specific prescriptions and proscriptions for action."[22]

In order to get around this difficulty, some regime theorists conflate "principles" and "norms" into a single category.[23]

Haggard and Simmons further note that too broad a definition of a regime runs the risk of tautology.[24] If we look for the lowest common denominator that all parties to a regime can agree upon (beliefs in fact, causation, and rectitude that are held by everyone), our definition may become so wide that we may be mistaken entirely to assert that a regime in fact exists. If there is trouble in this area, then the question of regime stability and change becomes a red herring. On Krasner's account, regime change is related to changing norms and principles. If we cannot locate them in

the first place, then we cannot attempt this broader project.[25]

Apart from running the risk of tautology, a broad definition of regimes will also have the effect of overestimating the level of normative consensus in a given issue area, and as such, will have difficulties in accounting for the evolution and stability of a regime. This can be attributed, in part, to the fact that such analyses tend to bracket the very negotiating process which gave rise to the regime in the first place. Since, without the hegemon, there would be no regime, the hegemon is assumed to be benevolent. The public good is assumed to be pure: everybody is assumed to want it. Haggard and Simmons note that most regimes do not provide a pure public good, but rather, rely on exclusionary mechanisms to enforce compliance.[26] While a good deal of collective goods analyses are devoted to addressing the "free rider" problem, the problem of the "forced consumer" has been all but overlooked. The underlying attitude seems to be, as James Keeley states: "(a)ny regime is better than none (therefore mine is better than yours)".[27]

This raises fundamental questions regarding the nature of actors' "convergence of expectations" around the principles and norms of a regime. As long as the majority of actors want the collective good, and agree to the distributive consequences of the regime, then the stability of the regime is more or less assured. Regime outcomes, however, are very

rarely symmetrically distributed. If major actors do not see the hegemon as benevolent, and do not agree to the distributive consequences of the regime, then the stability of the regime is at best a hypothesis. This is especially true when the major currency of power within the regime is technological capabilities. Smaller actors may initially agree to regime "principles" and "norms" to gain access to capabilities they would have extreme difficulty producing on their own. As capabilities pertinent to the operation of the regime spread, they may be able to bypass the regime altogether. The regime thus becomes destabilized as more actors are able to provide for their own technological needs or acquire them outside the regime.[29] Initial convergence around principles turns out to have little to do with beliefs in facts, causation and rectitude.

How actors come to a common interpretation of their situation is a key question in accounting for regime formation, and stability. Arguably, there is no necessity that the "convergence of expectations" around principles, norms, etc., is permanent; nor is it necessary that they will be interpreted and perceived equally by all members. As James Keeley states:

> The basic definition of the issue area to be regulated and approaches to what might require regulation, to what ends, and how, may be capable of multiple interpretations, and thus answers to these questions may have to be "negotiated".[30]

Perhaps only the "cognitive approach" within regime theory gets at the underlying negotiating process which gives rise to regimes. John Ruggie introduces the concepts of a "negotiated collective situation" and "negotiated collective response" to account for regime formation and stability.[31] Ruggie argues that when the products and applications of science cause externalities which are not divisible between states, nature becomes politicized at the international level. As international actors become aware of these externalities, and as issues become placed on the international agenda, an international collective situation arises. Ruggie argues that there is nothing inevitable about the collective situation. The way in which each collective situation is constituted will depend on how actors perceive and define it. Since each individual understanding of the collective situation will vary, the collective situation itself will have to be negotiated. Ruggie states:

> The "collective situation" ... is a <u>social</u> milieu, not a physical or natural or even technological one. It does not emerge out of nature but out of patterns of international exchange and domination. It is ... characterized by policy interdependencies of varying sorts which are rarely symmetrically distributed. Moreover, there is nothing inevitable about any particular collective situation. Each is <u>negotiated</u> by the parties concerned. Each represents an agreement that one configuration and not some other will constitute the collective situation. It follows that any given expression of the collective situation will not capture the <u>individual</u> situations of the participants equally well ... Thus, any given collective

> situation is inherently unstable. (emphasis in original)[32]

Like the collective situation, the collective response will be negotiated. International regimes can be seen as one particular manifestation of a negotiated collective response. They serve to organize behaviour in one particular way, based on a particular understanding and definition of the phenomenon to be organized. Since one particular understanding of an issue area, one mode of understanding of a problem, one mode of approach to that problem will have consequences which do not apply equally to all members, agreement to follow one particular approach to the exclusion of all others will have to be negotiated. Like the collective situation, the collective response is inherently political, and hence, inherently unstable. It will change as actors redefine their relationship within it.[33]

Arguably, Ruggie's main contribution lies in the notion that regimes are inherently unstable. They are the outcomes of interstate bargaining over a set of issues, and they are hardly definitive. Since actors are continually redefining their individual situations vis-à-vis the collective situation, a regime will be subject to strain as it is perceived to be less and less able to cope with a changing and evolving environment.

Not only are regimes subject to strain as they confront a recalcitrant environment, they may also be internally unstable. Tensions evident in the negotiating

process may become manifest in the structure of the regime. Ernst Haas links regime creation and maintenance to the degree of "consensual" or "substantive" knowledge ("the sum of technical information and of theories about that information which commands sufficient consensus at a given time among interested actors to serve as a guide to public policy designed to achieve some social goal") surrounding the issues to be regulated.[34] Instead of seeking out "principles" and "norms", Haas examines how issues become linked into packages or issue areas. In doing so, he has identified three general (or ideal) types of issue linkages - tactical, fragmented, and substantive - which have bearing on the integrity of a particular regime:

> (1) One can link issues by introducing into the agenda of multilateral negotiations items that are not connected by any intellectual coherence at all; we call this "tactical linkage." The objective is simply to obtain bargaining leverage, to extract a quid pro quo not obtainable if the discussion remains confined to a single issue. (2) Issue linkage may also be attempted, however, to maintain the cohesion of one's coalition. The coalition is held together by a commitment to some overriding social goal, even though the partners disagree with respect to the knowledge necessary to attain it ... We call this behaviour pattern "fragmented linkage". (3) Issue linkage may also proceed on the basis of cognitive developments based on consensual knowledge linked to an agreed social goal. This is the pattern of greatest interest to the construction of regimes; we call it "substantive linkage."[35]

Haas argues that a regime will be unlikely to form if the linkages made between issues are politically opportune, or

tactical; if it does, it will be inherently unstable. In situations of fragmented linkages, the regime will be less unstable, but side-payments or promises must be used to keep potential detractors in line. Substantive issue linkages provide the most solid basis for cooperation. Regimes formed on the basis of consensual knowledge will be the most stable.[36]

If we are to take Krasner's "principles" and "norms" seriously, then we must recognize that they are essentially ex post facto derivatives of a negotiating process, which is in turn, shaped by configurations of power, interest, and knowledge. As such, in attempting to account for the structure of a given regime, it may not be imperative to locate its "principles" and "norms" in any definitive sense. We need not be led on a wild tautological goose chase. This does not mean that we should ignore the consensual aspects of a regime, rather, it means that we should be absolutely clear about what has been agreed to. Krasner's "principles" and "norms" imply a certain level of intellectual and political coherence. In this sense, the "principles" of a regime can be seen as embodying a certain evaluation or analysis of a phenomenon in a given issue area. This evaluation or analysis is in part determined by the nature of the phenomenon itself. The principles of a regime will reflect a subjective understanding of the objective nature of the phenomenon to be regulated. But they will reflect the dominant understanding,

or the understanding which gained ascendency in the negotiating process. The "norms" of a regime will delineate standards of behaviour in accordance with the negotiated subjective understanding. If the problem is constructed in one particular way, then a certain mode of approach may follow: rights and obligations may be deducible from the analysis of the problem itself.

The definition of and approach to a problem (or set of problems) covered by a regime may entail one particular construction of an issue area. As Haas asserts, the linkages between issues are subject to varying degrees of consensus. More fundamentally, in a bargaining situation, they are made on the basis not only of actor's understandings of the scientific cause and effect relationships between issues, but also on the basis of actors' understandings of the political cause and effect relationships between issues. The scope or boundary of an issue area is therefore not a given. Depending on the substantive nature of the issue linkages, the regime may not be co-terminus with the issue area. The scope of an issue area may be broader than the range of issues covered by a regime: some issues could have been left out altogether since no consensus could be reached during the negotiating process. Some issues could have been excluded from the agenda altogether. Alternatively, a regime may cover or draw in issues from other issue areas. Where a regime remains incomplete vis-à-vis the issue area, other regimes based on

alternative constructions of the issue area may evolve to fill in the gap. Or, alternatively, the regime could undergo a transformation, as partial analyses and approaches are engulfed by and subordinated to more expansive ones. Where a regime pulls in issues from other issue areas, the regime could be subject to strain since changes in the other "outside" issue area linked to the regime would therefore have bearing on, and impinge on, the regime in question.[37]

In the case of the non-dissemination issue area, the technical link between military and peaceful uses of atomic energy constitutes the objective situation which confronts international actors attempting to control the spread of nuclear weapons. In the "non-proliferation" literature, scholars have described the evolution of the network of multilateral and bilateral arrangements which address this central problem in the following terms.[38]

The origin "non-proliferation regime" began in 1943 with U.S. President Roosevelt's decision to veil the U.S. atomic energy program in a shroud of secrecy, and has subsequently undergone three distinct phases in its evolution. The first phase began with the U.S. policy of technological denial and ended when President Eisenhower launched the Atoms for Peace proposal in the mid-1950's. The Atoms for Peace proposal, and the concomitant change in the U.S. Atomic Energy Act brought in a new era of openness which facilitated the transfer of civilian nuclear technology throughout the world.

The second phase, then, saw an opening of nuclear cooperation (institutionalized internationally through the creation of the IAEA and regionally through the Euratom Treaty), and reached its apex with the 1968 Nuclear Non-Proliferation Treaty. Other arrangements dealing with the spread of nuclear weapons negotiated during this phase included the 1963 Partial Test Ban Treaty, and the 1967 Treaty of Tlatelolco. Shortly after the NPT entered into force, several incidents occurred which challenged the Atoms for Peace wisdom. The most profound shock to the "non-proliferation" regime was India's detonation of a nuclear device in May 1974. Although India was not a signatory, it had developed its nuclear explosive capacity drawing largely on imported nuclear technology. As a result, the U.S. took the lead in advocating strict export controls for nuclear suppliers. The third phase in the evolution of the non-proliferation regime began with the publication of the London Suppliers Group Guidelines in 1977, and the passage of the U.S. Nuclear Non-Proliferation Act in 1978.

This construction of the evolution of the "non-proliferation regime" seems to be standard in the literature, and assumes a Krasnerian understanding of regimes. First, the underlying principle of the "regime" is assumed to be that the spread of nuclear weapons is bad. Hence, any and all attempts which purport to halt the spread are "good", and work in consort to further this grand underlying principle.

Second, because the principle of the regime has not changed since its inception, the regime has merely "evolved".

Benjamin Schiff offers a refinement of this basic approach. Instead of assuming one overarching principle, Smith locates five "norms":

> a) the proliferation of nuclear weapons capability is bad;
> b) peaceful nuclear technology is a useful scientific and industrial tool;
> c) the regime should operate according to universal principles;
> d) states' sovereignty is to be maintained, and;
> e) there should be a reciprocity of benefits and sacrifices among states.[39]

Schiff argues that norms reflect the "common purpose with respect to the importance of the subject singled out for regulation".[40] On closer scrutiny, however, these norms are problematic, and potentially contradictory. How can the spread of peaceful nuclear technology be a good thing, if it contributes to the proliferation of a nuclear weapons capability? How can c), d), and e) above be counted as regime norms when they do not reflect the "common purpose" of the dominant actors in the issue area?

Schiff's analysis of the evolution of the "non-proliferation" regime follows the one given above. Perhaps his analysis cannot capture the full story of the "non-proliferation regime" because he uses the "norms, rules, and decision-making procedures" as a convenient nomenclature for organizing complex material. The closest he comes to acknowledging that his regime norms may be contradictory is by

the way of a footnote where he states that the norms as perceived by the NWS are substantially different than those as perceived by the NNWS.

This thesis offers an alternative account of the evolution of the non-proliferation regime, based on a close scrutiny of the historical record. It argues that the network of bilateral and multilateral arrangements which have evolved since World War II, reflect two different analyses and approaches to the technical link between military and civilian technology. The oldest approach saw the link between civilian and military technology as essentially irreconcilable: the mere possession of nuclear technology was seen as a dissemination threat, irrespective of intended use. In other words, the problem of non-dissemination was defined as the spread of technological capabilities, or latent capacities to produce nuclear weapons, and not the spread of nuclear weapons per se. Hence, the approach to non-dissemination involved controlling the spread of civilian capabilities through a policy of technological denial. This approach began in 1943 with U.S. President Roosevelt's decision to close the door on outsider access to its atomic energy program. It subsequently went into dormancy during the "Atoms for Peace" era in the 1950's and 1960's, and became manifest again in the 1970's with the publication of the Nuclear Supplier's Group Guidelines (NSG) in 1977, and the passage of the U.S. Nuclear Non-Proliferation Act in 1978.

The second approach saw the technical link between civilian and military nuclear technology as essentially reconcilable: the possession of civilian technology was not regarded as problematic as long as such technology was not used for military purposes, or more specifically, nuclear weapons or nuclear explosive devices. This approach was institutionalized in the IAEA, and embodied in the 1968 NPT. It facilitated the transfer of civilian nuclear technology throughout the world.

The "end use" approach and "technological imperative" approach are potentially contradictory. To use Krasner's terms, while the idea that the spread of nuclear weapons is bad has gained more or less universal acceptance, two potentially different beliefs in "fact, causation, and rectitude" have emerged. This indicates, on the one hand, that the regime may in fact have two contradictory principles: a) the spread of nuclear weapons is bad; and b) the spread of civilian technology is good, or at least not problematic. On the other, it may indicate the existence of two regimes in the issue area.

That there are two contradictory "principles" in the "non-proliferation regime" which may indicate the existence of two regimes in the "non-proliferation" issue area, is as we have seen with Schiff, a possibility that has been lost on "non-proliferation" experts. Most of the academic commentary on the "regime" tends to define the non-dissemination problem

in terms of the spread of latent capacities. As such, those component parts which directly address the non-dissemination problem (especially those components which halt the spread of latent capacities) are emphasized, while other elements are treated as problematic, dismissed or ignored. By seeing the regime from the supply side (i.e. from the technological imperative approach), its component parts tend to be read acontextually and selectively. This is largely accomplished through reading the NPT - the centerpiece of the "non-proliferation" regime - from the point of a preferred policy position, rather than on the basis of its historical negotiating context. "Non-proliferation" specialists tend to "read" the "regime" using supply side glasses. While there is nothing inherently wrong with a supply side approach - the spread of latent capabilities is a real problem - there seems to be a fine line between supply side analysis and supply side apologetics.

As its title suggests, the NPT is not a narrowly defined non-dissemination agreement, but connects the issue of non-dissemination with that of disarmament, economic development, and security guarantees. Schiff has attempted to account for these linkages by drawing on Haas's issue linkage typologies. He thus accounts for the issue linkages embodied in the "regime" in terms of fragmented issue linkages, and his "norms" suggest an IAEA-NPT centered regime.[42] His analysis, however, does not consider the substantive differences between

the technological imperative approach embodied in NSG Guidelines and the end use approach embodied in the NPT. As such, while his analysis reflects an empathy for the historical negotiating context of the NPT, his "norms" do not reflect current understandings and modes of approach.

Schiff stands juxtaposed to the majority of other specialists who read the NPT as a narrowly defined non-dissemination treaty. Emphasis is placed on Articles I - III of the Treaty (the non-dissemination elements); the other articles along with the preamble are dismissed as tactical issue linkages. Article IV which grants the receipt of civilian nuclear technology as an inalienable right, is either ignored or treated as problematic. Hence, while Schiff favours an IAEA-NPT approach, others favour an NSG centered approach, which is accomplished through recontextualizing the NPT.[43]

Apart from exploring the evolution of the technological imperative and end use approach to the technical link between civilian and military nuclear technology, this thesis seeks to demonstrate that the NPT does in fact reflect a greater political and intellectual coherence than current wisdom acknowledges. The presence of issues relating to disarmament, economic development and security guarantees in the NPT cannot be dismissed as politically opportune. Rather, they were intellectually linked to the problem of

non-dissemination from the beginning, and their presence in the NPT formalizes the linkages.

The resolution of the question of civilian nuclear capabilities is a necessary but insufficient condition for non-dissemination. NNWS might agree not to use technology supplied by others to produce nuclear weapons, but that does not guarantee that they will not develop nuclear weapons by indigenous means. Hence, both the "end use" and "technological imperative" approaches are a palliative to non-dissemination, and not a full blown "cure". The early "technological imperative" approaches to the spread of civilian capacities were offered in conjunction with proposals for General and Complete Disarmament (GCD). GCD logically implied non-dissemination since there would be no nuclear weapons to spread. When the GCD talks broke down in the mid-1950's, the relationship between vertical and horizontal proliferation had to be redefined: GCD might logically imply non-dissemination, but non-dissemination did not imply GCD. In other words, NNWS may give up their right to develop nuclear weapons, while NWS keep them. A narrowly defined non-dissemination agreement would accept this logical asymmetry, and hence, the attendant problem of discrimination. Alternatively, the problem of non-dissemination could be approached indirectly, through vertical dissemination measures which had non-dissemination effects. A Comprehensive Test Ban, for example, would halt vertical proliferation by

providing a technical barrier to the production of more sophisticated and destabilizing weapons. It would also provide a technical barrier to NNWS contemplating a weapons program. These "indirect" approaches to non-dissemination would have roughly equal consequences for all members; the narrow non-dissemination approach would not.

The narrow approach to non-dissemination grew out of a series of Irish resolutions put forth in the U.N. General Assembly starting from the late 1950's. However, even then non-dissemination was not seen as fully independent from disarmament concerns. It emanated from concerns that the spread of nuclear weapons would throw a wrench into the ongoing negotiations for a comprehensive test ban treaty. As such, it was viewed as a "collateral measure" to be pursued in conjunction with ongoing disarmament negotiations. Moreover, other vertical proliferation measures under consideration at this time (i.e. nuclear weapon free zones) were considered to address the non-dissemination problem. A nuclear weapon free zone, for example, would halt dissemination as a byproduct of its original intent to halt vertical proliferation (especially in Central Europe). The NPT drew on these various direct and indirect approaches to non-dissemination which arose after the breakdown of the GCD negotiations in the mid-1950's, as well as the "end use" approach to civilian capacities, as a means of balancing the distribution of responsibilities between nuclear and non-nuclear states.

When understood in terms of its original context, the underlying logic of the NPT assumes that there is a positive correlation between horizontal and vertical proliferation. That is, NNWS will be less inclined to acquire nuclear weapons if NWS disarm, since gaps in security and prestige will be reduced. The reference to a Comprehensive Test Ban in the preamble of the NPT, as well as Article VI, is thus not a tactical linkage, but the result of an intellectual understanding of the relationship between non-dissemination and disarmament emanating from the late 1950's.[44]

The literature on "non-proliferation" in the West, thus follows this basic dichotomy. The dominant literature favours a NSG-centered approach which displaces the historical negotiating context of the NPT. The others (the "doves"), favour a NPT-centered approach, based on a historically accurate understanding of the NPT, but out-of-date understanding of the "non-proliferation regime".

This thesis is put forth as a means of clarifying current modes of understanding and approaches extant in the "non-proliferation" issue area. It is done with a view to account for current strains and tensions within the "regime". As such, it is largely an attempt to clarify, and potentially rethink the role of the NPT. This is accomplished through demonstrating that the NPT, as a product of history, draws together and reflects one particular construction of the issue area, one mode of understanding the problem, and one mode of

approach. For analytical purposes, these are treated as the "NPT regime". This categorization is useful since it a) recognizes the centrality of the NPT as an international approach to the spread of nuclear weapons; b) attributes a certain level of coherence to the NPT in terms of its conceptualization of the non-dissemination problem, and the proliferation problem more generally; c) draws together other arrangements in the issue area which actually do assume a positive relationship with the NPT; d) underlines the difference between the definition of and approach to non-dissemination embodied in the NPT and those of the NSG and individual supplier state policies motivated by a technological imperative definition.

This categorization is on one hand something to be demonstrated. On the other hand, it is not taken as etched in stone. The NPT regime has undergone some important de facto modifications in the last fifteen years which have had major ramifications with respect to its stability. These modifications are reflected, but rarely acknowledged as such in the literature. If we seek to gauge the stability of the NPT, then we must first understand what it is that has been modified. Once the conceptualization of the non-dissemination problem (and more generally the non-proliferation problem) embodied in the NPT has been ascertained, it can then be juxtaposed with other conceptualizations and approaches extant in the issue area. Tracing the evolution of the NPT regime,

and more specifically, recapturing the historical negotiating context of the NPT is thus important.

The de facto modifications of the NPT regime can be attributed to two basic factors. First, the dominant actors in the regime have, to use Ruggie's terms, sought to redefine the "collective situation". The NSG Guidelines provide a formalized manifestation of the dominant actors' redefinition of the collective situation. Since the conceptualization of and approach to non-dissemination embodied in the NSG Guidelines significantly departs from those embodied in the NPT, they at least potentially indicate the existence of a second or perhaps rival regime in the issue area. Or, they may point to regime transformation. (The relationship between the NPT-centered approach and the NSG-centered approach will be explored in Chapters Four and Five.) Whatever the case, the stability of the NPT must be gauged in relationship to other analyses and practices in the issue area. This includes not only the NSG, but also those of other non-NPT signatories.

The second basic factor which has given rise to a de facto modification of the NPT regime, hinges on changes in analyses and approaches in issue areas with which it overlaps. The NPT links the problem of horizontal and vertical proliferation in a very specific way. As I shall argue, its underlying logic was the result of the genesis of the problem of non-dissemination from its original GCD connection to its emergence as an issue in its own right. While the NPT

connects non-dissemination and disarmament in one way, superpower practices in the area of vertical proliferation have changed dramatically since the mid-1960's. The quest for disarmament has been displaced by that of arms control, which as I shall argue, is a qualitatively different approach to vertical proliferation than that sanctioned in the NPT. In order to assess the stability of the NPT, changes in analyses and practices in issue areas with which it overlaps must also be assessed.

On the basis of the preceding discussion, this study will trace the evolution of the NPT regime. In general terms, the purpose of this study is to:

1. Recapture the historical context of the NPT regime.

2. Demonstrate the coherence of the NPT regime.

3. Explore other analyses and practices in the non-dissemination issue area and their relationship to the NPT.

4. Assess changes in analyses and practices in issue areas covered by the NPT.

5. Evaluate the implications of (3) and (4) above with respect to the stability of the NPT.

Chapter One traces the history of post-war efforts to control the spread of nuclear weapons from 1943 to 1958. It begins with a discussion of the U.S. policy of technological denial. It then traces the origins of the conceptualization of and approach to the technical link between civilian and military technology embodied in the NPT, from Eisenhower's

Atoms for Peace proposal to the negotiation of the IAEA Statute.

Chapter Two discusses the non-dissemination debate from 1958 to 1965. While the IAEA Statute defined the link between military and civilian technology in "end use" terms, it was more a palliative to non-dissemination than a direct approach. Between 1958 and 1965, various approaches to halting the spread of nuclear weapons were explored. These included various vertical proliferation measures which had non-dissemination effects as well as the narrow approach, offered by Ireland, which allowed NWS to retain their nuclear weapons while prohibiting NNWS from developing them. Chapter Two shows how the "Irish" approach became the defining but qualified approach to non-dissemination embodied in the NPT.

Chapter Three deals specifically with the NPT negotiations in the Eighteen Nation Disarmament Committee, as well as the U.N. General Assembly from September 1965 to June 1968. It accounts for the specific text of the Treaty.

Chapter Four discusses post-NPT developments. It explores the possibility that the NSG Guidelines indicate the existence of a regime separate from the NPT regime, and explores the relationship between the two. It also discussed the understandings and practices of those actors which stand outside both the NSG and NPT.

The Conclusion discusses current strains on the NPT in light of the preceding analysis, and attempts to resolve some

fundamental regime defining questions. This includes clarifying the relationship between the NPT and the NSG, as well as the relationship between the NPT and the "regime" more generally.

Footnotes, Introduction

[1] Quoted in R.L. Beckman, Nuclear Non-Proliferation: Congress and the Control of Peaceful Nuclear Activities (Boulder: Westview Press, 1985), 91.

[2] Quoted in T.T. Poulouse, Nuclear Proliferation and the Third World (Atlantic Heights, N.J.: Humanities Press, 1982), 14.

[3] Quoted in J. Stoessinger, "Atoms for Peace: The International Atomic Energy Agency," in A.N. Halcombe (ed.), Organizing Peace in the Nuclear Age (Westport, Connecticut: Greenwood Press, 1975), 159.

[4] See for example, A. Myrdal, The Game of Disarmament: How the United States and Russia Run the Arms Race (New York: Pantheon Books, 1982). W. Epstein, "Reviewing the Non-Proliferation Treaty," Background Paper No. 4 (Ottawa: Canadian Institute for International Peace and Security, March 1986). M.I. Shaker, The Nuclear Non-Proliferation Treaty: Origin and Implementation (London: Oceana Publications, 1980).

[5] See for example, T.T. Poulouse, Nuclear Proliferation and the Third World (Atlantic Heights, N.J.: Humanities Press, 1982). R.R. Subramanian, "Second Tier Nuclear Suppliers: Threat to the NPT Regime?" in R. Jones et al. (eds.), The Nuclear Suppliers and Non-Proliferation (Lexington, Mass.: Lexington Books, 1985). R.J. Rao, "India and the Treaty on Non-Proliferation of Nuclear Weapons," Journal of International Law 3 (October 1971), 228-238.

[6] See for example, J.S. Nye, "Maintaining a Non-Proliferation Regime," International Organization 35 (1981). R.K. Smith, "Explaining the Non-Proliferation Regime: Anomalies for Contemporary International Relations Theory," International Organization 41 (Spring 1987), 253-81. M.J. Brenner, Spreading Nuclear Capabilities: New Trends (Los Angeles: University of California Press, Center for International and Strategic Affairs, Working Paper No. 61, February 1988). S.M. Meyer, The Dynamics of Nuclear Proliferation (Chicago: University of Chicago Press, 1984). C. Van Doren, Nuclear Supply and Non-Proliferation: The IAEA Committee on Assurances of Supply (Washington, D.C.: Library of Congress, Congressional Research Service, Report No. 83-2025, October 1983).

[7] E.L.M. Burns, A Seat at the Table (Toronto: Clarke, Irwin and Co., 1972), 81-2.

[8] Obviously this terminology is awkward, but this is more reflective of the ambiguity surrounding their public use. In Russian, for example, there is no distinction between non-dissemination and non-proliferation. (See ibid.) I have used non-dissemination instead of horizontal non-proliferation because the latter causes stylistic problems. Similarly, I have used the term vertical proliferation for lack of a better one to capture the activities exclusive to the nuclear weapon states.

[9] R.O. Keohane and J.S. Nye, Power and Interdependence: World Politics in Transition (Toronto: Little, Brown and Company, 1977), 3.

[10] E. Haas, "Why Collaborate? Issue-Linkage and International Regimes," World Politics 32 (1980), 357.

[11] Ibid.

[12] R.O. Keohane and J.S. Nye, Power and Interdependence, 11.

[13] Ibid, 24-26.

[14] Ibid.

[15] E. Haas, "Why Collaborate?", 357.

[16] S. Krasner, "Structural Causes and Regime Consequences: Regimes as Intervening Variables," in S. Krasner (ed.), International Regimes (Ithaca: Cornell University Press, 1983), 1.

[17] Ibid, 2.

[18] Ibid, 3.

[19] R.O. Keohane and J.S. Nye, Power and Interdependence, 44.

[20] See R.O. Keohane, After Hegemony: Cooperation and Discord in the World Political Economy (Princeton: Princeton University Press, 1984), 31-46, for a discussion on the theory of hegemonic stability.

[21] For a critique of hegemonic stability theory, and regime theory more generally, see S. Haggard and B.A. Simmons, "Theories of International Regimes," International Organization 41 (Summer 1987), 491-517; J.F. Keeley, "Toward a Foucauldian Analysis of Regimes," International Organization 44 (Winter 1990), 83-106; D. Snidal, "The Limits of Hegemonic Stability Theory," International Organization 39 (Autumn 1985)

579-614; S. Strange, "Cave! Hic Dragones: A Critique of Regime Analysis," in S. Krasner (ed.), International Regimes, 337-354.

22 "Theories of International Regimes," 493.

23 See for example, E. Haas, "Why Collaborate?", 358.

24 "Theories of International Regimes," 493.

25 Susan Strange pointedly notes: "(t)he concept of regime can become so broadened as to mean almost any fairly stable distribution of the power to influence outcomes ... So, if ... there is no fundamental consensus about the answer to Krasner's first question, "What is a regime?", obviously there is not going to be much useful or substantive convergence of conclusions about the answers to other questions concerning their making and unmaking." See "Cav! Hic Dragones," 343.

26 "Theories of International Regimes," 503.

27 Oran Young, for example, introduces the notion of "imposed regimes", but does not explore the ramifications for collective goods analysis. See "International Regimes: Problems of Concept Formation," World Politics 32 (April 1980), 357-405.

28 "Legitimacy, Capability, Effectiveness and the Future of the NPT," in D.B. Dewitt (ed.), Nuclear Non-Proliferation and Global Security (London: Croom Helm, 1987), 29.

29 Ibid.

30 Ibid, 27.

31 J. Ruggie, "International Responses to Technology: Concepts and Trends," International Organization 29 (Summer 1975), 557-583.

32 Ibid, 567-8.

33 Ibid, 574.

34 "Why Collaborate?", 367.

35 Ibid, 371-2.

36 Ibid, 371-5.

[37] Keohane and Nye note the difficulties associated with defining the boundaries of an issue area, given that they will change over time as issues and groupings change. See Power and Interdependence, 65.

[38] See for example, L. Scheinman, The International Atomic Energy Agency and World Nuclear Order (Washington, D.C.: Resources for the Future, 1987). B. Schiff, International Nuclear Technology Transfers: Dilemmas for Dissemination and Control (New Jersey: Rowman and Allenheld, 1984), 33-92.

[39] International Nuclear Technology Transfers, 23.

[40] Ibid, 20.

[41] Ibid, 32, fn. 32.

[42] Ibid, 21-2.

[43] See for example, fn. 6 above.

[44] Roger K. Smith, for example, argues that the underlying logic the NPT assumes the reverse relationship (i.e. that if NWS maintain large and sophisticated nuclear arsenals, NNWS would be less inclined to develop nuclear weapons since the NWS could offer positive security guarantees to allies). When considered within the context of the negotiating record, the NPT nowhere implies the concept of extended deterrence. See "Explaining the Non-Proliferation Regime," 258-9.

CHAPTER ONE
POST-WAR EFFORTS TO CONTROL THE SPREAD OF NUCLEAR WEAPONS

The Pre-History of the NPT Regime

The history of efforts at controlling the spread of nuclear weapons evolved concurrently with efforts to develop them. In fact, it was two years before the first atomic test at Los Alamogordo, New Mexico, that the U.S. President Franklin Delanor Roosevelt decided to close the door on what had been an open relationship with Canada and Britain. Although this was an affront to Churchill, it was at least understandable, given the British reticence to divulge atomic secrets prior to 1942, when they held the lead in atomic technology.[1] It was largely on account of Churchill's persistent efforts to re-establish Anglo-American cooperation that the first international nuclear agreement was signed at a summit conference in Quebec, during August 1943. The agreement included a pledge by both the U.S. and U.K. not to: a) use atomic weapons against each other, b) use atomic weapons against another party without mutual consent, and c) transfer nuclear information to another party without mutual consent.[2]

The Quebec agreement did not re-establish Anglo-American collaboration in the area of "sensitive"

technologies such as plutonium producing reactors, and plutonium separation plants. Although Britain eventually gave up her right under the Quebec agreement to exercise a veto power on the use of nuclear weapons, the significance of the agreement was that the prohibition against the transfer of technology to a third party became the basis for the post-war policy of technological denial.

In the immediate aftermath of World War II, the U.S., Canada, and Britain reaffirmed the principles of the Quebec Agreement at a tripartite summit conference in Washington. The Truman-Atlee-King declaration of November 1945 noted the potential benefits of civilian nuclear technology, but maintained that the dissemination of such technology would have a deleterious effect on global stability in the absence of effective safeguards which would ensure that such technology would not be used for military purposes. The Conference concluded with a commitment from the three parties to refrain from transferring civilian atomic technology until such safeguards could be developed. The final declaration stated that controlling the spread of atomic weapons was a collective responsibility, and called upon the U.N. General Assembly to establish a commission which would develop proposals for General and Complete Disarmament, as well as an international safeguards system.[3]

Controlling the spread of atomic weapons by international means had been given official sanction at the

Washington Conference. This approach was again endorsed one month later in Moscow by the U.S., the U.K. and the Soviet Union. The Moscow Conference endorsed the principles of the Truman-Atlee-King Declaration, and called upon the U.N. General Assembly to establish an Atomic Energy Commission which would be responsible to the Security Council. In conformity with the Moscow declaration, the General Assembly unanimously adopted a resolution establishing the United Nations Atomic Energy Commission (UNAEC) on 24 January 1946.[4]

The first proposal considered by the UNAEC, the Baruch Plan (named for the American representative Bernard Baruch), was derived from the influential Acheson-Lilienthal Report. In anticipation of the establishment of the UNAEC, U.S. Secretary of State James F. Byrnes commissioned Dean Acheson (then Undersecretary of State) to head a committee which would develop a proposal for the international control of atomic energy. Members of the committee included: Dr. Vannevar Bush, Dr. James Conant, Leslie R. Groves, and John J. McCloy. The committee further appointed a panel of consultants including David Lilienthal, Robert Oppenheimer, Charles Bernard, Charles Thomas, and Harry Wine. The final report of the commission, released 28 March 1946, became known as the Acheson-Lilienthal Report, although apparently Oppenheimer was the main contributor.[5]

Recalling the Truman-Atlee-King declaration, the Report reiterated that "in the employment of (atomic weapons)

no single nation can in fact have a monopoly."[6] Here, the assumption that the U.S. would be able to maintain its nuclear monopoly given the sheer enormity of the scientific and technical knowledge required for such an enterprise, was categorically rejected. As such, the Report concluded that any long term non-dissemination policy based solely on secrecy and technological denial, was bound to be unenduring.

The Report further argued that progress in the area of civilian atomic energy implied progress in the military applications of such technology: "the development of atomic energy for peaceful purposes and the development of atomic energy for bombs are in much of their course interchangeable and interdependent."[7] Since the technology used in both civilian and military applications of atomic energy was seen as essentially the same, the Report argued that the mere possession of that technology constituted a dissemination threat. Hence, it rejected inspection-based safeguards as an adequate means of ensuring that technologies developed in the course of a civilian atomic program would not be used in the pursuit of a weapons program.

In order to ensure that all atomic technologies would be used exclusively for peaceful purposes, the Report proposed the creation of an International Atomic Development Authority (IADA) which would own, control, and manage all "dangerous" atomic activities. "Dangerous" activities were defined as any activity which offered a solution to one of the three major

problems in making nuclear weapons: the provision of raw materials; the production of plutonium and U_{235} in suitable quantity and quality; the use of these materials in making atomic weapons.[8] Hence, "dangerous" activities would include mining and processing uranium, installations for assembling weapons, and operating reactors and separation plants capable of producing bomb materials.[9] The IADA would have the right to undertake atomic research, develop civilian uses of those "safe" activities not subject to international ownership. "Safe" activities were defined as those which use either denatured materials, or material insufficient for bomb production. Hence, the Report sanctioned national ownership of those activities using denatured material for purposes of research or electricity.[10]

Although Bernard Baruch and his advisors made substantial changes to the Acheson-Lilienthal Report, the proposal put forth at the UNAEC still supported the idea of an IADA which would own, control, and manage all dangerous atomic activities. All other activities would be subject to IADA inspection and licensing. In order for the Authority to be effective in detecting the misuse of atomic energy, it would be at the forefront of atomic technology. The major substantive difference between the Acheson-Lilienthal Report and the Baruch Plan was that the latter called for the use of the Security Council as an enforcement mechanism under special conditions where the veto power would not be applicable.

Nations caught in violation of IADA rules would be subject to Security Council action on the basis of a majority voting system. When the IADA became operative, the Baruch Plan provided for the destruction of existing U.S. stockpiles, the cessation of American atomic weapons production, and the transfer of U.S. atomic technology to the IADA.[11] The American offer was, however, contingent on a number of provisos which were unacceptable to the Soviet Union.

The Soviet counterproposal put forth in the UNAEC by Andre Gromyko, called for the multilateral treaty which banned atomic weapons and provided for the destruction of existing stockpiles.[12] Only when the U.S. nuclear monopoly was fully relinquished would the Soviets consider the creation of a control agency. Also, such an agency would not entail foregoing the Security Council veto. Glenn T. Seaborg, Nobel Laureate and former Chairman of the U.S. Atomic Energy Commission characterized the ensuing U.S.-Soviet impasse at the UNAEC as follows:

> We were for controls first, disarmament later. They were for disarmament first, controls later. Why did we want controls first? Essentially because we thought the Soviets would cheat, using agreements as a shield behind which they could overtly eat away at our lead in nuclear arms. Why did the Soviets want disarmament first? Essentially they felt vulnerable to American attack while they were inferior in nuclear arms and feared we would use controls to ascertain how weak they were and to pinpoint the location of military and industrial targets for bombing attacks.[13]

This inveterate and irreconcilable divergence was to plague ensuing disarmament negotiations in the UNAEC. In 1950, the U.N. General Assembly voted to dismantle the UNAEC on the basis that it could not reach sufficient consensus to fulfill its mandate.

Given the pending failure of the Baruch Plan in the UNAEC, the U.S. Congress passed the July 1946 Atomic Energy Act, which effectively put an end to all remaining nuclear cooperation with its allies. The legislation prohibited the transfer of any nuclear technology; peaceful applications were to be withheld until an effective safeguard system could be developed. The U.S. nuclear program was to be shrouded under a veil of secrecy until President Eisenhower's Atoms for Peace initiative.

Until the mid-1950's the spread of nuclear weapons was controlled by a policy of technological denial. The Acheson-Lilienthal Report, the Baruch Plan, and the 1946 Atomic Energy Act all adopted a technological imperative approach to nuclear weapons: the mere possession of nuclear capabilities was considered problematic, regardless of the intended use. Although the peaceful benefits of atomic energy were recognized, the problem of developing a weapons capacity from a civilian program was seen as insurmountable. Or in Schiff's terms, the technical link between civilian and military technologies was not seen as receptive to a political solution.[14]

Like the civilian and military aspects of atomic energy, the problems of non-dissemination and disarmament were also not clearly differentiated during this period. All initial proposals put forth at the UNAEC purported to halt the spread of nuclear weapons by banning them altogether. Since they were essentially disarmament proposals, they at least logically implied non-dissemination: in a nuclear disarmed world, the problem of non-dissemination would not arise. Hence, although the problem was at least conceptually distinct from that of disarmament, they were treated synonymously as a matter of practice. Neither objective was fully distinguished in terms of policy. The early proposals put before the UNAEC were, in any case, largely predicated on the willingness of the U.S. to relinquish its nuclear weapons. The Soviet detonation of a nuclear device made this approach to non-dissemination much more remote and impractical.

Atoms for Peace: The Creation of the IAEA

Eisenhower's Atoms for Peace Plan was an attempt to move away from the broad and sweeping disarmament proposals advocated in the U.N. and other negotiating forums during the 1940's. The plan can be traced back to Operation Candor - itself the result of a State Department report commissioned by Acheson and headed by Oppenheimer.[15] The report, released 15 January 1953, was mandated to inform U.S. disarmament policy. Among its conclusions, the report urged that measures

be taken to control the arms race with the Soviet Union, since the Soviet rejection of on-site inspections rendered the prospects for a disarmament agreement impossible. The Report also recommended that the public should be informed, to the greatest possible extent, of the nature and character of the problem presented by nuclear weapons.[16] Eisenhower was particularly sympathetic to this proposal, and as such, sought to explore areas in which at least limited agreement with the Soviets was possible.[17]

While looking for a new approach in its nuclear relations with the Soviets, the U.S. was also faced with pressures to liberalize its nuclear export policy. The Soviet detonation of a nuclear device in August 1949 rendered the Baruch Plan obsolete. It also weakened the U.S. justification for denying nuclear technology to its allies. Prior to the Soviet test, the U.S. maintained that high levels of nuclear cooperation would increase the possibility of weapons technology leaking to the Soviet Union. Afterwards, this justification was subject to greater scrutiny.[18]

Renewed pressure for nuclear cooperation, especially from Britain, resulted in an amendment to the 1946 Atomic Energy Act in 1951. Congress made some modest changes to prohibitions on the transfer of nuclear information pertaining to the production of fissile materials, reactor development, and refinement technology.[19] When Britain detonated her first atomic device on 2 October 1952, the policy of denial lost

further ground. Its effectiveness as a non-dissemination measure was questioned given that other nations were able to develop weapons by indigenous means. By restricting nuclear cooperation, the U.S. was not only preventing itself from reaping the commercial advantages of peaceful atomic technologies, but was also precluding the use of cooperation agreements as a potential and important source of leverage over the domestic nuclear programs of others.[20] By the time that the Soviets detonated their first hydrogen bomb, Atoms for Peace was already under consideration in Washington.

Operation Candor became a dead letter by the end of 1953. Eisenhower found the draft speeches outlining the magnitude of the nuclear predicament, prepared by White House Assistance C.D. Jackson, to be too stern and forbidding. Although he still wanted to be candid with the American public, he did not want to increase anxiety by presenting a grim nuclear evaluation without tempering it with something positive.[21]

Apparently, Eisenhower was on vacation in Denver when he came up with the "Atoms for Peace" idea: the creation of an international atomic energy agency under the aegis of the U.N. which would act as an atomic bank.[22] The Agency would be the recipient of a specified amount of fissionable materials which would be used for research and development of the peaceful applications of atomic energy. The nuclear powers would donate materials from their own stockpiles to the Agency

which would, in turn, transfer the materials under safeguards to those states interested in developing a civilian atomic energy program. The details of Eisenhower's Atoms for Peace plan were hashed out over breakfast meetings between Jackson and the Chairman of the U.S. Atomic Energy Commission, Lewis Strauss. Somewhat facetiously, Operation Candor became known as Operation "Wheaties".[23]

Having worked out a draft "Atoms for Peace" speech, Jackson and Lewis accompanied Eisenhower to Bermuda where the proposal was presented to British Prime Minister Winston Churchill, Lord Cherwell (scientific advisor to Churchill), and Lord Eden. The final draft was worked out by Secretary of State John Foster Dulles, Jackson, Strauss and Eisenhower immediately upon the successful conclusion of the Bermuda Conference (9 December 1953).[24] The Atoms for Peace speech was delivered the following day at the U.N. The response was overwhelmingly positive. The U.S. negotiator for the IAEA, James J. Wadsworth, described the reaction in the General Assembly as follows:

> The United Nations was galvanized in a reaction that far outdistanced the precautions set forth in the speech itself and by the U.S. delegation. These reservations were stated to warn developing countries that the atomic pool idea was not the immediate harbinger of limitless cheap power and revolutionary industrial growth.[25]

In spite of a careful articulation of problems relating to the development of a civilian nuclear energy program, the responses from the developing nations betrayed the general

hope that the proposal would be implemented without delay so that the peaceful benefits of atomic energy would be immediately available. John Stoessinger notes this as well: "The eager expectations of the underdeveloped countries compelled the Unites States to consider rapid implementation of a program which would give priority to the underdeveloped areas of the world.[26]

The reaction to Atoms for Peace left the U.S. administration in a policy vacuum. Outside of those few who were directly associated with the development of the proposal, no one knew about it prior to Eisenhower's U.N. speech.[27] The responsibility for developing a concrete and specific proposal for the IAEA was left to the State Department and the U.S. Atomic Energy Commission. The first and foremost task they faced was winning Congressional approval for revising the Atomic Energy Act in order to provide a legal basis for Atoms for Peace. Eisenhower himself carried the initiative in this regard, and after a lengthy and difficult debate in the Senate, the Atomic Energy Act was amended on 30 August 1954.[28]

Negotiating the Statute of the IAEA

The Soviet reaction to Eisenhower's Atoms for Peace speech was lukewarm at best. Their objections were based squarely on the fact that it did not directly address the question of disarmament. They claimed that instead of halting weapons production and decreasing the possibility of their

use, the Plan actually promoted the arms race. The Soviet position was articulated by Mr. Molotov as follows:

> The level of science and technique which has been reached at the present time makes it possible for the very application of atomic energy for peaceful purposes to be utilized for increasing the production of atomic weapons.[29]

The Soviet refusal to participate in negotiations for the IAEA lasted until September 1954. The U.S. had initiated a series of bilateral exchanges with the Soviets as early as January of that year. Repeated memorandums sent by the U.S., however, were categorically rejected pending resolution on the disarmament question; in accordance with their strict disarmament platform, the Soviets made the creation of the IAEA contingent upon the prior prohibition of nuclear weapons.[30]

The U.S. put forth a two-fold counter-argument to the Soviet position. They argued, first of all, that the issue of peaceful uses of atomic energy could be divorced from that of disarmament. Since the proposal itself was not a disarmament proposal, it therefore could be considered independently from ongoing negotiations in that field. Secondly, the U.S. maintained that Atoms for Peace would in no way contribute to the dissemination of nuclear weapons: techniques could be developed to ensure against diversion for military purposes, and moreover, weapons grade materials were not required for peaceful uses.[31]

The turning point with respect to the Soviet position on Atoms for Peace came on 22 September 1955 with a declaration of their willingness to negotiate the IAEA concurrently with the disarmament negotiations. The reason for the turnabout can be largely attributed to the passing of the new atomic energy legislation in the U.S. the previous month. Prior to this, the Soviets could afford to drag their feet on what was a very popular proposal because it was illegal under U.S. law.[32]

Another factor which contributed significantly to the change in Soviet position was the formation of the Eight Nation Negotiation Committee set up by the U.S. for the purpose of considering its draft proposal for the IAEA Statute. Buoyed by international reaction to Atoms for Peace, the U.S. declared its intent to proceed with IAEA negotiations without the Soviets. In May 1954, the following eight states met to negotiate a draft statute for the IAEA: the U.S., the U.K., Canada, France, Portugal, Australia, South Africa, and Belgium.[33] Taken together, these events signalled to the Soviets both the U.S. commitment to Atoms for Peace, and its willingness to proceed without Soviet support. The Soviet reversal came because they did not want to be seen as delaying or impeding the implementation of a proposal which had such obvious worldwide support. Certainly the time for Soviets to have a change of heart was propitious: it immediately preceded the commencement of the Ninth Session of the U.N.

General Assembly where the peaceful uses of atomic energy was included as a separate agenda item for the first time.

The Ninth Session of the U.N. General Assembly

By the time that the Ninth Session had convened, nine months had elapsed since Eisenhower had first presented his Atoms for Peace proposal. Enthusiasm for the peaceful atom had waned in the interim. The secrecy surrounding the Eight Nation Negotiating Group combined with a general ignorance of the extent to which the U.S. had moved toward implementing Atoms for Peace, resulted in some scepticism regarding the U.S. commitment. The Ninth Session proved to be pivotal for Atoms for Peace. U.S. ambassador Henry Cabot Lodge Jr. presented a thorough resume of U.S. progress in this area. This included the development of a training program on isotope techniques at Oakridge, Tennessee, the compilation of an atomic energy library, and the formation of a reactor training school outside Chicago.[34] Publicity surrounding these activities had been kept deliberately at a low profile, pending the passing of the new atomic energy legislation.[35]

The Ninth Session also provided the forum where Soviet concerns regarding the IAEA could be addressed. As Bechhoefer noted, the Soviets had surmised that the IAEA would assume sole responsibility for all transactions involving the transfer of fissionable materials designated for peaceful uses.[36] Since the U.S. could control the IAEA through the

majority voting system, the Soviets assumed that such an arrangement (i.e. forgoing its own bilateral program to the Agency) would result in U.S. control of its civilian exports. The U.S. clarification went a long way in easing Soviet reticence; only those materials which were contributed for Agency projects would fall under Agency control. Supplier states would then be free to retain their bilateral programs, and to transfer fissionable materials without Agency consent.[37]

Finally, the Ninth Session went some way in diffusing contention regarding the composition of the Eight Nation Negotiating Group, and the secrecy surrounding their deliberations. The composition of the group had fallen under heavy criticism, especially from the Third World, due to the lack of representation from the Middle East, Latin America, and Asia. That South Africa was a member of the negotiating group only exacerbated tensions. In order to raise international awareness of the peaceful uses of atomic energy and to relax tensions regarding the composition of the negotiation group, the General Assembly adopted a resolution calling for an international conference on the peaceful uses of atomic energy to be held in Geneva, the following year. Both Brazil and India were designated as members of the Conference's advisory group, thereby paving the way for their inclusion in the latter stages of the IAEA negotiations.[38]

Between March and May 1955, the U.S. engaged in an extensive promotion campaign aimed at securing as many bilateral agreements for nuclear cooperation as possible prior to the adjournment of Congress in August. Under the provisions of the Atomic Energy Act, all cooperation agreements were subject to a thirty day waiting period, at which time Congress had to be in session. The U.S. objective was to secure as many agreements as possible, so that they could be transferred to the IAEA when it became operative. Between May and July, the U.S. secured 24 agreements for research reactors - 19 of which became operative before Congress adjourned.[39] Although to a lesser degree, the U.K. and the Soviet Union also actively pursued civilian bilateral nuclear cooperation agreements during this time period.[40]

By the end of May 1955, the Eight Nation Negotiating Group reached a consensus on a draft treaty for the IAEA. The draft statute was designed to create a functional organization which would facilitate the safeguarded transfers of civilian nuclear technology. The IAEA was to be comprised of three organs: a General Conference, a Board of Governors, and a Secretariat headed by the Director General. By far the most powerful organ, the Board of Governors was to be the key decision making body of the Agency. It was authorized to set the agenda for the annual meetings of the General Conference, and provide direct instructions to the secretariat and staff. The General Conference, comprised of the membership as a

whole, could exert influence over the Board by electing its non-permanent members and controlling the budget.[41]

The composition of the Board of Governors became one of the most debated issues during the Statute negotiations. The Eight Nation Group set the number of board members at sixteen, and developed a formula for designating board membership. As Stoessinger notes, the group envisioned an "atomic parallel to the United Nations Security Council."[42] The five states most technically advanced in civilian nuclear technology (the U.S., U.K., U.S.S.R., France, and Canada) were to be granted permanent status and extra voting rights. The permanent members would then appoint an additional five members to the Board from those states which were the principle suppliers of source materials. The remaining six seats were to be elected by the General Conference.[43]

The Tenth Session of the U.N. General Assembly

The Eight Nation draft statute was submitted to the Soviet Union on 29 July 1955, and then to the U.N. membership on August 22. Hence, by the time that the tenth session of the General Assembly convened, all U.N. members had had the opportunity to not only assess the draft, but to return it with their comments.[44] In general, the tenth session was successful: enthusiasm for the IAEA had been sustained on account of the Geneva Conference and the bilateral programs of the U.S., U.K. and the Soviet Union.

The main point of contention over the draft statute centered on the composition of the Board of Governors. It was widely seen as overly biased toward supplier states.[45] Also, the U.S. was subject to enormous pressure to increase the size of the negotiating group, and to submit the final draft statute for approval at an international conference. After initial reluctance, both demands were met: Czechoslovakia, India, Brazil, and the Soviet Union were to be added to the Eight Nation Negotiating Group, and the resulting draft would be put before an international conference on the final text of the Statute.[46]

The Twelve Nation Negotiating Group

The Twelve Nation Group met between February 27 and April 27, 1956. The prospect of submitting the draft statute to an international conference increased the pressure for consensus at this stage in the negotiations. In fact, as Bechhoefer notes, the creation of the IAEA was largely contingent upon the level of agreement reached among the twelve states:

> If violent confrontation should take place among the twelve negotiating states, it was practically a certainty that the later Conference of all states would not agree upon a statute. If the Soviet Union and Czechoslovakia were the sole dissenters ... it was possible that ... an international conference would have adopted a statute by two-thirds majority over the Soviet objection. If both the Soviet Union and India were to dissent, a two-thirds majority

> in the larger Conference would have been out of the question.[47]

Aware of the need to reach a consensus, the Twelve Nation Group did not alter the earlier Eight Nation draft in terms of its structural and conceptual provisions for the IAEA. This is not to say that the negotiations proceeded without controversy. The two central points of dispute revolved around the composition of the Board of Governors and its authority vis-à-vis the General Conference, as well as the issue of safeguards.

Leading the attack on the "Atomic Security Council" was Indian representative Mr. Hommi Bhabha, who criticized the earlier draft for being both unrealistic and undemocratic: unrealistic because, over time the states principally involved with the peaceful uses of atomic energy could change; undemocratic because recipient states would not be granted the same status as supplier states.[48]

In defense of the U.S. position, Australian delegate, Mr. Baxter, pointed to the International Bank for Reconstruction and Development, and the International Monetary Fund as a parallel example, where the special contribution of a minority was recognized through a weighted voting system.[49]

While the Eight Nation Group argued for a privileged position for the technically advanced states, the new members held out for greater geographic representation. The group finally reached a compromise solution which increased the size of the Board of Governors to 23 seats. Canada, the U.S.,

Britain, France, and the Soviet Union were accorded permanent status for the duration of their tenure as the leaders in atomic energy, in their respective geographic areas (viz., North American, Western and Eastern Europe). The next five members were appointed by the permanent members on the basis of atomic energy leadership in the remaining geographic areas. States falling into this category included Japan, Australia, South Africa, Brazil and India.[50] The next two seats were reserved for principle suppliers of source materials. Belgium, Czechoslovakia, Poland and Portugal were designated to this position on an annual rotating basis. An additional seat was reserved for a supplier of technical assistance to be held on an annual basis.[51] The remaining ten members of the Board were to be elected on an annual basis by the General Conference. Finally, the composition of the Board would be subject to review at the fifth session of the General Conference.[52]

The General Conference was also granted the authority to propose matters for consideration before the Board, and to participate in statutory amendments. In the event of a deadlock on the Board, a decision could be referred by request to the General Conference.[53] The exact division of powers, especially with respect to the specific policy making role each organ would assume, was left (and remained) ambiguous. As Stoessinger noted: "the Statute does not enumerate a single specified policy function of the Board of Governors,

and leaves unclear the precise policy powers of the General Conference."[54]

By far, the most controversial issue confronting the Twelve Nation Group was that of safeguards. Once again, Brazil, India, Czechoslovakia, and the Soviet Union found themselves at odds with the original eight members. The Eight Nation Group had envisioned a stringent control mechanism regulating the transfer of civilian atomic technology. The U.S., in particular, proposed a pervasive safeguard system for the Agency, which was to include the mandatory acceptance of safeguards as a condition of IAEA membership, and to cover all forms of Agency aid.[55]

Again, India took the lead in criticising the bifurcation of supplier and recipient states resulting from the safeguards proposal in the earlier draft. As the most vociferous opponent of mandatory safeguards, India argued for a voluntary system wherein the obligation to accept Agency safeguards was not contingent on membership, but rather, on the receipt of certain types of Agency aid.[56] While the U.S. maintained that all fissionable and source materials, as well as technical assistance emanating from the Agency should be subject to safeguards, India countered that safeguards should only be applicable to those materials which could be used directly for military purposes.

While conceding the need for safeguarding special fissionable materials, India proposed that source materials

and technical assistance be exempted from accountability. Since fissionable materials produced in processing source materials would be safeguarded, and that source materials alone could not be used for military purposes, India argued against any direct safeguards on source materials. It warned that such controls would put the atomic have nots at a disadvantage vis-à-vis the atomic haves, given that the latter would be able to bypass Agency safeguards on source materials in virtue of their indigenous supplies.[57] India also argued that safeguarding technical assistance was not only unnecessary given the purposes of such assistance, but also could potentially result in hindering the development of the recipient's atomic energy program, if they proved to be too burdensome.

Although the Soviet Union had initially voiced concern over the possibility of diversion from peaceful to military purposes when first presented with the Atoms for Peace proposal, and had agreed in principle to the application of safeguards when it agreed to enter into IAEA negotiations, it supported the watered down safeguard proposals advocated by India.[58] While the Soviets themselves would be exempt from Agency safeguards, they argued that such a penetrating system as that proposed by the U.S. could potentially constitute an infringement on the sovereignty of recipient states.[59]

The safeguard mechanism finally decided upon by the Twelve Nation Group leaned toward the Indian and Soviet

position. IAEA members were not required to submit to safeguards unless they applied for and received Agency assistance: civilian programs which remained independent of Agency aid would be excluded from Agency controls.[60] The Agency was to have the right to control source materials in principle, although its jurisdiction was limited to materials which were produced in Agency-aided facilities or by Agency-supplied materials in quantities exceeding the requirements of the recipient's peaceful program.[61] In other words, recipient states could retain that portion of the byproduct which could be demonstrably used for peaceful purposes (the exact quantity to be determined by Agency inspectors), but would be required to return unused stockpiled materials. Finally, statutory provisions were made to protect the sovereignty of states. Any "political, economic, military or other conditions incompatible with the Statute as criteria for agency assistance" were debarred.[62]

The most sensitive points in the processing of materials (i.e. those points most amenable to diversion) were placed under closest Agency scrutiny. The process itself would have to be approved: the Agency was authorized to approve reactor designs prior to construction. In order to verify that Agency projects were being used solely for peaceful purposes, the Agency had the right to send its own inspectors to examine the facilities. In order to assist Agency inspections, recipient states were required to maintain

an account of their special nuclear materials. Finally, statutory provisions were made for states requesting Agency safeguards pursuant to bilateral nuclear cooperation agreements.[63]

Those states found in violation of their respective safeguard agreements were subject to Agency sanctions. In such cases, the Agency was empowered to withdraw its assistance, and bar the offender from membership rights and privileges. Recourse could also be sought through the U.N. Security Council. It should be noted that although the draft statute of the Twelve Nation Group was adopted unanimously as a whole, rather lengthy reservations regarding the safeguard provisions were noted and appended to the draft.[64]

The final item of business for the Twelve Nation Negotiating Group was to decide on a time for the International Conference on the Statute, what rules of procedure were to be adopted, and to whom invitations would be extended. Throughout the Statute negotiations, both the Soviet Union and India argued that the IAEA should be open to universal membership, as opposed to U.N. membership. This would have allowed for the participation of the People's Republic of China, North Vietnam, and the Democratic People's Republic of Korea. The Western Bloc countries steadfastly and successfully argued that the decision of the tenth session of the General Assembly to extend invitations only to members of the U.N. and its specialized agencies, should be upheld.[65]

The Conference was scheduled to take place between September 20 and October 26, 1956 at the U.N. headquarters in New York.

The General Conference on the IAEA Statute

According to Bechhoefer, the success of the Conference on the Statute of the IAEA can be largely attributed to the fact that the points of contention had been narrowed substantially during the preceding negotiations.[66] Given the delicate compromises reached on issues such as the composition of the Board of Governors in the Twelve Nation Group, the Conference was advised not to open it up for reconsideration, lest it jeopardize the creation of the IAEA.[67]

Nearly one hundred statutory amendments were submitted to the Conference, of which 30 were withdrawn, 26 rejected, and 35 were adopted.[68] Most of the amendments adopted by the Conference were relatively uncontroversial and aimed at clarifying statutory language. The power of the General Conference was slightly expanded at the expense of the Board of Governors; the amendment procedure was simplified; provisions were made for a statute review; and, provisions for the preparatory commission of the IAEA were clarified.[69]

Again, the most contentious issue revolved around the question of safeguards. India, supported by the Soviet Union, and followed by the Third World more generally, continued its attack on the Agency's safeguard provisions. Without gaining

any further substantive concessions in this regard, statutory guarantees assuring that the application of safeguards would in no way hinder the development of civilian atomic energy programs of recipient states were granted. In essence, as Stoessinger noted: "It was conceded that the Statute could not impede the spread of nuclear know-how."[70]

On 23 October 1956 the Statute of the IAEA was unanimously adopted by the Conference. After seventy states signed the Statute, President Eisenhower announced a 5,000 kilogram detonation of U_{235} to the Agency.[71] The Conference drew to a close on 26 October 1956. The Statute entered into force during the proceedings of the IAEA preparatory committee after 26 states - including the members of the Twelve Nation Negotiating Group - deposited their instruments of ratification, on 29 July 1957.[72]

The IAEA: A Milestone in the Evolution of the NPT Regime

The creation of the IAEA was a milestone in the evolution of the NPT regime. As Scheinman noted: "(the establishment of the IAEA) not only institutionalized global dissemination of nuclear science and technical assistance, but also evolved an acceptable system of safeguards. This latter feature is essential to non-proliferation ..."[73] Although the IAEA differed in certain respects from the original Atoms for Peace proposal, it constituted a significant departure from earlier proposals dealing with the spread of civilian atomic

technology. In early post-war approaches, the mere possession of civilian nuclear capabilities was seen as a dissemination threat - all but the very smallest civilian atomic activities were considered unsafe. Hence, all but the most insignificant nuclear capabilities were to be internationally owned and controlled.

The Atoms for Peace approach saw a significant reversal: all civilian nuclear activities were seen as safe, if reasonable precautions were made to ensure that they would not be used for military purposes. The problem was no longer seen as the possession of nuclear capabilities, but rather, to what "end use" those capabilities were put to. Hence, whereas the technical link between military and civilian technology was seen as problematic in early post-war proposals, the Atoms for Peace approach saw this link as a positive one. The non-dissemination problem was now seen as the actual development of a weapons capacity from civilian technology, rather than the national ownership of civilian capabilities.

The "end use" approach to the technical link between military and civilian technology was instituted on account of a change in attitude toward inspection-based safeguards. The earlier plans dismissed safeguards as inadequate. Atoms for Peace saw international safeguards as the answer to disseminating nuclear know-how without contributing to the dissemination of nuclear weapons. Nuclear goods and services

could be nationally owned and controlled if the proper end use could be verified.

While the IAEA provided for the transfer of peaceful nuclear technology from nuclear suppliers to consumers, it did not constitute a direct approach to the problem of weapons dissemination. Its non-dissemination component was limited to safeguarding either Agency aid or, upon request, bilateral aid. It did not, however, require a formal non-dissemination pledge, and membership was not contingent upon the acceptance of full-scope safeguards. The non-nuclears were particularly sensitive to the potential sovereignty implications of foreign inspections and, backed by the Soviet Union, they were able to de-link membership from safeguards during the IAEA negotiations. Opposition to safeguards continued when the IAEA became operative. The Agency's safeguard system developed very slowly, and it was not until 1965 that it adopted a standardized safeguards document.[74] Nevertheless, opposition to safeguards declined significantly during the NPT negotiations, and as such, the NPT drew substantially from the "end use" approach to civilian technology.

The reconceptualization of the technical link between military and civilian technology occurred during the breakdown of superpower disarmament negotiations in the mid-1950's. The rapid expansion of the Soviet nuclear program both weakened the U.S. rationale underlying its policy of technological denial, and also its resolve to seriously pursue General and

Complete Disarmament. Emanating from the depths of the Cold War, Atoms for Peace was initially an attempt to kill two birds with one stone: it was to provide for the safeguarded transfer of civilian atomic technology, and pending agreement on disarmament, provide the infrastructure for the international ownership of nuclear stockpiles. This latter vertical proliferation objective was lost during the creation of the IAEA: it was negotiated outside the disarmament forums at the U.N. by those parties "principally involved" with the civilian aspects of atomic technology, not those principally involved in the disarmament negotiations.[75]

Although the IAEA contains statutory provisions for an "atomic bank", it became more of a clearinghouse for nuclear transfers pursuant to bilateral agreements, than a significant repository for special fissionable materials.[76] Eisenhower had initially hoped that contributions of source and special fissionable materials made to the atomic bank would actually reduce the amount of such materials available for military use on a kiloton-for-kiloton basis.[77] This provided to be a tenuous assumption. By the mid-1950's the amount of stockpile materials in the U.S. and abroad was simply too large for this to be a real possibility.[78] Eisenhower's donation of special nuclear materials to the IAEA was not seen as a significant step toward reducing materials available for military purposes, but rather as a salutary nod in that direction.[79]

Although the IAEA was, for the most part, institutionally disengaged from the problem of disarmament, the NPT asserts a link between vertical and horizontal proliferation concerns. The historical development of this linkage will be explored in the following chapter.

Footnotes, Chapter One

[1] For an account of allied nuclear cooperation during World War II, see Bertrand Goldschmidt, The Atomic Complex: A Worldwide Political History of Nuclear Energy (La Grange Park, Illinois: American Nuclear Society, 1982), 5-39.

[2] Ibid, 52-3. It was under the provisions of the Quebec Agreement that the U.S. sought British consent prior to dropping the bomb on Hiroshima.

[3] Benjamin Schiff, International Nuclear Technology: Dilemmas of Dissemination and Control (New Jersey: Rowman and Allenhead, 1984), 36-7.

[4] Ibid, 37.

[5] See Goldschmidt, Op. cit., 71-2.

[6] U.S. Department of State, A Report on the International Control of Atomic Energy (Washington, D.C.: Department of State, March 16, 1946), 1.

[7] Ibid, 3.

[8] Ibid, 19-20.

[9] Ibid, 20.

[10] Ibid, 20-1.

[11] Glenn T. Seaborg, Stemming the Tide: Arms Control in the Johnson Years (Lexington, Mass: D.C. Heath and Co. 1987), 66-7.

[12] Schiff, op. cit., 40-1.

[13] Op. cit., 67-8. M. Mandelbaum argues that even if the Soviets accepted the Baruch Plan, the U.S. would not have implemented it. See The Nuclear Question: The United Sates and Nuclear Weapons (London: Cambridge University Press, 1979), 23-9.

[14] Op. cit., 42.

[15] Robert R. Bowie, "Eisenhower, Atomic Weapons and Atoms for Peace" in Pilat, Pendley and Ebinger (eds), Atoms for Peace: An Analysis After Thirty Years (Boulder, Colo.: Westview Press, 1985), 18.

[16] Ibid, 19.

[17] Ibid, 18-23.

[18] Seaborg, op. cit., 71-2.

[19] Schiff, op. cit., 43.

[20] Seaborg, op. cit., 71.

[21] Bowie, op. cit., 19.

[22] Ibid, 22.

[23] Ibid.

[24] James J. Wadsworth, "Atoms for Peace" in Stoessinger and Westin (eds.), Power and Order: Six Cases in World Politics (New York: Harcourt, 1964), 35; Goldschmidt notes that the French were "deliberately excluded" at this point; op. cit., 114.

[25] Ibid.

[26] A.N. Halcombe (ed.), "Atoms For Peace: The International Atomic Energy Agency", Organizing Peace in the Nuclear Age (Westport, Connecticut: Greenwood Press, 1975), 136-7.

[27] Richard G. Hewlett, "From Proposal to Program", op. cit., 28.

[28] Ibid, 32.

[29] See Stoessinger, op. cit., 120.

[30] Ibid.

[31] Berhard Bechhoefer, "Negotiating the Statute of the International Atomic Energy Agency", International Organization 13 (Winter 1959), 43-4.

[32] See Stoessinger, op. cit., 121; see op. cit., 49.

[33] Schiff, op. cit., 50.

[34] Bechhoefer, op. cit., 47.

[35] Ibid.

[36] Ibid.

[37] Ibid, 48.

[38] Ibid, 46.

[39] Ibid, 52; For an overview of the 1954 Atomic Energy Act, see R.K. Dixit, "International Cooperation for the Peaceful uses of Atomic Energy under the Atomic Energy Act of 1954", Dickinson Law Review 61 (1956).

[40] Ibid, 53; For an account of the U.K. bilateral nuclear cooperation agreements prompted by Atoms for Peace, see Stephen Gorove "Safeguarding Atoms for Peace: U.K. Bilateral Agreements With Other Nations" West Virginia Law Review 68 (1966), 263-73.

[41] Bechhoefer, Ibid, 49-50.

[42] Op. cit., 128.

[43] Stoessinger, Ibid.

[44] Bechhoefer, op. cit., 49.

[45] Stoessinger, op. cit., 122-3.

[46] See U.N. General Assembly Res. 912 (c), (December 3, 1955); see also, Wadsworth, op. cit. 41-2.

[47] Op. cit., 54.

[48] Stoessinger, op. cit. 129.

[49] Ibid.

[50] Ibid, 130.

[51] Ibid, 131; Sweden was the first state to occupy this seat.

[52] Ibid. This was offered as a concession to the atomic "have nots".

[53] Ibid, 135.

[54] Ibid.

[55] Ibid, 141; see also Scheinman, op. cit., 35.

[56] Ibid.

[57] Ibid, 142-3.

[58] Ibid, 141.

[59] Schiff notes that Soviet opposition to international inspections (from which they would be exempt) was based on "more subtle elements of national interest, support of the developing states, and maintenance of the freedom to support or oppose the Agency's proposed activities after it was established.": op. cit., 98.

[60] Scheinman, op. cit., 124.

[61] Schiff, op. cit., 98.

[62] Ibid, 52.

[63] Schiff, op. cit., 98-9; Stoessinger, op. cit., 143.

[64] Bechhoefer, op. cit., 56.

[65] Schiff, op. cit., 53.

[66] Op. cit., 57.

[67] Ibid.

[68] Schiff, Op. cit., 53.

[69] Ibid, 54.

[70] Op. cit., 147.

[71] Scheinman, op. cit., 73.

[72] Stoessinger, op. cit., 155.

[73] Op. cit., 19.

[74] For an account of the development of the IAEA's pre-NPT safeguards document, INFCIRC 166, see Schiff, op. cit., 98-103.

[75] Bechhoefer, op. cit., 42-3.

[76] Scheinman, op. cit., 34. The atomic bank option was not foreclosed in the IAEA Statute. Article IX allows for donations of source and special fissionable materials to be made to the IAEA, and stored in Agency receptacles.

[77] Hewlett, op. cit., 29.

[78] Ibid. For an overview of the expansion of the U.S. stockpiles under Truman, see Seaborg, op. cit., 25-34.

[79] Hewlett, Ibid, 30.

CHAPTER TWO
TOWARD A NON-PROLIFERATION TREATY: THE NON-DISSEMINATION DEBATE (1958-1965)

Following the negotiations of the IAEA Statute, non-dissemination was an internationally recognized but vaguely defined problem. The conceptual and institutional disengagement of horizontal from vertical proliferation reflected in the creation and mandate of the IAEA did not lead, ipso facto, to a direct approach to the problem of weapons dissemination. Nor did it guarantee an approach which would be completely divorced from disarmament issues.

As outlined in Chapter One, post-war efforts dealing with the spread of nuclear weapons emerged within the context of Complete and General Disarmament. Early initiatives, although not strongly differentiating between horizontal and vertical proliferation aimed at least implicitly at halting the former by resolving the latter. The development of the hydrogen bomb led the U.S. to reappraise its disarmament policy. Operation Candor, the precursor to Atoms for Peace, was initiated within this context. Subsequently the U.S. moved toward the negotiation of partial disarmament measures as a means of laying the groundwork for Complete and General Disarmament.

The movement toward partial disarmament measures occurred almost simultaneously in the Soviet Union. Having reached a rough nuclear parity with the U.S. (as indicated by their advances in thermonuclear technology, and the Sputnik success in 1957), and faced with the deployment of U.S. tactical weapons in Western Europe, the new Soviet leadership following the death of Stalin was prompted to re-evaluate the strategic balance, and their own strategic doctrine. The Soviet reappraisal resulted, in part, in an intensified diplomatic effort in the area of disarmament.[1] Departing from their intransigent disarmament policies of the 1940's, by the mid-1950's the Soviets showed clear signs of moving toward the negotiation of partial disarmament measures.

The movement away from General and Complete Disarmament and toward a more limited approach to the arms race became manifest on international negotiating fora as early as 1955. Apart from Atoms for Peace, President Eisenhower proposed an "open skies" agreement to establish an early warning system against surprise attack, at the 1955 Summit meeting in Geneva.[2] Later that year, at the London Subcommittee of the U.N. Disarmament Committee, the U.S. announced that it was putting on reserve - i.e. withdrawing - its previous positions on disarmament.[3] Although the U.S. continued to advocate the open skies proposal, they subsequently linked it to a cut-off of fissionable materials

for military purposes after President Bulganin indicated a willingness to accept aerial photography in 1956.[4]

Soviet counterproposals for partial disarmament measures included a nuclear weapons free zone (NWFZ) in East and West Germany, military budget reductions, and a ban on weapons testing. The establishment of NWFZ's in Central Europe became a dominant theme in Soviet foreign policy.[5]

Apart from prompting the superpowers to seek agreement on partial disarmament measures, the development of the hydrogen bomb also resulted in an international push to ban all weapons testing. International pressure for a comprehensive test ban (CTB) skyrocketed following the U.S. detonation of a 15 megaton hydrogen bomb in the Bikini Islands in 1954. Radioactive fallout from the explosion contaminated Japanese fishermen aboard the Lucky Dragon, one hundred miles down wind. Reaction in the U.S. and abroad was particularly intense, largely on account of media attention surrounding the event. Indian Prime Minister Jawaharlal Nehru called upon the superpowers to declare a moratorium on nuclear testing, and a U.N. committee was established to study the effects of radiation exposure.[6]

The test ban issue did not become the subject of serious international negotiation, however, until 1958. While the Soviets had insisted on discussing the matter at the last session of the London Subcommittee in 1957, the U.S. remained reticent about negotiating a test ban separately from ongoing

disarmament negotiations. This was largely in deference to the French, who were engaged in their own nuclear testing program and had refused to consider the possibility of a test ban without a prior cut-off of fissionable materials for weapons testing.[7] Hence, the most the U.S. would offer at this time was a first stage disarmament proposal which linked a test ban with, inter alia, a fissionable materials cut-off. This proposal would have significantly allowed for the transfer of nuclear weapons to non-weapon states.[8]

By early 1958, however, the U.S. relented and agreed to the separate negotiation of CTB. Following a series of exchanges between Eisenhower and Bulganin and Khrushchev, the superpowers agreed to convene a "Conference of Experts" to conduct a study on verification measures for a CTB agreement.[9] In August 1958, both the U.S. and U.K. joined the Soviet moratorium on nuclear testing. Although their initial push for a test ban arose out of environmental concerns, it was negotiated as a partial disarmament measure, and retained a strong orientation to disarmament. The CTB was offered as a first step disarmament measure which would prevent the nuclear powers from developing more sophisticated and destabilizing weapons systems.

While the main focus during the CTB negotiations centered on the vertical proliferation effects, the issue of non-dissemination arose within this context as a sub-theme.

Test Ban proponents would also provide a technical barrier to the development of weapons capacity for non-weapon states.

While test ban proponents hailed non-dissemination as a natural by-product of a CTB agreement, the movement toward a more direct approach to non-dissemination grew out of the test ban negotiations. The Soviets first raised the "Nth country" concern in response to the French testing program. The chief Soviet negotiator during the CTB negotiations, Mr. Tsarapkin, articulated the non-dissemination problem in these terms:

> In conducting nuclear weapons tests, the French government is actively spurring on the nuclear armaments race. If this development is not checked, the number of states possessing nuclear weapons will rapidly grow. In that case, it will be more difficult to reach agreement on the discontinuance of nuclear tests, and all the more difficult to reach agreement on nuclear disarmament.[10]

The Irish Initiative

The spectre of additional dissemination throwing a wrench into the test ban negotiations, as well as the disarmament negotiations more generally, was not lost on Irish Foreign Minister, Mr. Frank Aiken. Taking on the issue as his personal cause, he initiated a series of non-dissemination resolutions at the U.N. General Assembly between 1958 and 1961.

At the thirteenth session of the U.N. General Assembly, Aiken introduced a draft resolution calling for the

creation of an ad hoc committee which was mandated to evaluate the consequences of additional dissemination, and to inform proceedings at the Fourteenth Session regarding measures to prevent its deleterious effects.[11] Aiken further proposed the inclusion of a non-dissemination clause in a seventeen power draft resolution on the suspension of nuclear tests. The clause called upon the Nuclear Weapon States (NWS) to refrain from supplying nuclear weapons to the Non-Nuclear Weapon States (NNWS) for the duration of the test ban negotiations (and for the duration of any agreement forthcoming). Conversely, it called upon the NNWS to refrain from manufacturing nuclear weapons for the same duration.[12] In presenting the proposals, Aiken argued that the issue of weapons dissemination had to be considered separately from ongoing disarmament negotiations given that those negotiations were bound to be long and drawn out. Any additional dissemination in the interim would constitute an insurmountable setback in the quest for disarmament in general, and a CTB in particular.[13]

International response to both proposals ranged from lukewarm to negative. The amendment to the seventeen power draft resolution was eventually withdrawn. The draft resolution calling for the creation of an ad hoc committee was also withdrawn, although the second preambular paragraph (which recognized the danger of weapons dissemination) was put

to a separate roll call vote. It passed with 37 votes in favour, 0 against, and 44 abstentions.[14]

The three main objections to the Irish proposals became the main points of debate surrounding the NPT negotiations. The first objection centered on the division of states into two categories: the nuclear have and the nuclear have nots. As articulated by Argentina, such a division would entail "giving legal sanction to the unequal situation resulting from the fact that only a few powers possessed nuclear weapons. The effect would be to create a gulf between the small powers and the great power.[15]

The second objection hinged upon the issue of verification. The U.S. maintained that it could not support a resolution which called for any non-transfer or non-acquisition pledges which could not be verified.[16] Both the first and second objections signalled what was yet to come in terms of the North-South agenda during the NPT negotiations, where the principle of sovereign equality was at variance with the asymmetrical distribution of obligations and responsibilities required by the Treaty.

The third objection to the Irish proposal was that it could impair the efficacy of the defensive alliance systems. This reflected the ongoing East-West conflict, and became the main point of debate between the superpowers during the NPT negotiations.

The U.S. and the Irish Initiative

Although non-dissemination arose as an agenda item at the thirteenth session of the General Assembly in 1958, it was considered only briefly. Alternatively, international attention was focused on the Cold War, and the burgeoning arms race between the superpowers. The Soviet launching of Sputnik in October 1957, and the subsequent deployment of missiles aimed at Western Europe had dramatic effect on the White House. The ensuing "crisis of confidence" in the potency of the Western deterrent system led U.S. President Eisenhower to initiate amendments to the 1954 Atomic Energy Act in order to facilitate greater nuclear cooperation with U.S. allies.[17]

As adumbrated by William Bader, the 1958 amendment to the Atomic Energy Act allowed for the transfer to U.S. allies of: "(1) the non-nuclear parts of atomic weapons; (2) fissionable materials suitable for the deployment of, or use in, nuclear weapons; (3) sensitive information concerning nuclear weapons; and (4) nuclear equipment such as military reactors."[18]

Although the new legislation liberalized U.S. nuclear export law considerably vis-à-vis the 1954 Atomic Energy Act, it did not give carte blanche sanction of nuclear transfers to any state which had entered into a military alliance with the U.S. It was primarily written to facilitate the expansion of nuclear cooperation with Britain. Hence, the final version of the legislation stipulated that the recipient of any transfers

allowed under the amendment must already have made substantial progress in the development of atomic weapons, and that such transfers "must not constitute an unreasonable risk to common defense and security."[19] Although this wording seems rather ill-defined and open ended, it was crafted to evade any question of extending similar transfers to the French.[20]

In 1960, the U.S. entered into stockpile arrangements with various NATO allies which facilitated the deployment of U.S. intermediate range ballistic missiles in Europe.[21] Since these arrangements necessitated at least some freedom of movement with respect to nuclear sharing in Europe, the U.S. was particularly reticent toward the Irish resolutions prior to 1961. Bader characterizes the prevailing American attitude as follows:

> Clearly, at this uncertain juncture, a non-proliferation resolution would have been, at best, a psychological barrier to the type of nuclear arrangements we were negotiating; at worse, a direct threat to our national security.[22]

The Soviet Union and the Irish Initiative

The Soviet attitude toward the pre-1961 Irish resolutions reflected its anxiety about the deployment of U.S. intermediate range ballistic missiles in Europe. Under its new stockpile arrangements, the U.S. deployed Thors in the U.K., and Jupiter in Turkey and Italy in 1960.[23] The admittance of West Germany to NATO in 1954 (by amendment of the Brussels Treaty) and its subsequent rearmament (by the

1954 London and Paris Treaties) provided the legal framework for the deployment of U.S. missiles in West Germany.[24] Although West Germany was required to unilaterally renounce its right to develop an independent nuclear weapons capacity, fears of a "revanchist" West Germany with access to nuclear trigger prompted the Soviets to initiate a series of partial disarmament proposals aimed at circumventing this possibility.[25]

Generally speaking, until the Soviet Union gained parity with the U.S. in terms of its nuclear strength, it was particularly disinclined to discuss the problem of weapons dissemination outside the context of broader disarmament proposals. Hence, Soviet proposals to limit weapons dissemination were presented within larger packages aimed at either banning the use of nuclear weapons by NWS or banning the diffusion of such weapons beyond their territories.[26] The 1957 Polish Rapacki Plan provides a case in point. The plan, named for the Polish Foreign Minister, and heavily supported by the Soviet Union, was aimed at establishing a nuclear weapons free zone in Poland, Czechoslovakia, and West Germany. The plan did contain non-dissemination provisions: it would have foreclosed the nuclear options of Poland and Czechoslovakia (West Germany had already renounced a nuclear weapons program in 1954). However, its primary purpose was to get rid of U.S. missiles in West Germany.[27] As such, the Rapacki Plan was essentially a vertical proliferation

proposal, where non-dissemination was a sub-product of the larger package.

Although the Soviets supported the 1958 Irish resolution, they refrained from commenting on it publicly. As Shaker notes, this can be accounted for by their alternative interest in nuclear weapon free zones and a nuclear test ban.[28] It was not until non-dissemination gained priority as an objective of foreign policy that the Soviets were willing to negotiate a NPT apart from other vertical proliferation issues.

The 1959 Irish Resolution

At the fourteenth session of the U.N. General Assembly in 1959, Ireland again submitted a draft resolution on non-dissemination to the First Committee. The resolution called upon the newly formed Ten Nation Disarmament Committee to consider effective measures to halt additional weapons dissemination.[29] Such measures were to include exploring "the feasibility of an international agreement subject to inspection and control" whereby NWS would refrain from relinquishing control of nuclear weapons to states not already possessing them, and those states not already possessing nuclear weapons would refrain from their manufacture.[30]

The 1959 proposal offered a more far reaching response to the problem of non-dissemination than did that of the previous year. Whereas the 1959 proposal for

non-transfer/non-acquisition pledges was presented as an amendment to the seventeen power draft resolution for a nuclear test ban, the 1959 resolution called for an international agreement on non-dissemination to be concluded apart from ongoing disarmament negotiations. Further, by introducing the notion of inspection, it presented verified non-dissemination pledges as the preferred approach to the problem (vis-à-vis the mere renunciation of nuclear weapons). Finally, by introducing the notion of control, it presented, at least potentially, a broader definition on dissemination than that implied by the term "supply" alone.[31]

The Irish Resolution was adopted on November 16 with 66 votes in favour, none against, and 13 abstentions.[32] This time, the U.S. voted for the resolution and the Soviet Union abstained. Both the American and Soviet reversal hinged on the introduction of the term "control". The U.S. defined "control" as "the unilateral right to fire".[33] This was more in line with the arrangements for nuclear sharing it had made within NATO, and also, with its thinking on non-dissemination. Specifically, while the U.S. did not support new entries into the nuclear club, it maintained its right to supply weapons and training to any NNWS, insofar as it did not relinquish control of the firing system.[34]

The Soviet abstention reflected its attitude toward inspections, as well as the American definition of control. Taking exception to the U.S. definition, the Soviets denounced

the resolution as "tacitly approving" the spread of nuclear weapons since it did nothing to prevent NWS from having nuclear weapons outside their own territory, outlawing such weapons and destroying their stockpiles, and eliminating foreign bases."[35] Instead, the Soviets advocated their own disarmament proposal (which had been introduced at the same session), as a more penetrating alternative.

The 1960 Irish Proposal

Although the 1959 Irish resolution was passed by a substantial majority, the Ten Nation Disarmament Committee did not deliberate on the non-dissemination question as requested when it met in 1960. The Committee convened only once in 1959, and then only to welcome the inaugural resolution. Its meeting in the spring of 1960 was primarily taken up with debate on the Soviet Complete and General Disarmament proposal, and talks broke off abruptly after the Soviet delegation walked out along with the Eastern Bloc representatives in June.[36]

In reaction to this development, Ireland submitted another draft resolution on non-dissemination to the First Committee at the fifteenth session of the General Assembly. The 1960 draft resolution again called for an international agreement, but stipulated that it should be permanent in duration. Further, pending the conclusion of such an agreement, it called upon the NWS to refrain from

relinquishing control of nuclear weapons, and from transmitting information regarding their manufacture to NNWS, as a voluntary and temporary measure. Conversely, it called upon NNWS to refrain from manufacturing nuclear weapons, or otherwise acquiring them, again on a voluntary and temporary basis.[37]

The 1960 draft was more penetrating than the 1959 draft in that it broadened the parameters of what would constitute proscribed behaviour under a non-dissemination agreement. First, it prohibited NWS from disseminating information relevant to the manufacture of nuclear weapons (as distinct from supplying weapons outright or relinquishing control of them). It further prohibited NNWS from attempting to acquire nuclear weapons by any means (as distinct from merely banning their manufacture by indigenous means).

The 1960 Irish resolution was approved by the General Assembly on December 20, by a vote of 68 in favour, none against, and 26 abstentions.[38] This time the U.S. abstained, although the vote within NATO was divided. The U.S. declined to support the resolution on the basis that it did not include an inspection provision. Interestingly, at this point, the U.S. declined that the resolution had the effect of discriminating against the non-nuclear powers. To quote U.S. delegate, Mr. Francis Wilcox:

> (t)he nuclear powers cannot expect to deny themselves such weapons as they may believe are required for their defense if they - the nuclear powers - refuse to accept the

> responsibility of halting their own build-up of nuclear weapons, and refuse to begin the process of their destruction.[39]

The U.S. position here is somewhat of a curiosity given that the non-nuclear states largely supported the resolution. India, for example, supported the resolution, although it maintained that its support was not indicative of a shift in its disarmament position.[40] According to Bader, the underlying reasons for the U.S. position on the 1960 resolution centered on Eisenhower's resistance to any restriction on the use of America's nuclear resources. Now that his tenure at the White House was drawing to an end, lame-duck president Eisenhower did not wish to restrain in any way the position of the new administration on nuclear sharing within NATO.[41]

"The Irish Resolution", 1961

The Irish initiative finally bore fruit on 4 December 1961, when the U.N. General Assembly unanimously adopted what has become known as the "Irish" resolution. The 1961 resolution was substantively similar to that of the previous year. It again called upon states to conclude an agreement on the "wide dissemination of nuclear weapons" where NWS would undertake not to relinquish control of nuclear weapons or transfer information necessary to their manufacture, and NNWS would undertake not to manufacture nuclear weapons, or otherwise acquire control of them.[42] While the resolution

sanctioned an international agreement on non-dissemination, it did not call upon states to make non-transfer/non-acquisition pledges as a voluntary, temporary measure.

American support for the 1961 resolution can be attributed to the change in administration at the White House. Whereas the non-dissemination question had been a relatively low level of concern for President Eisenhower, President Kennedy considered the issue to be much more pressing.[43] Soviet support for the resolution was consistent with its position on the resolution of the previous year.

The unanimous adoption of the Irish resolution was a milestone in the evolution of the conceptualization of the non-dissemination problem latter embodied in the NPT. It sanctioned an international agreement as the main approach to non-dissemination, where NWS and NNWS would have asymmetrical responsibilities and obligations: NNWS would give up their right to develop or acquire control of nuclear weapons; NWS would not be similarly restrained in continuing to manufacture nuclear weapons. It is important to note, however, that the resolution was accepted unanimously, not because of its inherently discriminatory nature, but because the whole problem of non-dissemination was viewed as one component of larger efforts at halting and reversing the arms race. As Aiken persuasively argued from the outset, additional weapons dissemination would completely alter the context of ongoing disarmament negotiations, and would consequently nullify any

gains made therein. International sanction of the Irish resolution was thus based on the understanding that a solution to the non-dissemination problem constituted a partial measure or a preliminary step in the path toward General and Complete Disarmament. Had this not been the case, then the NNWS - particularly the developing countries - would not have supported it.

The importance of the Irish resolution was that it provided the framework for a direct approach to the problem of non-dissemination. This was by no means the only approach under consideration, but it was the first attempt to deal solely and explicitly with the problem. Elsewhere, non-dissemination was considered indirectly, and more explicitly within the context of measures aimed at halting vertical proliferation. While the Irish approach saw non-dissemination as a preliminary step towards disarmament - a partial or collateral measure - other approaches saw the resolution of the vertical proliferation problem as a means of solving or preempting the non-dissemination problem. Hence, while the Irish resolutions subsequent to 1958 advocated an approach to non-dissemination which did not substantively deal with the problem of vertical proliferation, the issue arose elsewhere in connection with schemes aimed at halting or reversing the arms race. Promoters of schemes for nuclear weapon free zones, general and complete disarmament, and Comprehensive and Partial Test Bans claimed that

non-dissemination benefits would arise in virtue of their implementation.[44] This was the case with the Rapacki Plan for example, and became a prominent theme among supporters for a Comprehensive Test Ban.

These alternative approaches to non-dissemination were particularly attractive to the NNWS because they did not involve an asymmetrical distribution of obligations and responsibilities. Under a Comprehensive Test Ban, for example, all states would be prohibited from weapons testing, regardless of their status as a nuclear or non-nuclear state. As will be discussed shortly, this "indirect" approach to non-dissemination was not fully abandoned during the NPT negotiations.

The Eighteen Nation Disarmament Committee (1962 - 1963)

Following the 1961 Irish resolution, the Secretary General of the U.N. circulated a questionnaire to member states on the issue of non-dissemination. Its primary concern was to ascertain "the conditions under which countries not possessing nuclear weapons might be willing to enter into specific undertakings to refrain from manufacturing or otherwise acquiring such weapons and to refuse to receive, in the future, nuclear weapons on behalf of any country."[45] Significantly, the question itself did not pertain solely to non-dissemination, but also to non-deployment. The questionnaire garnered over 60 responses which were by no

means unanimous. Respondents listed an array of requirements and approaches which included a CTB, NWFZ, a cut-off of fissionable materials for military purposes, security guarantees, and non-deployment.[46] A narrow non-dissemination agreement based on the Irish approach was seen as only one possible response to a problem which was not necessarily or exclusively seen as non-dissemination.

After the 1961 Irish Resolution, the push for a non-dissemination treaty remained relatively dormant for a couple of years. The abrupt demise of the Ten Nation Disarmament Committee left no international negotiating forum where the matter could be seriously considered. Its successor, the Eighteen Nation Disarmament Committee (ENDC) was created in December 1961 when the superpowers agreed to the composition of its membership. Like the Ten Nation Committee, the ENDC was not an official member of the U.N. family, although it submitted its final documents to the U.N. General Assembly, and drew upon the services of the Secretariat.[47] The U.S. and Soviet Union stood as the permanent co-chairmen, and membership was extended to the original Ten Nation Committee plus the following eight non-aligned states: Brazil, Burma, Ethiopia, Sweden, Nigeria, Mexico, India, and the U.A.R.[48]

ENDC membership was extended to the non-aligned members in response to the growing demand of the non-aligned movement to be included in international disarmament forums,

and in recognition of their growing force as a third voice on disarmament matters.[49] They did not represent a bloc in the same manner as the NATO or Warsaw Pact members of the ENDC, although they referred to themselves as the "non-aligned members" and met informally on a weekly basis. As Shaker notes, they constituted more of a diplomatic group.[50]

As a "third force" in ENDC deliberations, the non-aligned members were able to coalesce around certain issues, although their positions varied greatly, and their views were by no means monolithic. Georges Fischer suggests, for example, that had they been more united and forceful during the test ban negotiations, they could have made possible the conclusion of a Comprehensive Test Ban.[51] Similarly, during the NPT negotiations although they were the driving force behind Resolution 2028, and released the periodic joint communique, they acted independently of each other, putting forth amendments to superpower draft treaties and the like, often without consultation.

The official NATO membership in the ENDC included the U.S., Canada, Italy, France and the U.K. France, however, persistently refused to occupy its seat, and hence, the ENDC was technically comprised of seventeen members. Although connected militarily through the Atlantic Alliance, the Western Bloc members were also not a coherent force in the ENDC. During the NPT negotiations, for example, both Italy and the U.K. submitted their own amendments to the superpower

draft treaties.[52] Britain took the U.S. to task over the NATO multilateral force. Generally speaking, Canada assumed a brokerage position, attempting to facilitate U.S.-Soviet compromise where possible. Mr. Burns, Canada's representative in the ENDC, noted that on occasion the non-aligned delegates would jest that Canada was really the ninth non-aligned member.[53] During the NPT negotiations, the U.S. maintained regular consultations with other NATO members (especially West Germany), and the Euratom Commission.[54]

The most cohesive force by far was the Eastern Bloc. During the NPT negotiations, Poland, Bulgaria, and Czechoslovakia were especially prone to follow the Soviet lead on all major issues. Romania was the only one that retained an independent and distinct position; it was, for example, the only Eastern Bloc country that introduced amendments to the superpower draft treaties.[55]

The General Assembly which endorsed the creation of the ENDC (Res. 1772 (XVI)), also called upon the Committee to give priority to agreement on General and Complete Disarmament. During its 1962 session, debate at the ENDC was taken up with deliberations on General and Complete Disarmament, as well as a CTB. The non-dissemination issue arose within the context of the superpower disarmament proposals: both the U.S. and Soviet disarmament proposals of March and April 1962 respectively, contained a non-dissemination clause as part of the first phase

provisions.[56] In December 1962, the ENDC's Committee of the Whole - established to consider collateral measures - reached an agreement to accord agenda priority to measures preventing both the spread of nuclear weapons, and the possibility of war by "accident, miscalculation, or failure of communications".[57] In 1963, debate in the ENDC was largely taken up by consideration of this latter issue, which culminated in the conclusion of the "Memorandum of Understanding Regarding the Establishment of a Direct Communication Link" (popularly known as the Hot-Line Agreement), on June 20 of that year. The Partial Test Ban Treaty was signed in Moscow the following month.

That the issue of non-dissemination fell into the background during the Hot-Line and Test Ban negotiations, has been aptly explained by Barton and Weiler:

> Starting in 1963, the ENDC led to a series of agreements, negotiated essentially one at a time. Whereas the earlier discussions of GCD concerned general concepts, the negotiations of specific agreements required time-consuming effort to agree upon specific detailed provisions. Governments found it difficult to engage in more than one detailed arms control negotiation at a time ... Thus each "active" negotiation dominated the agenda in its turn. Other matters were debated, but attention was focused on the measure which had become "ripe for agreement."[58]

Certainly, the conclusion of the Hot-Line Agreement, and to a greater extent, the Partial Test Ban Treaty, freed up superpower resources for serious consideration of a NPT. But it did more than that: the conclusion of the Partial Test Ban

set the stage for the NPT negotiations. As noted, the Irish Resolutions advocated a non-dissemination agreement substantively divorced from disarmament issues. The conclusion of a partial test ban instead of a comprehensive test ban left the latter issue on the agenda.

The Partial Test Ban and Non-Dissemination

While the initial impetus for a ban on nuclear testing arose at a global level out of concern for the environment, nations held greater expectations for a test ban than merely that of safeguarding the environment against atmospheric fallout: it was hailed as an arms control measure with the expectation that it would provide a technological barrier to the development of more sophisticated and destabilizing weapons systems; it was hailed as a non-dissemination measure with the expectation that it would provide a technological barrier to the development of a weapons capacity. The conclusion of a Partial Test Ban instead of a comprehensive test ban went a long way in assuaging environmental concerns, but failed to fulfill these greater expectations.

Although a state could legally develop a weapons capacity through underground testing, claims made for the effectiveness of the Partial Test Ban (PTB) as a non-dissemination measure were based on the assumption that underground testing was more time-consuming, expensive, and technically more difficult than atmospheric testing.[59]

Moreover, the PTB did contain limited non-dissemination provisions: Article I, Paragraph 2, called upon signatories to refrain from "causing, encouraging, or in any way participating in the carrying out of any nuclear weapons test explosion, or any other nuclear explosion, anywhere which would take place in any one of the environments described ..."[60]

Since the PTB was perceived as a technological (albeit imperfect) barrier to the spread of nuclear weapons, and because it prohibited signatories from lending assistance to nuclear testing programs of others, it could be more readily promoted as a non-dissemination measure than a vertical proliferation measure.[61] This was certainly the line taken by President Kennedy, Secretary of State Dean Rusk, and Defense Secretary McNamara in their bid to sell the PTB to critics in the Senate. In his message to the Senate on August 8, 1963, Kennedy articulated his views as follows:

> While the Treaty cannot wholly prevent the spread of nuclear arms to nations now not possessing them, it prohibits assistance to testing in these environments by others; it will be signed by many other potential testers; and it is thus an important opening in our effort to get the "genie back in the bottle".[62]

Robert McNamara also strongly supported the view that the PTB constituted an important non-dissemination measure:

> With testing limited to the underground environment, the potential cost for a nuclear weapons program would increase sharply for all signatory states. And since testing in underground is not only more costly, but also

> more difficult and time consuming, the proposed treaty would retard progress in weapons development in cases where the added costs and other factors were not sufficient to preclude it altogether. One of the great advantages of this treaty is that it will have the effect of retarding the spread of nuclear weapons.[63]

While the Partial Test Ban Treaty was being actively promoted by the U.S. administration as a non-dissemination measure, there was no illusion abroad that the Treaty would forestall the further development of the superpower's nuclear arsenals. In fact, Kennedy was obliged to commit himself to a massive underground testing program (among other things), in order to gain the support of the Joint Chiefs of Staff and placate wary senators. Seaborg notes: "For Kennedy, it (the PTB) was a Pyrrhic victory. Instead of representing, as he had wished, a step toward an end to all testing, the vote (in the Senate) represented to many a validation of continued testing albeit underground ... Testing after the test ban continued at a rapid rate."[64]

Although the NNWS welcomed the Partial Test Ban Treaty (while the superpowers were in the process of ratifying the Treaty, more than one hundred states signed it), it was largely viewed as incomplete business since it did not contain provisions banning underground tests. This view was held most strongly by the non-aligned members of the ENDC who were somewhat disarmed that the test ban talks were moved to Moscow, and the Partial Test Ban was presented as a <u>fait accompli</u>.[65] They tended to view the PTB as a precursor to a

CTB agreement rather than the best that could be accomplished by the NWS. As such, they pushed for the consideration of a CTB in the 1964 session of the ENDC. The superpowers remained rhetorically committed to a CTB, although they had little intention of giving it serious consideration.[66] As superpower attention shifted toward the negotiation of a non-dissemination treaty, the non-aligned states kept the test ban issue on the agenda by bringing it into the substance of the NPT negotiations.

The NATO Multilateral Force

Although the conclusion of the Partial Test Ban freed up superpower resources for the serious discussions on the NPT, bilateral negotiations between the superpowers proceeded slowly on account of one major stumbling block: the U.S. proposal for a nuclear armed multilateral force (MLF) operating under the auspices of NATO. The MLF plan, conceived during the last few months of the Eisenhower administration, was essentially a response to European aspirations for greater participation in the nuclear defense of NATO.[67] In particular, it was designed to prevent such aspirations on the part of West Germany from developing into a full blown desire for an independent nuclear deterrent. It was also an attempt to lure the West Germans away from possibly entering into a nuclear sharing arrangement with the French. In the long run, it was aimed at integrating the British (and possibly the

French) nuclear deterrent into an independent European force (the so-called "European option").[68]

Although the MLF was actively promoted by the Policy Planning Staff in the U.S. State Department, President Kennedy did not throw his weight behind it until de Gaulle and Adenauer signed the Franco-German Friendship Treaty in January 1963.[69] A State Department task force was set up, and the U.S. presented NATO allies with the first definite plan in March of that year. By October 1964, a working group composed of seven NATO members had laid the groundwork for a MLF charter.[70] The MLF was to consist of 25 surface vessels, each equipped with eight Polaris missiles. The crew on each ship was to represent three different countries, and the command system was to be determined on the basis of financial contribution. Provisions for the control system over the actual use of missiles was left ill-defined. It was tentatively proposed, however, that the decision to use the missiles would be left to the major participants (i.e. the U.S., the U.K., and the F.R.G.), and each would have veto power.[71]

The MLF plan threw a wrench into discussions on the NPT in both the ENDC and the U.N. Disarmament Commission between 1963 and 1965. As Shaker notes, both forums served as an arena for the MLF debate between NATO and the Warsaw Pact.[72] The Soviet position of the MLF was intransigent: it was tantamount to condoning dissemination, and therefore was

incompatible with a treaty designed to prevent it. The Soviets were particularly suspicious of West Germany's nuclear aspirations, and argued that the MLF would encourage the "militarist" and "revanchist" elements in West Germany to acquire nuclear weapons outright.[73]

Although President Johnson continued to support the MLF after he acceded to the presidency in November 1963, he eventually let it die a natural death after it became clear that the plan lacked sufficient allied support, and that it would prevent the conclusion of a NPT.[74] The West Germans themselves were interested in the MLF to the extent that it would tie the U.S. more firmly to the security of Western Europe, and allow them a greater degree of influence in Washington. If support of the MLF would result in some degree of control over the tactical nuclear weapons deployed in their country, then that would be welcome as well.[75]

Outside of West German (and to a lesser extent, Italian) interest, the MLF lacked the support of two crucial allies - France and the U.K. The French had been particularly hostile to the plan from its inception. It saw the MLF as a means by which the U.S. could gain leverage over its force de frappe. Moreover, like the Soviets, the French maintained that any nuclear sharing arrangements with the West Germans would "whet their appetites for nuclear matters".[76]

Although the U.K. participated in the MLF working group, it did so on the understanding that it did not commit

them to anything. The British Ministry of Defence was solidly opposed to the MLF, and British participation in the MLF negotiations was largely predicated on gaining a veto over the European option.[77] During his last two years as Prime Minister, MacMillan avoided taking a firm position on the MLF. After the October 1964 elections, Prime Minister Harold Wilson approached U.S. President Johnson with an alternative scheme for an Atlantic Nuclear Force (ANF).[78] The ANF proposed to dismantle the independent British deterrent, and place it at the disposal of NATO's Strategic Air Command in Europe. The "internationalization" of the British force was a means of getting around the problem of West German access to the nuclear trigger, and preventing the evolution of an independent European force. The U.S. welcomed the British proposal, but as Shaker notes, the ANF "seemed to have been cleverly devised to kill the MLF".[79]

The Chinese Nuclear Test Explosion

The Chinese detonation of a nuclear device in October 1964 brought a new sense of urgency to the debate on non-dissemination. Prior to the final break with China, the Soviets retained a certain level of ambiguity with respect to their position on non-dissemination. The Soviets had made substantial contributions to the Chinese nuclear program in its early stages, and signed an agreement for nuclear cooperation with them on 15 July 1957.[80] The increasingly

divergent foreign policy line taken by Beijing began to alarm Moscow however, and when the Chinese, prompted by the success of Sputnik and Khrushchev's claim to military superiority over the West, sought to gain control over the Island of Qemoy in the Taiwan Straits, the Soviets radically reassessed their nuclear relations with them.[81] According to B.S. Lambeth, the Taiwan Straits Crisis constituted a milestone in the evolution of Sino-Soviet relations, as well as in Soviet thinking on non-dissemination.[82] During the Qemoy affair, the Soviets refused to grant the Chinese any assurances of nuclear support until after it was clear that the crisis was subsiding. Shortly thereafter, the Soviets unilaterally renounced the agreement for nuclear cooperation. From 1961 until the Chinese detonation, the Soviets sought policy agreements with the West in part, to prevent China from obtaining nuclear weapons. In this regard, the Soviets saw the Partial Test Ban Treaty as a possible means of preventing China from developing nuclear weapons, although China denounced the Treaty as "fraudulent Soviet-American collusion."[83] The Soviets were unwilling, however, to go the distance at the time of the Partial Test Ban, when the U.S. was reported to have approached them with a proposal for a joint military exercise aimed at preempting Chinese weapons production. The Soviets reportedly rebuffed American overtures, as Quester notes: "(I)t was apparently too early or too late to ask Moscow to contemplate war against Peking in conjunction with the

Americans, even for the good cause of nuclear proliferation."[84] Following the Chinese detonation, Moscow sought to isolate and contain the Chinese weapons program. As a result, the NPT gained greater priority.

The Chinese detonation provided the impetus needed for the U.S. to drop the MLF/ANF plan and thus pave the way for agreement with the Soviets on Articles I and II of the NPT. As more information became available on the Chinese test, it became clear that the design of the explosive was more sophisticated than the original U.S. bomb dropped over Hiroshima.[85] In November 1964, President Johnson set up a panel (formally entitled "the President's Task Force on Preventing the Spread of Nuclear Weapons") to "explore the widest range of measures that the U.S. might undertake in conjunction with other governments or by itself" to halt the spread of nuclear weapons.[86] Although the Committee explored the desirability of allowing certain countries to attain a weapons capacity under controlled conditions, the final report was unequivocal in recommending that an international agreement on non-dissemination should be concluded as soon as possible. In light of the controversy surrounding the MLF, it strongly suggested that an NPT be given higher priority.[87]

In December 1964, President Johnson moved away from directly promoting an inter-allied force. The issue, however, was kept alive throughout 1965, and well into 1966, in part by advocates in the State Department who still hoped to bring the

MLF plan to fruition.[88] Moreover, until 1966, the West Germans had become quite anxious with respect to the establishment of the MLF, and some diplomatic effort was required to convince them that they had not been abandoned. The U.S. would only formally drop the MLF/ANF after the 1966 West German elections which brought the Social Democrats - who strongly opposed the MLF - into the Cabinet. When it became clear that the new coalition government had no interest in the plan, the U.S. could quietly let go of it without causing much embarrassment to Bonn.[89]

Within NATO, the nuclear sharing arrangement envisaged by the MLF/ANF were eventually replaced by a more modest goal of joint planning and strategy of nuclear operations. In the end, the MLF/ANF gave way to the NATO Nuclear Planning Group.[90]

The 1964 ENDC Session

Debate at the 1964 session of the ENDC was largely exploratory and remained at a fairly high level of generality. Many issues were discussed as possible areas for agreement. A non-proliferation agreement was mentioned in both President Johnson's opening message to the ENDC, and in the Soviet government memorandum, but only as one possibility among many.[91] Other issues considered included a cut-off of fissionable materials for military purposes, a freeze on nuclear delivery vehicles, a CTB, and NWFZ. The CTB was

strongly pushed by the non-aligned states. The non-dissemination issue was not considered until the session was half over. When it finally made the active agenda, the debate revolved around the question of whether or not the MLF would cause an increase in the number of states with an independent capacity. The non-aligned states voiced cautious support for NPT, and noted that the MLF controversy could jeopardize agreement in that area.[92] The Soviets also discussed the problem of non-dissemination within the context of their perennial favourite, a NWFZ in East and West Germany, and introduced a draft treaty on that issue on behalf of the German Democratic Republic.[93] Although the plan had little chance of succeeding, the move was clearly aimed at embarrassing West Germany.

By June 1964, the ENDC reached an impasse: the Soviets rejected a U.S. proposal for a verified freeze on nuclear delivery vehicles; the test ban debate snagged on the issue of verification; the NPT gained no further ground on account of the MLF controversy.

Member states had hoped to break the stalemate before the next session of the ENDC by hearing the views of the U.N. General Assembly in the interim. The Nineteenth Session of the Assembly was unable to inject new energy into the non-dissemination debate however, because it got bogged down in the controversy over financing the Congo peacekeeping operations. Although the International Court had ruled that

all U.N. members must incur their share of the debt, both France and the Soviet Union (among others) declined to submit payment. As a result, there was a push within the General Assembly to suspend their voting privileges under Article 19 of the U.N. Charter. Faced with this possibility, the Soviets threatened to pull out of the U.N. altogether, and the proceedings at the Nineteenth Session were paralyzed. The non-dissemination issue was not discussed, nor was any other disarmament issue. In order to resume debate in the area the Soviets requested a session of the UNDC - a forum whose membership was identical with that of the General Assembly, but where the question of voting rights could be avoided. Accordingly, a session of the UNDC was convened between April 21 and June 16, 1965.[94]

The 1965 UNDC Session: The MLF and the Non-Nuclears

Debate in the UNDC was largely taken up with the issue of non-dissemination. Although the superpowers reiterated their "support" for a Comprehensive Test Ban, a cut-off of fissionable material and a freeze on nuclear weapons delivery vehicles, it was by now clear that they were moving away from these issues and toward the consideration of a NPT - an area where they were most likely to find agreement.

Debate between the superpowers in the UNDC focused on the MLF/ANF plan. The Soviets argued that there was no essential difference between the MLF and the ANF in terms of

weapons dissemination: West Germany could still gain access to nuclear weapons under the ANF because it retained provisions similar to the MLF for mixed-man crews.[95] The ongoing debate between the superpowers on the MLF/ANF question had a significant impact on the NNWS - particularly the non-aligned. Up to the 1965 UNDC session, the issue of non-dissemination had arisen within four general contexts. The first context, General and Complete Disarmament, defined the non-dissemination problem in the broadest possible terms: controlling the spread of nuclear weapons applied to both weapon and non-weapon states. The second context, that of the CTB was narrower in focus than General and Complete Disarmament, but nonetheless preserved the connection between horizontal and vertical proliferation. The issue of non-dissemination also arose within the context of NWFZ's. Here, the problem of non-dissemination was expanded to include non-deployment. Finally, the Irish approach defined the non-dissemination problem in its narrowest form. It implicitly accepted the logical asymmetry between non-dissemination and disarmament, and hence was the only approach which: a) divorced the two issues; and b) accepted an asymmetrical distribution of duties and responsibilities between NWS and NNWS under a narrowly defined non-dissemination agreement.[96]

During the UNDC session, it had become clear that the superpowers were moving toward the negotiation of a NPT based

on the Irish approach. The ongoing East-West debate, cast in terms of the MLF question, was essentially a debate over what constituted non-dissemination within the context of Central Europe. As such, it was entirely divorced for the question of disarmament, and belied any intention on their part of getting rid of their own nuclear weaponry.

The NNWS had not supported the Irish resolutions, however, because of the approach to non-dissemination it embodied. The vote was demonstrative of a moral position against nuclear weapons in general, not non-dissemination per se. (Their general attitude was: "We've supported a non-dissemination resolution because nuclear weapons are bad, and no one should have them"). As long as the non-dissemination debate remained at a fairly high degree of generality, and the NNWS were not asked to formally commit themselves under treaty obligations, the discriminatory underpinnings of the Irish approach remained sotto voce.

During the 1965 session of the U.N.D.C., the non-aligned states attempted to open up the superpower debate on non-dissemination by bringing disarmament issues into the substance of the negotiations. What they were essentially aiming for was a political guarantee that a non-dissemination treaty would remain a meaningful collateral measure, and hence, would involve renunciatory activity on the part of both nuclear and non-nuclear states. The first line of attack was to draw on "linkage" arguments which tied the resolution of

the non-dissemination problem to that of disarmament. This included questioning the non-dissemination definition implicit in the Irish approach, and arguing that the possession of nuclear weapons by some encourages the acquisition of nuclear weapons by others.

India took the lead in advocating a link between non-dissemination and disarmament. India argued that it would be meaningless to ask the NNWS to renounce their right to develop nuclear weapons when international security continued to be threatened by the existing proliferation of the NWS. As such, it offered the following five step "integrated" approach to the "problems of proliferation:

> (1) An undertaking by the nuclear powers not to transfer nuclear weapons or nuclear weapons technology to NNWS.
>
> (2) An undertaking by the NWS not to use nuclear weapons against states which do not possess them.
>
> (3) An undertaking through the U.N. to safeguard the security of countries which may be threatened by having a nuclear weapons capability or about to have a nuclear weapons capability.
>
> (4) Tangible progress toward disarmament, including a CTB, a freeze on the production of nuclear weapons and delivery vehicles, as well as substantial reductions in existing stockpiles.
>
> (5) An undertaking by the NNWS not to acquire or manufacture nuclear weapons.[97]

Although others perhaps did not go the distance of the Indian approach, there was widespread agreement that the issues of non-dissemination and disarmament were linked, and

that the definition of the non-dissemination problem encompassed much more than horizontal proliferation. Yugoslavia, for example, offered the following definition of non-dissemination:

> We understand the dissemination of weapons of mass destruction to mean ...: simplification of production through nuclear tests, distribution of nuclear weapons over foreign territories and ports, and maintenance of these weapons in space, transfer to non-nuclear countries of technical and scientific knowledge, and the introduction of nuclear weapons to the lowest units of the army.[98]

In arguing for a broader definition of non-dissemination, NNWS maintained that a NPT must be "balanced" in terms of the obligations and responsibilities between the nuclear and non-nuclear states. Sweden argued that a NPT should not deal solely with the narrow problem of non-dissemination since it would bind the NNWS indefinitely to the status quo. It should involve renunciatory activity by both NWS and NNWS, and as such, priority should be accorded not to "one isolated measure but to several elements combined in a package".[99] The Swedish package included a CTB, a freeze on the production of fissionable materials for military purposes, and an agreement to prevent the dissemination of nuclear weapons.[100]

At the UNDC session, neither the Soviets nor the Americans questioned the linkage arguments put forth by the non-nuclears, nor did they argue against the balance arguments. Both superpowers had reiterated their rhetorical

support for those collateral measures which NNWS argued were part of NWS obligations under a NPT, by presenting them as agenda items at the outset of the session. Since the superpowers were locked into their own agenda, it was clear that their respective desires to win propaganda points prevented them from arguing strenuously against the balance argument. When the superpowers finally did reach agreement on the non-dissemination provisions on the NPT, and tried to conclude the Treaty on that basis, it was too late - the balance argument had already won.

There were a handful of NNWS at the session that argued against linking a NPT with broader disarmament issues. This view was presented by Ireland, Brazil, Norway, Costa Rica, Nepal and Pakistan.[101] Norway, for example, argued that "no attempt should be made a priori to fix an interrelationship between non-dissemination and other areas of disarmament."[102] Costa Rica, on the other hand, noted a linkage between non-dissemination and disarmament, but argued that a NPT should nonetheless be treated as a separate issue.[103]

The view that the NPT should be based exclusively on the Irish approach was, however, by far the minority position. The first triumph of the balance argument was reflected in the final resolution of UNDC session, which called on the ENDC to "accord special priority to the consideration of a question of a treaty or convention to prevent the proliferation of nuclear

weapons, giving close attention to the various suggestions that agreement at this level could be facilitated by adopting a program of certain related measures."[104] These related measures were taken to include a CTB, a freeze on nuclear weapons production, and a freeze on the production of fissionable materials for weapons purposes.[105]

The UNDC resolution was adopted by a vote of 83 in favour, 1 against (Albania), and 18 abstentions.[106] The abstentions emanated primarily from the Soviet Union and Eastern Bloc countries. The Soviets abstained on the grounds that the resolution did nothing to preclude West Germany from gaining access to nuclear weapons, and that it made the resolution of the non-dissemination problem contingent upon "the solution of a whole series of complex problems."[107] This latter objection to the U.S. sponsored resolution seemed to be somewhat of an afterthought. The Soviets did vote in favour of U.N. General Assembly Resolution 2028, passed the following October, where the balance argument was given full form.

Footnotes, Chapter Two

[1] Bernhard Beochhoefer, Post-War Negotiations for Arms Control (Washington, D.C.: The Brookings Institution, 1961), 270-85.

[2] J.H. Barton and L.D. Weiler, International Arms Control: Issues and Agreements (Stanford: Stanford University Press, 1976), 77.

[3] Ibid.

[4] Ibid, 78.

[5] Ibid.

[6] Ibid, 101-2.

[7] H.K. Jacobson and E. Stein, Diplomats, Scientists and Politicians: The United States and the Nuclear Test Ban Negotiations (Ann Arbor: University of Michigan Press, 1966), 16.

[8] Ibid.

[9] Glenn T. Seaborg, Kennedy, Khrushchev and the Test Ban (Berkeley: University of California Press, 1981), 3-13.

[10] Jacobson and Stein, op. cit., 273.

[11] Yearbook of the United Nations: 1958 (New York: United Nations, 1959), 9.

[12] Ibid.

[13] Mohammed I. Shaker, The Nuclear Non-Proliferation Treaty: Origin and Implementation (London: Oceana Publications, 1980), 4-5, vol. 1.

[14] Ibid, 9.

[15] Ibid, 7; G.A.O.R. 13th Session, 1st Committee 957 meeting 21 October 1958, para. 7.

[16] Shaker, ibid.

[17] William B. Bader, The United States and the Spread of Nuclear Weapons (New York: Pegasus, 1968), 26-9.

[18] Ibid, 29.

[19] Ibid, 30; The United States Code: Congressional and Administrative News, 85th Congress, 2nd Session, (Washington, D.C.: Government Printing Office, 1958), 2826.

[20] Ibid, 30-5.

[21] Ibid, 39.

[22] Ibid.

[23] Barton and Weiler, op. cit., 54.

[24] Ibid, 251.

[25] Ibid, 252.

[26] George H. Quester, "Soviet Policy on the Nuclear Non-Proliferation Treaty:, Cornell International Law Journal 5(1972), 17-18.

[27] Barton and Weiler, op. cit., 252.

[28] Op. cit., 11.

[29] The Ten Nation Disarmament Committee was set up in 1959 by the U.S., U.K., France, and U.S.S.R. to replace the London Subcommittee on Disarmament. The Ten Nation Committee also included Bulgaria, Canada, Czechoslovakia, Italy, Poland and Romania. Shaker, ibid, 13 fn. 25.

[30] Ibid, 13; G.O.A.R., 14th Session, Anns. Doc. A/4286, 18 November 1959, para. 5.

[31] For example, the 1959 resolution would have prohibited NWS from supplying weapons to NNWS (through a gift, etc.) but it would not have prohibited NWS from technically retaining possession of the weapons, but extending the right to fire to NNWS. The Irish delegate, however, declined to define the term "control". Shaker, ibid, 14, fn. 27.

[32] U.N.G.A. Res. 1380 (XIV); Bader op. cit., 41.

[33] Glenn T. Seaborg, Stemming the Tide: Arms Control in the Johnson Years (Lexington, Mass: D.C. Heath and Co., 1987), 78.

[34] Ibid, 77-8; see also Bader, op. cit., 41.

[35] Bader, ibid.

[36] The demise of the Ten Nation Disarmament Committee occurred in the aftermath of the "U-2" incident, where

American pilot Francis Gary Powers was shot down over the Soviet Union. Barton & Weiler, op. cit. 83; see also Bechhoefer, op. cit., 536-57.

37 Shaker, op. cit., 18; G.A.O.R. 15th Session, Anns. (vol. 2), Doc. A/4680, December 20, 1960, para. 10.

38 U.N.G.A. Res. 1576 (XV) December 20, 1960. Although the U.S. abstained, the vote within NATO was divided. Canada, Denmark, Iceland, and Norway voted for the resolution. See Bader, op. cit., 42.

39 Shaker, op. cit., 21-2; G.A.O.R. 15th Session (Part I), 960th plenary meeting, December 20, 1960, para. 33.

40 Shaker, ibid, 22.

41 Bader, op. cit., 42-3; Seaborg notes that similar restraint was evident at the Test Ban negotiations in Geneva. See Stemming the Tide, op. cit., 79.

42 Shaker, op. cit., 24; U.N.G.A. Res 1665 (XVI), December 4, 1961.

43 Bader, op. cit., 44.

44 J.F. Keeley & S.K. Singh "Before & After: The Comprehensive Test Ban and the NPT", paper presented at the Annual Meeting of the Canadian Political Science Association (Quebec City, 1989), 4-5.

45 Disarmament Commission Official Records, DC/201 (April 2, 1962).

46 Ibid, DC/201. Add. 2, DC/201. Add. 3, DC/203. Add. 1.

47 Georges Fischer, The Non-Proliferation of Nuclear Weapons (London: Europa Publications, 1971), 39.

48 Ibid, 43-6.

49 The non-aligned states had called fro greater representation in disarmament negotiations at the first Conference of Heads of States or Government of Non-Aligned States in Belgrade, Yugoslavia in September, 1961. See Shaker, op. cit., 71.

50 Ibid, 81.

51 Op. cit., 46

[52] See for example; ENDC/203 (November 22, 1967); ENDC/218 (February 20, 1968); ENDC/221 (March 6, 1968).

[53] E.L.M. Burns, A Seat at the Table (Toronto: Clark, Irwin and Co. Ltd., 1972), 85.

[54] Seaborg, Stemming the Tide, op. cit., 164.

[55] See ENDC/199 (October 19, 1967).

[56] ENDC/2 (March 15, 1962), 122; ENDC/30 (April 18, 1962), 145.

[57] The Cuban Missile Crisis provided the key impetus for the Hot-Line Agreement. See Barton & Weiler, op. cit., 86.

[58] Ibid.

[59] Bader, op. cit., 54-6; Fischer, op. cit., 18-9.

[60] Keesings Research Report No. 7, Disarmament: Negotiations and Treaties, 1946-1971 (New York: Charles Scribner's Sons, 1972), 313-4.

[61] Keeley & Singh, op. cit., 5.

[62] U.S. Senate, Nuclear Test Ban Treaty: Hearings Before the Committee on Foreign Relations (Washington, D.C.: U.S. Government Printing Office, 1963), 3.

[63] Ibid, 108.

[64] Stemming the Tide, op. cit., 204-5.

[65] Bader, op. cit., 51.

[66] Seaborg, Stemming the Tide, op. cit., 204-5.

[67] Ibid, 83-4; Shaker, op. cit., 133.

[68] Ibid.

[69] Seaborg, ibid, 86.

[70] Shaker, op. cit., 138-9.

[71] Ibid, 140.

[72] Ibid, 159.

[73] Ibid.

[74] See Seaborg, Stemming the Tide, op. cit., 95-151.

[75] Shaker, op. cit., 143.

[76] Seaborg, Stemming the Tide, op. cit., 103; Shaker, ibid, 135, 153-5; In an attempt to pre-empt West German participation in the MLF, de Gaulle offered to extend nuclear protection to the West Germans under its force de frappe. As West Germany began to show increasing interest in the MLF, France threatened to abrogate their 1963 Friendship Treaty.

[77] Shaker, ibid, 148.

[78] Ibid, 174-5.

[79] Ibid, 188.

[80] For an account of the Soviet contribution to the Chinese nuclear bomb program see Morton Halperin, China and the Bomb (London: Pall Mall Press, 1965), 78-82.

[81] B.S. Lambeth, "Nuclear Proliferation and Soviet Arms Control Policy", Orbis 14 (Summer 1970), 309-10.

[82] Ibid, 311.

[83] Quester, op. cit., 21.

[84] Ibid, 21-2.

[85] Seaborg, Stemming the Tide, op. cit., 116.

[86] The Committee was more popularly known as the Gilpatric Committee, named for the Chairman, Roswell L. Gilpatric. For an interested account of the proceedings see Seaborg, ibid, 131-52.

[87] Ibid, 143.

[88] Ibid, 169.

[89] Shaker, op. cit., 181.

[90] Ibid, 183-7.

[91] ENDC/147 (September 17, 1964); Also, in a rather lengthy statement delivered to the ENDC in February 1964, the U.S. representative, Mr. Steele, went into some detail summarizing the testimonies of President Kennedy and Secretary of State Rusk at the Senate Foreign Relations Committee's hearings on the PTB. Mr. Steele went on to outline the

additional non-dissemination benefits to be gained by a ban on underground tests. ENDC/PV. 126 (February 13, 1964), 21-3.

92 The U.A.R., for example, proposed that the MLF issue be tied to a verified freeze on strategic nuclear weapons. ENDC/144 (September 14, 1964), 30.

93 ENDC/124 (February 3, 1964).

94 See E.L.M. Burns, op. cit., 204-5.

95 Seaborg, Stemming the Tide, op. cit., 155-157.

96 Keeley & Singh, op. cit., 7.

97 Disarmament Commission: Official Records DC/PV. 75; 75th meeting (May 4, 1965), 4-5.

98 Ibid, DC/PV. 76; 76th meeting (May 7, 1965), 12.

99 Ibid, DC/PV. 77; 77th meeting (May 10, 1965), 9-10.

100 Ibid.

101 The positions of Brazil and Pakistan were to change dramatically; both declined to sign the NPT on the basis that it was discriminatory.

102 Ibid, DC/PV. 83; 83rd meeting (May 18, 1965), 15.

103 Ibid, DC/PV. 86; 85th meeting (May 20, 1965), 14.

104 UNDC Official Records, DOC/DC/255, June 15, 1965.

105 Seaborg, op. cit., 156.

106 UNDC Official Records, 102nd meeting (June 15, 1965), para. 21.

107 Ibid, 99th meeting (June 14, 1965), para. 80.

CHAPTER THREE
NEGOTIATING THE NPT, JULY 1965 - JUNE 1968

The U.S. Draft Treaty

The ENDC convened on 27 July 1965 - a few weeks after the conclusion of the UNDC session. During the recess, the U.S. developed a draft treaty on non-proliferation in consultation with Britain and Canada.[1] Following the language of the 1961 Irish resolution, the U.S. draft was written with a view to retaining the MLF option. Article I, Paragraph 1, read as follows:

> Each of the nuclear states party to this treaty undertakes not to transfer any nuclear weapons into the national control of any non-nuclear state, either directly or indirectly through a military alliance, and each undertakes not to take any other action which would cause an increase in the total number of states and other organizations having independent power to use nuclear weapons.[2]

The prohibition against transferring nuclear weapons into the national control of NWS, did not preclude the possibility of shared control, (viz., joint ownership of nuclear weapons and joint decision-making regarding the use of those weapons). The prohibition against the NWS taking actions which would increase the total number of states with independent power to use nuclear weapons reflected the U.S. argument that the MLF was actually a non-dissemination device. It purported to

prevent the emergence of additional independent deterrent forces in Western Europe by preempting any need or desire to do so.[3]

Article II of the U.S. draft was the obverse of Article I: NNWS were prohibited from manufacturing nuclear devices, receiving nuclear weapons into their national control, or undertaking any action which would "cause an increase in the total number of states or other organizations having independent use of nuclear weapons." Article III contained verification provisions where NPT signatories were to facilitate the "application of IAEA or equivalent safeguards on all peaceful nuclear activities."[4] Article IV defined a NWS as a state "possessing the independent power to use nuclear weapons." The remaining three articles were procedural rather than substantive. Article VI sub-paragraph 2 contained provisions for a Treaty Review Conference. According to Seaborg, this was granted as a concession to the NNWS.[5]

Now that the U.S. had devised a specific text, the concerns raised at the UNDC regarding the obligations of the NWS were intensified. The onesidedness of the superpower debate on non-dissemination was reflected in the first draft treaty. This resulted in increased demands that the NPT be linked to specific disarmament measures. On 15 September 1965 the eight non-aligned members of the ENDC issued two joint memorandums - one on non-proliferation, and the other on a

comprehensive test ban. The memorandum on non-proliferation noted the submission of the U.S. draft treaty, but expressed regret that it had not yet "been possible to reconcile the various approaches for an appropriate or adequate treaty."[6] The memorandum then placed on record their own approach as follows:

> A treaty on non-proliferation of nuclear weapons is not an end in itself, but a means to an end. That end is general and complete disarmament, and, more particularly, nuclear disarmament. The eight delegations are convinced that measures to prohibit the spread of nuclear weapons should, therefore, be coupled or followed by tangible steps to halt the arms race and to limit, reduce and eliminate the stocks of nuclear weapons and their means of delivery.[7]

The second memorandum on a Comprehensive Test Ban noted that the final resolution of the UNDC had called upon the ENDC to accord priority to the question of extending the Partial Test Ban Treaty to include underground tests. It further noted that the conclusion of a Comprehensive Test Ban would not only constitute a non-proliferation measure, but also "strengthen the efforts being made to reach agreement on an appropriate treaty about non-proliferation, and generally improve the international climate."[8]

The Soviet Draft Treaty

After the conclusion of the ENDC meetings in September 1965, debate continued at the Twentieth Session of the U.N. General Assembly where non-dissemination was an active agenda

item. The Soviets presented their draft treaty at the outset. It was written explicitly to preclude the MLF/ANF, or any other type of nuclear sharing arrangement. Article I, paragraph 1, read as follows:

> Parties to the Treaty possessing nuclear weapons undertake not to transfer such weapons in any form - directly or indirectly, through third states or groups of states - to the ownership or control of states or groups of states not possessing nuclear weapons and not to accord to such states or groups of states, the right to participate in the ownership, control or use of nuclear weapons.
>
> The said Parties to the Treaty shall not transfer nuclear weapons, or control over them or over their emplacement and use, to units of the armed forces or military personnel of States not possessing nuclear weapons, even if such units or personnel are under the command of a military alliance.[9]

The Soviet draft provided for stricter obligations on the part of the NWS than the U.S. draft. NWS were also called upon to refrain from transmitting information relevant to the manufacture of nuclear weapons. Article II delineated the obligations of the NNWS. NNWS were prohibited from: manufacturing or acquiring nuclear weapons; participating in the ownership, control, or use of such weapons in any form; and, seeking information relevant to the manufacture of nuclear weapons. Unlike the U.S. draft, the Soviet draft did not contain an article on safeguards. Article III prohibited all parties from "offering any support, encouragement, or inducement to states seeking to own, manufacture, or exercise

control over nuclear weapons." The remaining four articles were procedural.[10]

The Soviet draft was summarily rejected by the U.S. Not only did it leave out provisions for safeguards, far from merely precluding the possibility of an MLF/ANF, it seemed to outlaw the existing two-key bilateral arrangements that the U.S. had with various of its NATO allies.[11]

The Non-Aligned Response

The presentation of the two draft treaties provided the impetus for the non-aligned member of the ENDC to formulate a joint response. They had been particularly impressed by a statement made by the U.A.R. representative in the U.N. First Committee, Mr. Ismael Fahmey, who suggested that a set of principles be adopted as a guide to the NPT negotiations, and not the superpower draft treaties.[12] The starting point to the negotiations then, would be to reach agreement on the objectives of the Treaty prior to the negotiation of an actual text. Drawing on the principles outlined by Fahmey, the eight non-aligned delegates produced a draft resolution which was subsequently introduced to the First Committee by the U.A.R. The resolution called upon the ENDC to reconvene as soon as possible in order to conduct negotiations on a NPT based on the following principles:

a) The Treaty should be devoid of any loopholes which might permit nuclear or non-nuclear Powers to proliferate,

directly or indirectly, nuclear weapons in any form.

b) The Treaty should embody an acceptable balance of duties and obligations of nuclear an non-nuclear Powers.

c) The Treaty should be a step towards the achievement of general and complete disarmament, and more particularly, nuclear disarmament.

d) The Treaty should be acceptable, and contain workable provisions to ensure the effectiveness of the Treaty.

e) Nothing in the Treaty should adversely affect the right of any group of states to conclude regional treaties in order to ensure the total absence of nuclear weapons in their territories.[13]

Significantly, the draft resolution was put to vote without debate, and was passed with 83 in favour, none against, and 6 abstentions. It was adopted a few days later in the General Assembly with 93 in favour, one against, and 6 abstentions.[14] Both the U.S. and the Soviet Union were not initially in favour of the "Guiding Principles". The U.S. argued that the Irish resolution embodied the principles necessary to reach agreement on an NPT, and submitted a draft resolution calling upon the ENDC to resume NPT negotiations as a matter of urgent priority. The Soviets introduced their own draft resolution which restated the first two articles of their draft treaty as the main principles or basis for agreement on the NPT.[15]

The support for Resolution 2028, however, was overwhelming. That it went straight to a vote without debate,

was the result of behind the scenes negotiations on the part of the eight non-aligned, and the sheer popularity of the draft resolution itself. The "Guiding Principles" was a means of altering the agenda set by the superpowers; a way for the NNWS to redirect discussion on the two draft treaties, and to introduce their own agenda. Bowing to international pressure, both the U.S. and the Soviet Union withdrew their own draft resolutions and supported the Guiding Principles.

The five principles contained in Resolution 2028 are worth considering in more detail, since they became the criteria used by the non-aligned ENDC members for evaluating subsequent draft treaties. Principle (a) was formulated with reference to the MLF/ANF controversy. The non-aligned argued that in order to avoid future misunderstanding, the actual non-dissemination provisions should be clearly defined at the outset.[16] The U.S. and the Soviet Union however, offered differing interpretations of what they defined as "loopholes": for the Soviets it meant "the granting of access to nuclear weapons to the West German revanchists through military blocs"; for the Americans it meant causing "an increase in the total number of states having independent powers to use nuclear weapons."[17]

Principle (b), calling for an acceptable balance of mutual obligations and responsibilities was formulated as a corrective to the onesidedness of the superpower draft treaties. The NNWS argued that the validity of the NPT hinged

on whether or not it took into account the particular interests of both the nuclear and non-nuclear powers. Principle (b) became the point of reference for the NNWS in their demands for security guarantees, assured supply of technical assistance, and the conclusion of tangible measures to halt the arms race.

Principle (c), calling for nuclear disarmament, overlapped with principle (b) insofar as it was considered as an obligation of the NWS. It was presented separately however, to emphasize the relationship between non-dissemination and disarmament (viz., that the Treaty should be integral to the disarmament process). Principle (c) became the point of departure for debate on Article VI of the NPT.

Principle (d), calling for acceptable and workable treaty provisions, related specifically to the issue of safeguards, as well as the procedural aspects of the Treaty. Finally, principle (e), included at the request of Mexico, was formulated in recognition of the Latin American initiative to establish a NWFZ in the region. Principle (e) became the basis for Article VII of the NPT.[18]

The ENDC Sessions in 1966

In 1966, the ENDC convened for two sessions which ran back to back between January and August. Although the issue of a NPT dominated proceedings, the question of a CTB was also

debated in some detail. President Johnson's Seven Point message to the ENDC urged the committee to consider a CTB, a verified cut-off of fissionable materials, and the destruction of stockpiles, in addition to the NPT. Johnson reiterated the U.S. commitment to a CTB, and again hailed it as an effective non-proliferation measure:

> My country persists in the belief that the perils of proliferation would be materially reduced by an extension of the Limited Test Ban Treaty to cover underground nuclear tests. For such an extension, the U.S. will require only that the number and kind of inspections which modern science shows to be necessary to assure that the Treaty is being faithfully observed. We call on all nations truly interested in such a ban to provide this committee any improvements in means for the detection and identification of seismic events which their research efforts may have developed.[19]

Soviet Premier Kosygin also voiced support for extending the Partial Test Ban Treaty, however, one which used nationally operated verification techniques situation within the territories of states concerned.[20]

Debate on the CTB was essentially carried by Sweden, the U.S., and the Soviet Union. Taking issue with the American position, Mrs. Myrdal argued that on-site inspections would have a negligible effect in detecting clandestine activities, and that national verification techniques were sufficient. She proposed that a CTB could include provisions where suspected violators would be subject to a "challenge for inspection" if the suspected violator could not produce a satisfactory explanation for a suspicious event. If the

potential violator did not subsequently allow for on-site inspections, then the challenging party could withdraw from the Treaty.[21]

Both the U.S. and Soviet Union rejected the Swedish proposal. The U.S. argued that it was both technically and politically unsound: technically, because national verification techniques could not differentiate between explosions and earthquakes on seismic events registering below 4.0 on the richter scale; politically, because it relied on accusations for its enforcement.[22] The Soviets argued that the Swedish proposal had the effect of bringing international inspections in through the back door.[23]

On 17 August 1966 the eight non-aligned issued another joint memorandum on a CTB which again reiterated their own contention that the discontinuance of underground testing would itself constitute an effective non-dissemination measure and inhibit the further development of nuclear weapons. The non-aligned eight again called on the NWS to conclude a CTB at an early date.[24] The non-aligned states repeated their call for a CTB in their joint memorandum on non-proliferation released a couple of days later in the ENDC. Recalling U.N. General Assembly Resolution 2028, they suggested various tangible disarmament measures which could be included either explicitly, as part of the Treaty provisions or possibly as preamble in the form of a declaration of intent:

> The eight delegations have individually put forward a number of suggestions as to such

> tangible steps including a comprehensive ban of nuclear weapons testing, a complete cessation of production of fissionable material for weapons purposes, both in themselves effective non-proliferation measures, a freeze and gradual reduction of stocks of nuclear weapons and the means of their delivery, the banning of the use of nuclear weapons as assurances of the security of non-nuclear weapons states. Such different steps could be embodied in a treaty as part of its provisions or as a declaration on intention.[25]

The U.S.-Soviet intransigence on the CTB verification issue reflected their mutual disinterest on the issue of banning underground tests. They kept the CTB on the agenda even when it was threatening to become inextricably linked with the NPT because of the propaganda mileage it could make in their ongoing contest on disarmament issues. Seaborg notes that at one point, the Joint Chiefs of Staff recommended that Johnson refrain from advocating a CTB in his 1966 ENDC address, especially since underground testing was required for the development of an effective ABM system. This view did not prevail however, in light of William Foster's warning that backtracking on the CTB would cost the U.S. heavily in terms of public relations.[26] This propaganda contest made it very difficult for either superpower to oppose the NNWS demand that a NPT should obligate the NWS to a CTB. Perhaps they hoped that their public declarations supporting the test ban would placate the non-nuclears, that it would lead them to believe that agreement on a CTB would be difficult but not impossible

- perhaps even foreseeable - and hence obviate the need to link it with a NPT.

Another issue which was widely debated in the 1966 ENDC session was that of security guarantees. This had been a mounting concern of the NNWS since the UNDC session, and subsequently became one of the most contentious issues in the NPT negotiations. Both Premier Kosygin and President Johnson addressed the issue in the opening messages. Kosygin offered to include a negative security guarantee as part of the NPT provisions:

> In order to facilitate agreement on the conclusion of a Treaty, the Soviet government declares its willingness to include in the draft Treaty a clause on the prohibition of the use of nuclear weapons against NNWS parties to the Treaty which have no nuclear weapons on their territory.[27]

Johnson offered a verbal positive security guarantee by repeating a statement he had made the previous October on nationwide television following the Chinese nuclear explosion: "(t)he nations that do not seek nuclear weapons can be sure that if they need our strong support against some threat of nuclear blackmail, then they will have it."[28]

The Kosygin proposal had been widely welcomed by the eight non-aligned ENDC members, especially since it had been offered as part of the Treaty provisions. It was rejected by the U.S. and other NATO members. The U.S. largely viewed it as a means of drawing attention to its missiles in West Germany, and its policy which was generally unsympathetic to

a no first-use commitment. Both Canada and Italy argued against the Kosygin proposal on the grounds that it would discriminate against NNWS with nuclear weapons on their territory, and that it would give rise to the problem of verifying which states did in fact have foreign weapons on their soil.[29]

Toward U.S.-Soviet Agreement on Articles I & II

During the 1966 ENDC session, the superpowers were unable to agree on a common language for Articles I & II. Although support for the MLF had diminished considerably within the U.S. administration, the U.S. stepped up its rhetorical support for the plan after de Gaulle's decision to pull France out of the inter-allied command structure of NATO in March 1966.[30] The superpowers did nevertheless manage to make some headway with respect to Articles I & II. On March 21, the U.S. submitted a list of amendments to its own draft treaty which were aimed at ameliorating Soviet fears about the European option. The amendments contained a definition of control ("the right or ability to fire nuclear weapons without the concurrent decision of an existing nuclear-weapon state") which effectively guaranteed a U.S. veto over any decision to use nuclear force within the context of a NATO nuclear sharing arrangement.[31] The Soviets argued that this definition was too narrow; if the U.S. allowed non-nuclear countries within NATO access to nuclear weapons,

they might ignore a U.S. veto if push came to shove. Since "locks don't protect against thieves", the Soviets maintained that the Treaty must contain provisions against both transferring nuclear weapons to NNWS as well as allowing them to gain access to the weapons of the NWS.[32]

The final push to abandon the MLF completely, and actively pursue a non-proliferation treaty came from within Congress. On 18 January 1966, the Vice-Chairman of the Joint Committee on Atomic Energy, Senator John O. Pastore, introduced a draft resolution on the spread of nuclear weapons. The operative paragraph read as follows:

> Resolved, that the Senate commends the President's serious and urgent efforts to negotiate international agreements limiting the spread of nuclear weapons and supports the principle of additional efforts by the President which are appropriate and necessary in the interest of peace and for the solution of nuclear proliferation problems.[33]

The Joint Committee on Atomic Energy subsequently held three well publicized hearings on the resolution which revealed that Congress would in no way support an MLF/ANF including sanctioning any change to the Atomic Energy Act which would provide the legal basis to do so. Defense Secretary McNamara was questioned about the security guarantees offered by Johnson following the Chinese explosion. At this time, McNamara stated that the U.S. was not the "policeman of the world". For onlookers in the ENDC this constituted a retrenchment from Johnson's offer, and underscored the weakness of the U.S. promise.[34]

Testimony at the hearing also reflected a general confidence in the IAEA safeguard system. While John Pastore himself noted that the spread of nuclear weapons was a "perversion of Atoms for Peace", the IAEA safeguard system was assumed to be efficacious. As Robert Beckman noted, the hearings accepted the traditional Atoms for Peace wisdom since they did not go beyond calling for assurances that a NPT would bind signatories to accept IAEA safeguards.[35]

The Pastore resolution was passed unanimously by the Senate on 17 May 1966.[36] While the Pastore resolution commended Johnson's non-proliferation efforts, it constituted more of a direct message to the President to throw his personal weight behind the NPT negotiations. Johnson's involvement in the NPT negotiations until mid-1966, had not gone much further than the general level of consultancy required to keep the negotiations on an even keel. This was largely on account of the escalation of war in Vietnam. The negotiations had now progressed to the point of finding a common language for Articles I & II. In order to proceed, the MLF had to be dropped with the West Germans, and as a quid pro quo, the Soviets had to accept the alternative: the NATO Nuclear Planning Group under the McNamara Committee. Following the 1966 ENDC sessions, these obstacles were removed.

In September, President Johnson met with Chancellor Erhard in Washington. The communique issued after their

meeting made no mention of the MLF/ANF as a solution to the problem of nuclear sharing within NATO.[37] Although it is not clear what exactly transpired at this meeting, the MLF was no longer discussed as a viable policy alternative at any time thereafter.[38]

The following month, President Johnson met with Soviet Foreign Minister Andrei Gromyko, again in Washington. It was here that the final obstacle to agreement on Articles I & II was removed: Johnson indicated that U.S. plans for nuclear sharing within NATO had been abandoned; Gromyko indicated that the Soviets would not raise strong objections to the establishment of the NATO Nuclear Planning Group.[39]

The resolution of the MLF impasses was reflected in the progress of the bilateral working group on the NPT. The working group was headed by the Co-Chairmen of the ENDC, and ran concurrently with the Twenty-First Session of the U.N. General Assembly. Within a month of the Washington meetings, the working group had managed to hammer out a common language for Articles I & II. The Soviets backed off their insistence on prohibiting the right to participate in the control or use of nuclear weapons, the transfer of information relevant to their manufacture, and most importantly, banning NNWS access to the nuclear weapons on NWS.[40]

For its part, the U.S. conceded that the Treaty need not retain the language of "national control" and accepted a Soviet text which forbade the transfer of nuclear weapons to

"any recipient whatsoever". Agreement on Articles I & II was reached on 5 December 1966 and the common language remained intact in the final form of the NPT. The first two articles of the NPT were agreed to as follows:

Article I

> Each nuclear-weapon State Party to the Treaty undertakes not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices directly, or indirectly; and not to in any way assist, encourage or induce any non-nuclear weapon state to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or devices.

Article II

> Each non-nuclear weapons State Party to this Treaty undertakes not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices directly or indirectly; not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices; and not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices.

The Twenty-First Session of the U.N. General Assembly

The non-proliferation issue was widely debated during the Twenty-First Session of the General Assembly. Again the NNWS argued for a balanced treaty, and at least two resolutions were passed reaffirming Resolution 2028.[41] The issue of peaceful nuclear explosives was also a hot item for debate, and pressure was increased for the inclusion of security guarantees in the NPT. Pakistan submitted a draft resolution calling for a conference of non-nuclear weapon

states to be convened not later than July 1968, so that these and other issues relevant to NNWS could be discussed in more detail. The resolution was passed with a vote of 48 for, 1 against, and 59 abstentions.[42] The vote reflected support for the idea of a NNWS conference but hesitance to hold it before the NPT was open for signature. Nevertheless, a preparatory committee was set up with a mandate to make the necessary arrangements and report to the Twenty-Second Session of the Assembly.

Toward Agreement on Articles III and IV

When the ENDC reconvened in February 1967, there was widespread speculation that the superpowers would table an agreed draft treaty. Having resolved the MLF/ANF question, however, U.S.-Soviet negotiations met another stumbling block, viz., safeguard provisions. Although the superpowers had agreed in principle to include provisions requiring NNWS signatories to accept safeguards on their entire civilian nuclear energy programs in November 1966, the remaining problem hinged on the Euratom "exception".[43] Proceedings at the Pastore hearings had revealed that the U.S. Senate would be negatively disposed toward a NPT without mandatory safeguard provisions. Its objection to Article III of the U.S. draft treaty centered on its weak language, which merely required states to "cooperate in facilitating IAEA or equivalent safeguards". The objection was not directed at the

"or equivalent" clause, a direct reference to the Euratom system - in fact the U.S. had been largely satisfied with the effectiveness or Euratom controls - but rather, at the "cooperative in facilitating" clause which would not have necessarily committed states to accept mandatory full scope safeguards.[44]

The Soviets had refused to consider the Euratom exception on the basis that it was tantamount to self-inspection. By itself, the U.S. could have agreed to require IAEA controls for Euratom members. However, after extensive consultation, NATO/EURATOM allies (particularly West Germany) made it clear that they would not accept a NPT with mandatory IAEA safeguards. Euratom members argued that the agency had been set up in 1958 - while the IAEA was attempting to develop its own safeguard system - in part, so that member states would be exempt from foreign inspection.[45]

West Germany had been especially insistent on Euratom controls, and had shown an increased hostility to a NPT generally speaking. The Brandt-Kiesinger coalition criticized the NPT on two accounts: first, IAEA safeguards would increase the possibility of industrial espionage; second, research and development in the area of nuclear explosives (and weapons) might give rise to civilian applications, and hence, would substantially aid in the development of their civilian nuclear industry. Since they would not be able to reap the benefits of this so-called "spin-off" effect from a

military nuclear program through their own research efforts under a NPT, they argued that the Treaty should include some assurances that these benefits would be made available to them through adequate technical assistance provisions.[46] It was largely in response to these concerns that the U.S. held out for the Euratom exception, and was induced to include some provisions for technical assistance in the NPT. Gaining the West German signature on the NPT was a prime U.S. objective.[47]

The Federal Republic of Germany was not alone in its reluctance to accept full scope IAEA safeguards, or in its demand for technical assistance guarantees. That the NWS would be exempt from IAEA controls served to further exacerbate tensions arising from the discriminatory Articles I & II. NNWS argued that IAEA safeguards could restrict the development of their civilian nuclear programs, especially if controls were differentially applied. Moreover, they worried that the NPT could be used by the NWS or technically advanced non-weapon states as a basis for denying nuclear technology to the less technically advanced non-weapon states. The idea of a spin-off effect was not lost on other NNWS either, and this concern drove the call for technical assistance guarantees.

In response to concerns that the NPT would confer a technological advantage on NWS, President Johnson offered the following reassurance in his 1967 opening message to the ENDC:

> I have instructed our negotiators to exercise the greatest care that the Treaty shall not hinder the non-nuclear powers in their development of nuclear energy for peaceful

> purposes. We believe in sharing the benefits of scientific progress ... There will be no barrier to effective cooperating among the signatory nations ... The U.S. is prepared to make available nuclear explosive services for peaceful purposes under appropriate IAEA safeguards ... We recommend that the Treaty clearly state the intention of its signatories to make available the full benefits of peaceful nuclear technology - including the benefits that are the byproduct of weapons research.[48]

While acknowledging that the NPT would contain some technical provision guarantees, Johnson's message did not allay the concerns of the non-aligned members of the ENDC - especially those that were holding out for the right to develop their own peaceful nuclear explosives. While Britain, Canada, and the U.S. argued at length against the spin-off effect, all eight non-aligned members as well as Italy and Romania voiced the concern that the NPT would hamper the development of NNWS civilian atomic energy programs.[49] The Soviet Union followed by the Eastern Bloc (with the exception of Romania), also argued against the spin-off effect, but their statements were largely couched within the context of anti-Bonn propaganda.[50]

The Italian representative to the ENDC, Mr. Cavalletti, argued that "it would be inadmissible for a NPT, through technical limitations or unfair influence of discriminatory controls, to delay or hamper scientific, technical or social progress in non-nuclear weapon countries. Each country must remain free to develop its industrial facilities through the use of all forms of atomic energy."[51]

Although Italy did not explicitly demand the right to develop peaceful nuclear explosives, they at least held the implicit expectation to do so.

Both Brazil and India went further than the Italians in their demand that a NPT should in no way prohibit the right to pursue peaceful nuclear explosives (PNE) research. Noting Mr. Cavalletti's statement, the Brazilian representative pointed to the Treaty of Tlatelolco which made a distinction between PNE's and explosions under controlled and elaborate procedures.[52] He argued that the NPT should contain PNE provisions using Tlatelolco as a model.

Supporting the Brazilian position, India argued that prohibiting PNE's in the NPT would be like throwing the baby out with the bath water. Since the technology is not evil as such, it should not be denied if it is put to a peaceful aim. India supported the idea of allowing PNE's under IAEA safeguards.[53]

Sweden took a somewhat different approach to the PNE issue, arguing that it would be more properly dealt with under a CTB. At this stage in the negotiations, Sweden argued extensively that the NPT should be negotiated alongside a CTB treaty so that the draft texts of both might be contrasted and compared.[54]

The PNE issue was essentially a sub-component of the larger issue of technical assistance. For those who did not hold out for the explicit right to develop PNE's, the demand

remained that the Treaty should contain provisions assuring that NNWS signatories would have access to that technology. The positions of Brazil and India served to strengthen the moderate position. More generally, the demand for technical assistance guarantees emanated from fears that the NPT would be used as a basis for technological denial. Although Johnson's message implicitly reaffirmed the U.S. commitment to their Atoms for Peace tradition, and the United Kingdom made a series of statements confirming that the NPT would not prevent the transfer of advanced nuclear technology, the non-aligned states as well as various U.S. allies (West Germany, Italy, and Japan) wanted explicit provisions assuring the free flow of civilian nuclear technology.[55]

On 21 March 1967 the Mexican representative to the ENDC, Mr. Garcia Robles, offered a compromise proposal which became the basis for Article IV of the NPT. Noting that it would be impossible to incorporate the diversity of opinions on the issue of technical assistance guarantees, especially with respect to the PNE issue, Mr. Robles proposed that the NPT should contain an article comprised of a general declaration that "no provision of the Treaty would be interpreted as detracting from the right of the contracting parties to use nuclear energy for peaceful purposes in any manner contrary to the basic obligations assumed under the Treaty itself."[56] Following such a declaration, the article would then contain three basic provisions: "a) the benefits

resulting from the use of nuclear energy for peaceful purposes shall be available to all parties on a basis of absolute equality and equity; b) the parties must share all the knowledge and benefits that may be derived from future progress in nuclear technology for peaceful purposes, and may continue in their respective territories to develop that technology; c) the nuclear states shall make their effective cooperation available to non-nuclear states without any discrimination for the promotion of that development."[57]

Although both superpowers agreed to include technical assistance provisions along the lines of the Mexican proposal, they were still unable to agree on safeguard provisions during their bilateral discussions. On 31 March 1967, the U.S. submitted a compromise safeguard proposal to Euratom members. Under this proposal, the IAEA and Euratom would negotiate a separate agreement during the first three years after the NPT entered into force which would facilitate IAEA verification of the effectiveness of Euratom safeguards. In the event that Euratom and the IAEA were unable to reach agreement during that time, each individual Euratom member would be obliged to accept IAEA safeguards.[58] This proposal was coolly received by Euratom members who questioned whether or not the IAEA would negotiate in good faith. Quite conceivably, the IAEA would only pay lip service to the negotiations, and after the three year period impose its own safeguards.[59]

Again, the Soviets rejected this proposal outright on the basis that they would not accept any provisions which would exempt West Germany from international safeguards for three years.[60] Since it was clear that the U.S. and Soviet Union were making very little progress on the safeguards issue, the joint co-chairmen of the ENDC requested a recess so that both sides could focus their efforts on the resolution of the Euratom question at the bilateral level. Accordingly, the ENDC recessed between March 24 and May 17.

In April 1967, the U.S. submitted another proposal designed to meet the concerns of the Euratom states. It again proposed that the IAEA and Euratom reach a safeguards agreement during the first three years of the NPT's entry into force. It did not specify, however, what would happen if Euratom and the IAEA were unable to reach an agreement during that time. This proposal was again coolly received by Euratom members and rejected by the Soviets.[61]

Identical Draft Treaties of August 1967

The superpowers were unable to resolve the safeguards issue by the time the ENDC reconvened in May. Facing pressure from within the ENDC to produce a draft NPT, the Joint Chairman of the ENDC agreed to submit a draft treaty, leaving the safeguard article blank. In the meantime they set up a "group of experts" to discuss possibilities for an agreed language for Article III.

On August 24, each co-chairman submitted a separate but identical draft NPT to the ENDC. The drafts contained a rather lengthy preamble, and eight articles. The first two articles contained the narrow non-dissemination measures as agreed on 5 December 1966. Article III read simply: (International Control). This was included along with two preambular clauses on safeguards to indicate that the final draft would contain safeguard provisions.[62]

Drawing on the Mexican proposal of March 21, Article IV on technical cooperation read as follows:

> Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes and without discrimination and in conformity with Articles I and II of this Treaty, as well as the right of Parties to participate in the fullest possible exchange for information for, and to contribute alone or in cooperation with other states to, the further developments of the applications of nuclear energy for peaceful purposes.[63]

Article IV was bolstered by three preambular clauses on peaceful nuclear technology, including the following clause on PNE's:

> Declaring their intention that potential benefits from any peaceful applications of nuclear explosions should be available through appropriate international procedures to non-nuclear weapon States Parties to this Treaty on a non-discriminatory basis and that the charge to such Parties for the explosive devices used should be as low as possible and exclude any charge for research and development.[64]

The remaining articles of the draft were procedural: Article V contained amendment procedures, as well as provisions for a review conference to be held five years after the entry into force of the Treaty in order to assure that the "purposes and provisions of the Treaty are being realized"; Article VI defined a nuclear weapon state as "one which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to 1 January 1967"; Article VII specified that the duration of the Treaty would be unlimited, and contained a withdrawal clause. NPT signatories would have the right to withdraw if they determined that "extraordinary events" had "jeopardized the supreme interests" of their country. The draft did not contain an article on disarmament, but included three preambular references in this regard. Unlike the initial U.S. and Soviet drafts of 1965 (each of which contained a vague and general commitment to disarmament), the new draft contained three specific disarmament objectives: the cessation of weapons production, the liquidation of stockpiles, and, in the event of agreement on nuclear disarmament, the elimination of nuclear weapons and delivery systems. Finally, the draft contained a reference to NWFZ in the preamble - a nod to Tlatelolco.

The 1967 draft NPT met with increased demands for a "balanced" treaty in the ENDC. In specific terms, the demand for balance manifested itself in the call for disarmament provisions and security guarantees. Each non-aligned state

noted with regret that the superpower draft would in no way commit the NWS to conclude measures in the area of disarmament. India, for example, labelled the preamble disarmament clauses a "pious preambular platitude" and suggested the incorporation of an article which would commit the NWS to undertake meaningful measures in the area of disarmament.[65]

Romania also argued that the NPT should contain disarmament provisions, and west so far as to propose a lengthy set of amendments which would have adumbrated the five principles of Resolution 2028 in the preamble. Further, it proposed an article which would commit the NWS to achieve agreement on nuclear disarmament within five years of the Treaty's entry into force. In the event that such an agreement had not been reached, the signatories "shall consider the situation created and decide on measures to be taken."[66]

As dissatisfaction among the non-aligned grew, both the Eastern and Western Blocs joined ranks in an attempt to avoid the inclusion of a disarmament clause in the NPT. Although the Soviet Union was careful not to come directly out against disarmament provisions, all other Eastern Bloc countries in the ENDC (with the exception of Romania) argued against such a linkage. Bulgaria, for example, argued that principle (c) of Resolution 2028 should be interpreted as creating "favourable conditions for the solution of other

disarmament problems" and not that "those problems are to be solved by the Treaty itself."[67]

In an effort to get around the disarmament question, the U.S., Britain, and Canada began to promote the idea that the procedural clauses of the Treaty could be used as a means of leverage for the NNWS in the event that the NWS failed to come to some agreement in the area. Britain and Canada had been sympathetic to the linkage and balance arguments however. They argued that the NPT should not be contingent on prior agreement on disarmament, or commit to NWS to specific disarmament measures. British representative, Lord Chalfont, offered the following comments:

> If a Treaty is not followed by further agreements, it will not last anyway. But if it is not signed, I fear that ... other measures of disarmament may be out of reach for years. This is not to suggest that a non-proliferation treaty can ignore the responsibilities of the nuclear powers in this respect. Its drafting must clearly reflect their intention to move rapidly on measures to halt and reverse what has been expressively called "vertical proliferation"; and its terms must provide the means of redress for the non-nuclear powers if the nuclear states are unreasonably slow in translating their intentions into actions.[68]

Both Britain and Canada argued that the Review Conference would be an appropriate forum where NWS progress in the area of disarmament could be assessed. Moreover, the withdrawal clause could be used if NWS were particularly slow in negotiating disarmament measures. This view was also promoted by the U.S. and the Soviet Union.[69] Italy proposed that the

Treaty be of limited duration in order to allow time for disarmament negotiations, and subject to renewal pending progress in the area.[70]

Apart from mobilizing pressure for disarmament provisions, the non-aligned states stepped up demands for security guarantees. Within the ENDC, various amendments on security guarantees were introduced: the U.A.R. submitted the Kosygin proposal as an amendment; Romania proposed that NWS signatories undertake not to threaten to use, or use nuclear force against NNWS signatories.[71] These and other attempts to get a security guarantee as part of the Treaty provisions were successfully fended off by the U.S. and Western Bloc. The debate on this issue proved to be equally as contentious as that of disarmament, and by late 1967 it became clear that some accommodation would have to be made on both issues if the Treaty was to gain widespread support among the NNWS. Britain, Canada, and the U.S. argued that the matter of security guarantees would best be pursued through the framework of the U.N. The question was then deferred to the Security Council - an alternative which pleased few NNWS, but seemed to be the best that could be accomplished, given the intransigence of the U.S.

Agreement on Article III

While the 1967 draft was being debated in the ENDC, the "group of experts" developed a common language for

Article III. According to Seaborg, the group of experts, having no negotiating authority, and having been instructed not to depart from their respective positions, decided to present the agreed draft article to the U.S.-Soviet negotiating team as a proposal put forth by the other side.[72] Hence, Washington received the text on the understanding that it was a Soviet proposal, and Moscow received it on the understanding that it was an American proposal. Apparently, this manoeuvre was successful since the draft was approved in both Washington and Moscow.

The safeguards formula developed by the group of experts allowed for safeguard agreements with the IAEA to be entered into either individually or together with a group of states. This wording allowed Euratom to preserve its safeguard system, provided that the IAEA would monitor its effectiveness.

In October 1967, Euratom members accepted this formula, however, they requested a minor change in wording. Although the alteration had no practical effect, the Soviets dragged their feet on it. It was not until the eve before the ENDC reconvened in January 1968 that the Soviets accepted the changes.

The Soviets were not alone in their general disinclination toward the Euratom exception. The non-aligned states argued that it exacerbated the discriminatory underpinnings of Article III. Sweden, for example, argued

that IAEA safeguards should be mandatory for all NPT signatories, not just the NNWS.[73] Even Japan had a problem with the Euratom exception and noted that it might confer an unfair advantage on Euratom members.[74]

Facing increased tensions in the ENDC over the discriminatory character of the 1967 draft, the U.S. attempted to pre-empt any further dissension which may have been created upon the introduction of Article III, by offering to place its own civilian nuclear facilities under IAEA safeguards. On 4 December 1967, the U.K. announced that it would follow the U.S. lead and submit to IAEA safeguards as well.[75] Although by this time the Soviet Union had reversed its longstanding opposition to safeguards within the IAEA, it declined to make a similar offer.

The Twenty-Second Session of the U.N. General Assembly

The issue of non-proliferation received little attention during the Twenty-Second General Assembly session, largely on account of time constraints. The preparatory committee for the Conference of Non-Nuclear Weapon States submitted its report to the Assembly on 19 September 1967.[76] The report contained a provisional agenda for the conference, as well as membership qualifications and voting rights. It also proposed that the conference convene between 11 March and 10 April 1968. Although the report was accepted, the dates were pushed forward to August/September 1968. Both the U.S.

and the Soviet Union lobbied strongly and successfully to get the conference dates deferred until after the NPT was open for signature. Both sides feared that if the conference was scheduled concomitantly with the NPT negotiations, an intractable opposition to the NPT could be mobilized.[77]

The rescheduling of the NNWS Conference significantly decreased its potency as a source of leverage over the NWS. In compensation, the Assembly opted for an alternative which was more amenable to the superpowers. It voted to convene a special session on the NPT before it opened for signature. Hence, like the negotiations for the Statute of the IAEA, the NPT was to be put before an international forum for closer scrutiny before its final adoption.

The 18 January 1968 Draft

When the ENDC reconvened on 18 January 1968, the superpowers were ready with another draft. The new draft contained eleven articles - four more than the previous one. Apart from the inclusion of Article III, the new articles were aimed at accommodating NNWS demands. These demands had been recognized in the preamble of the 1967 draft, but were now formally endorsed in the operative provisions of the Treaty. As a result, the new preamble was somewhat shorter. The right to benefit from the development of peaceful nuclear explosive research was recognized in Article V. Article VI contained

basically what the NWS were willing to concede in terms of disarmament provisions. It read as follows:

> Each of the Parties to this Treaty undertakes to pursue negotiations in good faith on the effective measures regarding cessation of the nuclear arms race and disarmament, and on a Treaty on general and complete disarmament under strict and effective international control.[78]

Article VI was offered as a concession to demands for a balanced treaty and more specifically, for a linkage between vertical and horizontal proliferation. This linkage was also recognized at least implicitly in Article VII, which assured states of the right to develop regional nuclear weapon free zones.

Apart from the new articles, the January draft also conceded to the balance arguments by bolstering Article IV and limiting the duration of the Treaty. An additional clause was appended to Article IV which called upon parties "in a position to do so" to cooperate in contributing to the civilian nuclear programs of NNWS. While the original intention of Article IV was to ameliorate concerns that NNWS access to civilian nuclear technology would not be hampered by the Treaty, both technically advanced weapon and non-weapon states were now obligated to contribute to the development of the civilian programs of the others. As a concession to broader demands that the Treaty embody an acceptable balance of duties and responsibilities, the NPT now explicitly connected what was already implicit in the IAEA Statute: the

issue of non-dissemination would now be linked formally with economic development concerns.

In order to strengthen Article VI, the January Treaty set the duration of the Treaty at twenty-five years. Predictably, Article VI met with a barrage of criticism in the ENDC, and again in the Special Session on the General Assembly in April 1968. NNWS states argued that Article VI was non-binding and hence ineffectual. The NWS explicitly offered the duration clause as a check against inactivity in the area. They argued that the negotiation of specific measures take time, and although such measures were not specified in the article, it nevertheless constituted a promise to negotiate them. As such, the duration clause accorded them a formal and meaningful opportunity to evaluate NWS performance of that promise. And, after twenty-five years, if the NNWS remained unsatisfied, they could take action which they deemed appropriate.[79]

Security Guarantees

Upon receipt of the January draft, non-aligned ENDC members moved quickly to negotiate more concessions as it became apparent that time was running out. Hence, less time was spent in debate, and more time was spent in submitting amendments and proposals, and in consultations with the co-chairmen.[80] The non-aligned members considered the concessions to be paltry compared with their demands, and that

the Treaty had a long way to go before it embodied an acceptable balance of duties and responsibilities.

As far as the non-aligned were concerned, the most glaring hole in the draft was the absence of any form of assurances against nuclear aggression. Although more attempts were made to include security provisions in the NPT, the U.S., in particular, remained intransigent. In order to diffuse contention, the NWS deferred the matter to the U.N. Security Council. On 7 March 1968 the U.S., U.K., and the Soviet Union recognized that any nuclear aggression or threat thereof against a NNWS signatory "would create a situation in which the Security Council, and above all its nuclear-weapon state permanent members, would have to act immediately in accordance with their obligations under the U.N. Charter." The resolution then welcomed the intention which had been previously expressed by each of these states in a document submitted separately, to assist NNWS signatories that are victims of nuclear aggression or blackmail, and in this connection, reaffirmed the right of individual or collective self-defense under Article 51 of the U.N. charter.[81]

The weakness of this arrangement was immediately apparent. That all the NWS - with, at the time, the exception of the People's Republic of China - had a veto on the Security Council, underscored its weakness. The NWS, however, were not able to offer anything better, and the whole debate on

security assurances continued well after the NPT opened for signature.[82]

The Join Draft of 11 March 1968 and the May 31 Revised Draft

Apart from the issue of security guarantees, non-aligned states attempted to get strengthened disarmament provisions. Although they had wanted specific disarmament provisions mentioned in Article VI, the superpowers conceded very little in their joint draft of 11 March 1968. Article VI was strengthened slightly: parties to the Treaty would now undertake to pursue good faith negotiations on disarmament "at an early date". Upon Swedish request, a reference to the Partial Test Ban Treaty, and the discontinuance of all nuclear testing was included in the preamble.[83] The review provisions were modified so that a conference on the Treaty would proceed after every five years. In this regard, Article VIII also included a British amendment which mandated the Review Conferences to evaluate the operation of the Treaty "with a view to assuring that the purposes of the preamble and the provisions of the Treaty are being realized."[84]

After the submission of the March 11 draft, there was very little time remaining for negotiation or debate. The ENDC session ended on March 14, and deliberations were scheduled to resume in the First Committee of the U.N. between April 26 and June 10 1968. ENDC members failed to reach a consensus on the March 11 draft. At the conclusion of the

session, only seven of the seventeen members came forth to announce their public support for the draft treaty.[85] The final report of the ENDC to the General Assembly and the Disarmament Commission made it clear that the March 11 draft had not been adopted by the Committee.[86]

This lack of consensus was carried over in the First Committee when debate on the NPT resumed on April 26. The March 11 draft met with a lukewarm reception, and was criticized on three general accounts: a) it did not commit NWS to conclude tangible disarmament measures; b) it did not go far enough in facilitating the free flow of civilian nuclear technology transfers; c) it conferred industrial and commercial advantages on the NWS since it did not mandate safeguards on their civilian nuclear facilities.[87] The draft resolution on security assurance was also heavily criticized.

In defense of the March 11 draft, both the U.S. and Soviet Union stressed that the long term viability of the NPT would be contingent upon future policy successes in the area of disarmament. Although they staved off all attempts to get specific disarmament measures written into Article VI, they both expressed their intention to negotiate specific measures. Similarly, they argued that the security guarantee arrangements were the best that could be accomplished given the complexity of the matter.

While the NWS were unwilling to alter Article VI or the Security Council security guarantee arrangements, there

were two ares where they were willing to make small concessions to concerns of the NNWS - especially those of the Third World. On May 31 a revised version of the March 11 draft was submitted to the Assembly.[88] Article IV was altered to provide the less technically developed NNWS with greater supply assurances. "Parties in a position to do so" were now obligated to cooperate in contributing to the development of the civilian nuclear energy programs of NNWS with "due consideration for the needs of the developing areas of the world." The language of Article V was also strengthened slightly in favour of the developing countries. NNWS now had stronger assurances of gaining access to PNE research and development benefits, with new emphasis placed on obtaining such assistance through an international body rather than through bilateral means.[89]

Although anti-NPT sentiment still remained - NNWS still saw the NPT as imbalanced - various NNWS argued that the NPT should be approved. They felt that concessions granted by the NWS were the best that could be accomplished; that it was the only agreement in "immediate prospect"; and that "it was a choice between making little progress and no progress at all."[90] Sweden's Alva Myrdal noted that approval of the NPT would clear the agenda for other disarmament matters, especially for the consideration of a Comprehensive Test Ban.[91] Certainly the terms of praise for the NPT were not glowing. The superpower draft resolution of May 1 calling for

the Assembly to "endorse" the NPT also met with little enthusiasm. On May 28 the resolution was amended: the General Assembly would "commend" the draft, not endorse it.[92]

Notwithstanding some remaining reticence on the part of the NNWS, on 12 June 1968, the General Assembly voted to commend the May 31 revised draft. The vote was 95 in favour, 4 against and 21 abstentions. The negative votes were cast by Albania, Cuba, Tanzania, and Zambia.[93] The abstentions included, inter alia, France, India, Brazil, and Burma. These last three were active ENDC members during the NPT negotiations. On June 19, the U.K., U.S., and Soviet Union submitted formal statements to the Security Council declaring their intention to come to the aid of NNWS threatened by nuclear aggression or blackmail, and the March 7 draft resolution was adopted by the Council.[94]

The NPT was open for signature on 1 July 1968, and was signed on that day by the Depository Governments (U.S., U.K., and the Soviet Union), and more than fifty countries. Under the terms of Article IX, the Treaty was to enter into force after the Depository Governments and forty other states had deposited their instruments of ratification. These terms were met on 5 March 1970, and the NPT entered into force on that date.[95]

Footnotes, Chapter Three

[1] M.I. Shaker, The Nuclear Non-Proliferation Treaty: Origin & Implementation (London: Oceana Publications, 1980), 95-97. Lord Chalfont publicly revealed British reticence toward the U.S. draft in the ENDC by stating that it would preserve the MLF and the European Option: see ENDC PV. 225 (August 19, 1965), 10; Privately, Chalfont was reported to have declared his willingness to "sink several MLF fleets to get a NPT": see G.T. Seaborg, Stemming the Tide: Arms Control in the Johnson Years (Lexington, Mass.: D.C. Heath and Co., 1987), 174.

[2] United States of America, "Draft Treaty to Prevent the Spread of Nuclear Weapons", ENDC/152 (August 17, 1965), 1.

[3] J.H. Barton and L.D. Weiler, International Arms Control: Issues and Agreements (Stanford: Stanford University Press, 1976), 296.

[4] U.S.A. "Draft Treaty to Prevent the Spread of Nuclear Weapons": op. cit., 1-3.

[5] Op. cit., 165.

[6] ENDC/158 (September 15, 1965).

[7] Ibid.

[8] ENDC/159 (September 16, 1965).

[9] Union of Soviet Socialist Republics, "Treaty on the Non-Proliferation of Nuclear Weapons", ENDC/164 (January 27, 1966), 4.

[10] Ibid, 4-6.

[11] Seaborg, op. cit., 166-7.

[12] Shaker, op. cit., 43-5.

[13] U.N. General Assembly Res. 2028 (XX), November 19, 1965.

[14] Shaker, op. cit., 46; G.A.O.R., 20th Session, 1382 plenary meeting, November 19, 1965, para. 20.

[15] Shaker, ibid, 42-2.

[16] Ibid, 55.

[17] Ibid, 49-50.

[18] Ibid, 49-62.

[19] ENDC/165 (January 27, 1966), 2.

[20] ENDC/167 (February 3, 1966), 3.

[21] Seaborg, op. cit., 228-9.

[22] Ibid, 229.

[23] Ibid.

[24] ENDC/177 (August 17, 1966).

[25] ENDC/178 (August 19, 1966).

[26] Op. cit., 227-33. Foster was the President of the U.S. Arms Control and Disarmament Agency, as well as Chief U.S. Negotiator for the NPT.

[27] ENDC/167 op. cit., 2-3.

[28] ENDC/165 op. cit., 2.

[29] ENDC/PF. 239 (February 10, 1966), 10; ENDC/PV. 241 (February 17, 1966), 12-13.

[30] Seaborg, op. cit., 178-80.

[31] ENDC/152/Add. 1 (March 21, 19660. See also Georges Fischer, The Non-Proliferation of Nuclear Weapons (London: Europa Publications, 1971), 71-2.

[32] Seaborg, op. cit., 178.

[33] Ibid, 180.

[34] Ibid, 372.

[35] Nuclear Non-Proliferation Congress and the Control of Peaceful Nuclear Activities (Boulder, Colo.: Westview Press, 1985), 116-17.

[36] Shaker, op. cit., 101.

[37] For the final communique (September 27, 1966), see Keesings Contemporary Archives: 1965-1966. (Vol. XV), 21784a.

[38] Shaker, op. cit., 102.

[39] Ibid, 102-3.

[40] Ibid.

[41] U.N. General Assembly Resolution 2153 A(XXI), (November 17, 1966); U.N. General Assembly Resolution 2149 (XXI), (November 4, 1966).

[42] U.N. General Assembly Resolution 2153 B(XXI) (November 19, 1966); see Shaker, op. cit., 104-5; G.O.A.R. 21st session, 1500th plenary meeting (December 20, 1966) para. 191-193.

[43] Seaborg, op. cit., 288.

[44] Ibid, 275-6.

[45] The Euratom members are: France, Germany, Italy, Belgium, the Netherlands, and Luxembourg. See Bertrand Goldschmidt, The Atomic Complex (La Grange Park, Illinois: American Nuclear Society, 1982), 132-5, 289-302.

[46] Seaborg, op. cit., 289-91.

[47] Ibid.

[48] ENDC/187 (February 21, 1967), 2.

[49] ENDC/PV. 288 (February 23, 1967), 7-9; PV. 289 (February 28, 1967), 7-9; ENDC/PV. 295 (March 21, 1967), 6; ENDC/PV. 298 (May 23, 1967), 13.

[50] ENDC/PV. 297 (May 18, 1967).

[51] ENDC/PV. 289, 8.

[52] ENDC/PV. 293, 15; Articles 1, 5, and 18 of the Treaty of Tlatelolco, establishes procedures for contracting parties to carry out PNE's. This includes: a) the supply of detailed information of the planned explosion to the IAEA and the Agency for the Prohibition of Nuclear Weapons in Latin America (OPANAL); b) advance notification of the IAEA and OPANAL; c) on-site inspection of both agencies when the test is carried out. In ratifying Protocol II of Tlatelolco, however, both the U.S. and Soviet Union took the position that PNE's were not acceptable under the terms of the Treaty. See M. Marin Bosch, "The Treaty of Tlatelolco and the NPT," Dewit (ed.), Nuclear Non-Proliferation and Global Security (London: Croom Helm, 1987), 173-188.

[53] ENDC/PV. 298 (May 23, 1967), 11-12.

[54] ENDC/PV. 288 (February 23, 1967), 12-13.

[55] See Seaborg, op. cit., 291.

[56] ENDC/PV. 295 (March 21, 1967), 6-7; ENDC/196 (September 19, 1967), 1-2.

[57] Ibid.

[58] Seaborg, op. cit., 291.

[59] Ibid.

[60] Ibid.

[61] Ibid, 292.

[62] "Draft Treaty on the Non-Proliferation of Nuclear Weapons" submitted by the U.S. as: ENDC/192 (August 24, 1967); and by the Soviet Union as: ENDC/193 (August 24, 1967).

[63] Ibid.

[64] Ibid.

[65] ENDC/PV. 334 (September 28, 1967), 8.

[66] ENDC/199 (October 19, 1967).

[67] ENDC/PV. 300 (May 30, 1967), 20.

[68] ENDC/PV. 288 (February 23, 1967), 5; For the Canadian position see ENDC/PV. 289 (February 28, 1967); see also E.L.M. Burns, A Seat at the Table (Toronto: Clarke, Irwin, and Co., Ltd., 1972), 213.

[69] ENDC/PV 307 (June 22, 1967); ENDC/PV. 268.

[70] ENDC/PV. 289 (February 28, 1967), 6; ENDC/200 (October 24, 1967) and ENDC/200/Rev. 1. (October 26, 1967).

[71] For the U.A.R. see ENDC/197 (September 26, 1967); For Romania see ENDC/199 (October 19, 1967).

[72] Op. cit., 293-4.

[73] Fischer, op. cit., 82.

[74] Ibid, 87-8.

[75] Ibid, 83

[76] Shaker, op. cit., 111; U.N. Doc. A/6817, September 19, 1967.

[77] Ibid, 112.

[78] "Draft Treaty on the Non-Proliferation of Nuclear Weapons" submitted by the U.S. as: ENDC/192/Rev. 1 (January 18, 1968); and by the Soviet Union as: ENDC/193/Rev. 1 (January 18, 1968).

[79] See ENDC/PV. 357, 358; ENDC/PV. 268.

[80] Shaker, op. cit., 114-5.

[81] U.N. Security Council Res. 255 (June 19, 1968); Security Council Official Records S/8630, 1433rd meeting, June 19, 1968.

[82] Fischer, op. cit., 146-154.

[83] ENDC/215 (February 8, 1968).

[84] ENDC/203 (November 22, 1967).

[85] The seven members were: the U.S., U.K., Soviet Union, Canada, Bulgaria, Czechoslovakia, and Poland. See Seaborg, op. cit., 271.

[86] ENDC/255 (March 14, 1968).

[87] Seaborg, op. cit., 376.

[88] The May 31, 1968 Revised Draft became the NPT; it was submitted in the General Assembly as Res. 2373 (XXII), (June 12, 1968).

[89] Ibid.

[90] Seaborg, op. cit., 375-6.

[91] Ibid, 376.

[92] Shaker, op. cit., 117.

[93] Ibid.

[94] Ibid, 117-8.

[95] Ibid, 118.

CHAPTER FOUR
POST-NPT DEVELOPMENTS: THE NUCLEAR SUPPLIERS GROUP AND OTHER "EXTRA"-REGIME ELEMENTS

Terms of the Treaty

The formulation of the proliferation problem embodied in the NPT was the result of more than a decade of international debate on the issue. It is not strictly speaking a non-dissemination treaty, but rather, contains and reflects a negotiated relationship with other issues: disarmament, security guarantees, and economic development.

The approach to non-dissemination of the NPT carries over the "end use" approach of the IAEA. Taken together, Articles I, II, III, IV and IX.3, define the non-dissemination problem as the spread of nuclear explosives, not the spread of civilian nuclear technology. Access to civilian technology is guaranteed under Articles IV as long as non-dissemination pledges (Article II) are internationally verified (Article III). The NPT safeguard provisions are more comprehensive than that of the IAEA: IAEA safeguards are voluntary and not contingent on membership; NWS NPT signatories are obligated to make the supply of nuclear goods and services contingent on the acceptance of safeguards, even to non-signatories; and, NNWS signatories must accept IAEA

safeguards on all their civilian nuclear activities (full scope safeguards).

Although the NPT safeguard system is more comprehensive than that of the IAEA, both systems are designed to monitor the movement of source and special fissionable materials through national nuclear fuel cycles by the way of on-site inspections on declared facilities.[1] They are not designed to detect undeclared or clandestine activities, control the movement of materials through the fuel cycles, or control access to certain technologies. They are designed to verify that states are complying with their non-dissemination pledges. In this sense, the IAEA-NPT safeguard system does not prevent dissemination. Rather, it is designed to detect if diversion has taken place, or more specifically, verify the absence of diversion.[2]

Although the approach to non-dissemination is the same as that of IAEA, the NPT connects non-dissemination with disarmament. As discussed in Chapter 2, Eisenhower's Atoms for Peace proposal was initiated in part, as a result of a general reappraisal of U.S. disarmament policy. The U.S.-Soviet impasses in the disarmament talks combined with the thermonuclear revolution led to a more incremental approach in dealing with the arms race. Atoms for Peace was originally conceived as a confidence building measure - an area where limited agreement with the Soviets was possible. In this sense it was seen as a partial disarmament measure, or

a prelude to agreement on nuclear disarmament. The institutional apotheosis of Atoms for Peace, the IAEA, however, was substantively divorced from disarmament concerns. This does not mean that states at this time agreed that non-dissemination would be divorced from disarmament; here it was agreed that civilian nuclear assistance emanating from the IAEA would not be used for military purposes.[3] Since the IAEA was disengaged from disarmament concerns, it was not quite a prototype of the partial disarmament measures or collateral measures subsequently negotiated in the 1960's.[4] It was strictly speaking, more of an attempt to regulate the flow of civilian nuclear technology transfers than to deal directly with the problem of non-dissemination.

The NPT reasserts a connection between non-dissemination and disarmament through Article IV, and preambular paragraphs, 9, 10, and 11. Also, preambular paragraph 11 provides a reference to a Comprehensive Test Ban, and Article VII contains nuclear weapons free zone provisions. Both nuclear weapons free zones and a Comprehensive Test Ban contain non-dissemination benefits, yet are approaches which also address the wider problem of vertical proliferation. The procedural clauses, as discussed in the previous chapter were revised (i.e. Article VIII.3 allowing for periodic reviews; Article X allowing for withdrawal and a specific duration of the Treaty) with a view to ensuring NWS progress under Article VI.

On one reading of the NPT, the disarmament provisions constitute a tactical linkage: NNWS linked the issues of non-dissemination and disarmament in order to get concessions from the NWS. As such, Article VI is simply a quid quo for verified non-dissemination pledges.[5] Although this reading is a popular one, it becomes less apparent that Article VI is a mere quid quo when the broader negotiating history of the NPT is considered, or more specifically, when that history is located within the broader context of the desegregation of efforts at nuclear disarmament into partial disarmament measures in the mid-1950's.

As discussed in Chapter 3, when international efforts to control nuclear weapons were focused exclusively on disarmament, the distinction between horizontal and vertical proliferation was, for the most part, irrelevant. A disarmament agreement would address both concerns. When the disarmament talks broke down in the mid-1950's, the relationship between the two became problematic: non-dissemination could be pursued by itself or in conjunction with other measures which could also address the problem of vertical proliferation (i.e. nuclear weapons free zones, and a Comprehensive Test Ban). Hence, by the late 1950's, a variety of approaches had surfaced, with the Irish initiative arising as the only one aimed at dealing with the narrow problem of non-dissemination. Even then, however, the Irish approach arose out of concerns that additional entries into

the nuclear club would forestall the possibility of agreement on nuclear disarmament in general, and a Comprehensive Test Ban in particular. As such, the Irish approach itself was a partial measure, or a collateral measure to be pursued alongside disarmament negotiations. Hence, not only was a non-dissemination agreement merely one policy option among others, the non-dissemination problem was originally formulated with reference to the broader problem of disarmament.

The Irish approach to non-dissemination was the only one which tacitly accepted the logical asymmetry between non-dissemination and disarmament. By implication, it was the only one which accepted an asymmetrical distribution of duties and responsibilities between NWS and NNWS. When the superpowers moved to negotiate a non-dissemination agreement based on the Irish approach, the NNWS did draw on the contextual linkage to disarmament, as well as other approaches to non-dissemination (which also had vertical proliferation effects), as a source of bargaining leverage for a "balanced" treaty. NNWS essentially argued that because non-dissemination would help the disarmament process, it should be pursued. But, at the same time, if significant strides in the area of disarmament were not made, the security of NNWS would be threatened. Hence, non-dissemination should be pursued concomitantly with other measures aimed at halting the arms race.

This argument was basically accepted by the NWS. Throughout the NPT negotiations, they made little or no attempt to argue that there was no connection between non-dissemination and disarmament, or that non-dissemination was a good thing from the point of view of the NNWS, and not a sacrifice which required compensation in the form of disarmament obligations. The negotiating record suggests that the NWS were at least sympathetic to the linkage argument, and the issue for them was not that there was no a priori connection between non-dissemination and disarmament, but rather, whether or not actual disarmament provisions should be included in the NPT. Hence, while the NNWS argued that because there was a linkage, the Treaty should be balanced with disarmament provisions, the NWS argued that there was a linkage, but it would be difficult to include specific disarmament measures in the Treaty.

The reading which sees Article VI as a tactical linkage, hence, does not capture the situation. Article VI is backed, not only by the preamble - including the test ban reference - but also by the procedural articles, as well as Article VII. Taken together, these elements reflect a consistent line of interpretation about what the NPT is about. The NPT is not a narrow non-dissemination treaty. Rather, it draws together the various approaches to non-dissemination which evolved from the mid-1950's, into a broader non-proliferation treaty. In this sense, Article VI was

essentially a guarantee that the NPT would remain a meaningful collateral measure, or partial disarmament measure.[6]

Post-NPT Developments

The NPT had scarcely entered into force before dominant actors in the regime began to question its effectiveness as a non-dissemination device. This concern arose over the development and spread of uranium and reprocessing technology, and their "safeguardability" under IAEA mechanisms. Up to the mid-1970's the U.S. viewed both technologies as a natural and efficient component of the fuel cycle for light water reactors.[7] The separation of plutonium from spent fuel and its subsequent recycling in conventional reactors was seen as an effective technical and economic way to complete the fuel cycle: it would make the waste product more manageable; it would extend limited uranium resources, and; provide a step toward the development of breeder reactors fuelled by plutonium.[8]

The traditional wisdom of disengaging technical problems of the fuel cycle from risks of dissemination was shattered in the West, however, after India's untimely explosion of what is called a "peaceful nuclear explosive". Although India had not made a formal non-dissemination commitment under the NPT, it was the first nation to develop a nuclear explosives capability drawing on imported civilian technology.[9] It occurred in the midst of the OPEC oil embargo

and subsequent price shocks - at a time when the rapid expansion of nuclear power facilities around the world was projected.[10] France and West Germany had negotiated, or were in the process of negotiating, the export of enrichment and reprocessing technology to Brazil, Iran, South Africa, Pakistan, and South Korea.[11] The spread of reprocessing technology combined with the pending development of breeder reactors led to worries of a "plutonium economy".[12] Taken together, these events drew attention to the technical link between civilian and military nuclear technology and resulted in a major rethinking of approaches to deal with it.

In technical terms, the debate centered on the effectiveness of IAEA safeguards as a means of dealing with uranium enrichment and reprocessing technology. The enrichment of the quantity of uranium isotope U_{235} from its naturally occurring 0.7% to 3.0% is necessary for use as fuel in light water power facilities. Facilities designed to enrich uranium to fuel grade can also be used to produce weapons grade. In reprocessing spent fuel, the separated plutonium can be used for weapons manufacture. This technology is regarded as the most sophisticated and difficult in the manufacture of fission weapons.[13]

The spread of reprocessing technology raised questions regarding the possibility that diversions of small amounts of plutonium would go undetected by safeguards. Moreover, concerns were raised about whether or not the time between the

detection of diversion, or the termination of a safeguards agreement would be long enough for action to be taken before weapons were actually manufactured.[14] These questions led to a major concern regarding the mere possession of these technologies, and resulted in a major reorientation of nuclear export policies among dominant suppliers.

In Western Europe and Japan, this reorientation became first apparent in the shift in attitude toward the NPT itself as well as safeguards more generally. Until 1975, Italy, West Germany, and Japan had refused to sign the NPT, citing that France's anti-NPT policy accorded it a privileged status in international nuclear export market.[15] The Indian shake-up led to a general acceptance of NPT export rules among nuclear suppliers. In 1975, France announced that although it would not go the distance and sign the NPT, it would align its nuclear export policies in accordance with the NPT.[16] This, in turn, led to the Italian, West German, and Japanese ratification of the Treaty.

The changes went further than simply solidifying support for the NPT, however. Between 1975 and 1978, dominant nuclear suppliers met in London to negotiate a common approach to the export of sensitive nuclear technologies. This group - which later became known as the Nuclear Suppliers Group - initially comprised the U.S., the Soviet Union, the United Kingdom, France, West Germany, Canada, and Japan. It was

later expanded to include: Czechoslovakia, East Germany, Italy, the Netherlands, Poland, Sweden, and Switzerland.[17]

In 1977, the Nuclear Suppliers Group (NSG) published a set of guidelines regarding nuclear exports. A "trigger list" was established which adumbrated those items for export which would automatically trigger IAEA safeguards. Apart from encouraging the use and strengthening the effectiveness of IAEA safeguards, the Guidelines specified that even with the application of safeguards, sensitive technologies were to be transferred with "great restraint". In effect, it provided an oversight power for nuclear suppliers over consumers. Exports were to be made on the desirability or necessity of the technology vis-à-vis the recipient's nuclear program, not on the basis of consumer demand. In the event that sensitive technologies were transferred, it strongly encouraged supplier states to participate in the operation of the resulting facilities, or encourage recipients to resort to multinational centres for certain fuel services. It also outlined further controls over the quality and use of nuclear materials in national fuel cycles, and instituted consent requirements over the retransfer of trigger list items derived from transferred facilities to third parties.[18] In accordance with the new regulations, France cancelled its plans for exporting reprocessing technology to South Korea and Pakistan.[19]

The publication of the Nuclear Suppliers Group Guidelines was followed in the U.S. by the passage of the

Nuclear Non-Proliferation Act in 1978. In the U.S., the Indian detonation led to a general reappraisal of the Atoms for Peace approach, and a reinterpretation of the NPT and the role of IAEA safeguards. The U.S. administration under President Carter developed a two-fold approach to the problem as what it now saw as the spread of "sensitive" civilian nuclear capabilities.[20]

The first approach centered on a re-evaluation of the role of reprocessing technology in national nuclear fuel cycles. In October 1977, the U.S. set up the International Nuclear Fuel Cycle Evaluation (INFCE), a one and a half year conference designed to study alternative fuel cycles which would minimize the risk of diversion. This included looking for alternatives to nationally owned reprocessing technology, such as international spent fuel storage facilities.[21] That year Carter also announced a reorientation of the U.S. breeder reactor research program: the development of the breeder reactor was put on hold and the demonstration project at Clinch River was terminated.[22] The U.S. maintained that the development of breeder technology was "premature". This was apparently an attempt to reconcile the problem of assured supply with that of the suspension of exports on uranium enrichment and reprocessing technology announced in 1976.[23]

The second approach adopted by the Carter administration to the spread of sensitive technologies, was based on export restrictions and controls. This approach was

formally expressed in the Nuclear Non-Proliferation Act. The NNPA imposed unilateral restrictions on U.S. nuclear exports. It stipulated that recipients of U.S. enrichment services, nuclear equipment, and sensitive technologies must have full scope safeguards as a condition of supply. As such, it effectively terminated U.S. nuclear cooperation with non-NPT signatories.[24] Both the reprocessing of spent fuel, and the retransfer of special nuclear material produced in U.S. assisted facilities were subject to a U.S. veto.[25]

The Act also stipulated that all U.S. export licenses would be subject to authorization from the executive branch. Authorization was to be granted on the basis of whether or not the proposed export would be "inimical to common defense and security".[26] Although not elucidated in the Act itself, the following policies were offered as guidelines for export license authorization in a presidential document circulated with the proposed legislation:

1) An embargo on the export of enrichment and reprocessing plants.

2) Avoid new commitments to export significant quantities of separated plutonium.

3) Avoid new commitments to export highly enriched uranium, unless the project was of "exceptional merit", and the use of less weapons usable material could be demonstrated as technically infeasible.

4) Presidential approval for any export of more than 15 kilograms of highly enriched uranium.

5) Identify projects and facilities which may be converted from the use of highly enriched uranium to low enriched uranium.

6) Undertake measures to reduce inventories of weapons usable uranium abroad.[27]

The NNPA was promoted internally as a "delicately balanced blend" of denials, controls, and incentives.[28] As one scholar put it, the NNPA constituted a "unilateral step toward the revision of the worldwide non-proliferation regime."[29] On one hand, it constituted a revision of the role and purpose of IAEA safeguards. More generally, it constituted a revision of the technical transfer provisions of the NPT.

The NNPA redefined the purpose of IAEA safeguards with the introduction of the concept of "timely warning". Under the terms of the Act, the U.S. would approve reprocessing spent fuel, if it could be assured that it would receive timely warning after diversion had occurred: i.e. that diversion would be detected after the diversion had taken place but before the diverter had time to manufacture a nuclear weapon. There is no authorization of this interpretation under the IAEA's safeguard document for the NPT, INFCIRC. 153. Here, the purpose is to deter the potential diversion by risk of exposure, to verify compliance, detect and expose non-compliance, or to declare that the absence of diversion is indeterminate. Its purpose is not to guarantee timely warning as such.[30]

More generally, the U.S. supply controls and restrictions depart from NPT provisions for technical transfers.[31] In order to address this problem, the U.S. has attempted to redefine Article IV of the NPT. The underlying rationale for the NNPA was that the dissemination of sensitive nuclear technologies itself presented a non-dissemination risk, and contravened the NPT.

A Nuclear Export Control Regime?

In the non-dissemination literature, it is generally held that the Nuclear Suppliers Group Guidelines and restrictive export policies of key suppliers constitute a change in the rules of the regime. The changes are significant enough, however, to warrant labelling them as the third phase in the evolution of the "non-proliferation regime". Much attention is devoted to the non-dissemination problem, and effort is made to show how the NSG/state export control policies either supplement the NPT, or the connection is treated as problematic.[32] Charles Van Doren, for example, argues that Article IV of the Treaty "creates no new rights or obligations; it simply provides that the Treaty should not be interpreted as affecting whatever rights of this sort existed before the Treaty."[33] Van Doren goes on to argue that states are not necessarily entitled to "the fullest possible exchange" of nuclear goods and services even with the application of safeguards, since the spread of sensitive

technologies may not be consistent with the central objectives of the treaty, viz., Articles I and II.[34]

An examination of the negotiating history of the NPT, in terms of actors' expectations surrounding Article IV does not seem to support this contention. Van Doren's argument is more than an acontextual reading of the NPT: it reflects an attempt to reinterpret the Treaty, to reconcile its provisions with a current policy position. While other academic commentaries on non-dissemination may not have reworked the original intentions of Article IV so explicitly, they still tend to read the negotiating history within the context of a preferred policy line. Although the policies that they support may in fact be desirable from a narrow non-dissemination perspective, their accounts of the "non-proliferation regime" run the risk of becoming apologetic rather than analytical.[35] Moreover, such analyses may not fully capture what is actually happening in the "regime". In order to argue, for example, that the NSG Guidelines "supplement" the NPT, the Treaty must be read as a narrow non-dissemination Treaty, and from a "technological imperative" understanding of the dissemination problem. It is largely how changes in regime "rules" are accounted for and accommodated.

It is arguable, however, that the NSG Guidelines do not constitute a change in regime rules, but rather reflect the crystallization of a second line of approach to the

problem of non-dissemination, one not incorporated into the NPT, but nevertheless predated it and grew along parallel with it. If we accept that the regime is not co-terminus with the issue area, a case can be made for the existence of two regimes: one based on the "end use" approach and centered on the NPT; the other based on the "technological imperative" approach and centered on the NSG Guidelines.[36] In order to make a case for the existence of this second regime, one based on export controls, we must first explore the underlying analysis of the dissemination problem and point to where it is manifest in both the national export policies of supplier states, as well as in supplier attempts to coordinate those policies. This will be, at best, a brief sketch. There seems to be a gap in the non-dissemination literature with respect to supply practices, and a bias toward the study of multilateral tests.[37]

Attempts to coordinate nuclear supply practices and restrict nuclear exports have reflected a "technological imperative" conceptualization of the dissemination problem. Whereas the "end use" approach implicit in the NPT saw the link between military and civilian technology as positive and reconciled them accordingly, the technological imperative approach finds the connection problematic. Simply put, this formulation posits that if states have an independent capacity to develop nuclear weapons (i.e. a latent capacity), then it is only a matter of time before they actually develop them.[38]

Hence, the problem is not only the actual production of a nuclear explosive device (improper end use), but also the technological capability to produce them. Since national acquisition of significant nuclear capabilities is tantamount to dissemination, controlling the spread of nuclear weapons involves, ipso facto, controlling the spread of nuclear capabilities. Moreover, since the mere possession of capabilities is problematic, safeguards are seen as inadequate control mechanisms.

This conceptualization of the proliferation problem is implicit in the NSG Guidelines. Although the "trigger list" reflects a strengthened commitment to IAEA safeguards, its mechanisms for control are much more intrusive. It seeks to discourage the national ownership and control of certain technologies: it encourages multinational fuel cycle services, and where this is not possible, it encourages supplier control of nationally owned capabilities through consent and consultation requirements. While the NSG Guidelines reflect a more encompassing understanding of the dissemination problem, they also reflect a narrower construction of the issue area. Such issues as disarmament, security guarantees, and economic development are notable in the Guidelines by their absence.[39]

This approach to the supply of nuclear goods and services was implicit in the supply practices of dominant suppliers long before they coalesced around the NSG

Guidelines, and even prior to the negotiation of the IAEA. As outlined in Chapter One, the earliest attempt to coordinate restrictive supply practices was the Quebec agreement between the U.S. and Britain. In the aftermath of World War II, Canada joined the U.S. and Britain in the Combined Development Trust to control, among other things, the world's uranium supplies. Consultations on the export of technical information between these three states continued into the late 1950's.[40]

The technological imperative approach was also embedded in U.S. post-war nuclear export policy as exemplified by the Ascheson-Lilienthal Report, the Baruch Plan, and the 1946 Atomic Energy Act. Even during the height of the Atoms for Peace era, the U.S. resorted to both formal and informal means of restricting the spread of "sensitive" technologies. It discouraged and halted cooperation in uranium enrichment, most notably in the cases of Britain/Norway and Britain/France.[41] Also, in 1960, West Germany, the Netherlands and Britain imposed security classifications on their centrifuge enrichment research, on U.S. request.[42] In terms of supply practices, export requirements went further than safeguards. These included: limitations on enriched uranium exports, controls on the level of uranium exports, controls on the level of uranium enrichment in U.S. assisted facilities, controls over spent fuel - including options to purchase byproduct materials. Apart from intrusive supply

controls, the U.S. resorted to outright denials. In 1960, for example, exports on gas centrifuges and their component parts were listed on the Commerce Department's positive list as restricted for export.[43] Taken together, these controls substantially foreshadowed the 1978 NNPA. One could argue that the NNPA was in fact a formalization of what already existed in U.S. supply practices; that it constituted more of a formalization of this line of approach, than a revision of Atoms for Peace.

The technological imperative approach was also implicit in Soviet nuclear supply policy. Although the Soviet Union was a staunch safeguards opponent within the IAEA until 1965, and it substantially assisted the early Chinese atomic energy program, on the whole, its supply practices tended to be fairly strict - especially with respect to its Eastern European allies.[44] Like the U.S., its mechanisms for control included both formal and informal means. It prevented Eastern European allies from producing purely indigenous capabilities by controlling their access to the raw materials used in weapons production. Uranium fuel for Soviet supplied reactors had to be obtained from the Soviet Union; spent fuel rods had to be returned promptly. Moreover, no Eastern European country was allowed to develop reprocessing and enrichment plants.[45] Goldschmidt notes that Soviet participation in the fuel cycle of assisted states was limited to the "compulsory delivery to the Soviet Union of any uranium found on its

territory."[46] Moreover, the Soviets exercised other indirect controls over Eastern Bloc fuel cycle activities: Eastern Bloc nuclear scientists and technicians were all trained at the Joint Institute for Nuclear Research, headquartered north of Moscow; Soviet technicians directly supervised the construction of Eastern European power plants, which were built by a Soviet contracting firm; nuclear industry activity was coordinated by the Soviets in the Eastern Bloc through the Council for Economic Mutual Assistance's Commission for the Use of Atomic Energy for Peaceful Purposes.[47] The reversal in Soviet policy on IAEA safeguards did not cause it to abandon the use of these more intrusive forms of control. As a NSG member, it remains committed to this line of approach.[48]

On the basis of the preceding overview, it can be concluded at least tentatively, that the NSG Guidelines present a formalization of pre-existing supply practices based on the technological imperative approach. What remains unclear, however, is whether or not the degree of consensus and coordination among NSG members is strong enough to indicate the existence of a regime based on nuclear export controls. Attempts to coordinate supply practices in the past have been impeded by supplier competition in the international nuclear market.[49] Nevertheless, non-dissemination concerns have been a major factor in narrowing the margin of divergence between suppliers. These concerns have emanated primarily but not exclusively from dissemination risks posed by NNWS who are

not NPT signatories, and are active nuclear consumers who are not obligated to accept IAEA safeguards as a condition of supply.

A direct precursor to the NSG in terms of attempts at supplier coordination can be found in the development of the "Zangger" Committee. Following the adoption of the NPT's safeguard document INFCIRC/153, a group of suppliers met within the IAEA under the leadership of Charles Zangger, for the purposes of eliminating the use of safeguards as a bargaining chip for nuclear exports to non-NPT signatories.[50] A trigger list was developed which outlined those items for export which would automatically require safeguards as a condition of supply. Consensus at this time was modest. In August 1974, nineteen supplier states notified the IAEA that they would align their export policies with the trigger list. Four countries - France, Belgium, Italy, and Switzerland - declined to do likewise.[51]

Although the Zangger Committee was mainly concerned with standardizing safeguard requirements, its form foreshadowed the NSG. Although the Zangger Committee met under IAEA auspices, it met as a group of suppliers. The trigger list was circulated as INFCIRC 209, but it was never given formal sanction by the IAEA's Board of Governors.[52] The NSG Guidelines were similarly the sole creation of nuclear suppliers. Its membership drew substantially from the Zangger Committee, and the Guidelines were negotiated secretly and

completely outside the IAEA framework. The NSG met with much more success than the Zangger Committee: the Indian detonation did much to forge a broader consensus, not only on the issue of safeguards, but also on supply controls. NSG negotiations drew France, Belgium, Italy, and Switzerland into the fold.[53]

While divergences in supply policies among major suppliers still exist, the Guidelines seem at least, prima facie, strong enough to point to the possibility that there is a second regime in the non-proliferation issue area. NSG membership comprises the most significant nuclear suppliers in the world, and members have agreed to engage in consultations over guideline modifications. Although its membership overlaps with the NPT, NSG members are distinguished by their capacity as suppliers. The Guidelines constitute an attempt to coordinate supply practices vis-à-vis consumers outside this group, including both NPT and Non-NPT signatories. The NPT, in contrast, distinguishes between nuclear weapon and non-weapon states, and allocates the distribution of obligations and responsibilities on that basis.[54]

If we accept that the NSG Guidelines reflect the degree of recognition and coordination exemplified by a regime, we may come to one of two conclusions regarding its relationship to the NPT regime. The first and most provocative conclusion is that there is actually only one regime in the non-dissemination issue area: a nuclear export

control regime which draws together both the NSG and NPT. Although NSG members advocate the Guidelines as "supplementing" the NPT, an argument could be made that, in fact, the reverse is true: the NPT "supplements" the NSG.[55] Although it is true that there are significant areas of overlap between the two regimes (i.e. NSG membership overlaps with the NPT; NSG members strongly encourage NPT membership, as well as IAEA safeguards; NSG members agree that the production of nuclear explosives constitutes an improper end use), it could be argued logically, however, that the NSG incorporates the conceptualization of the dissemination problem embodied in the NPT into a broader frame of analyses, and employs the NPT's safeguard system within a broader array of control mechanisms. The technological imperative approach accepts the end-use approach at least partially. It, at least, accepts that the production of nuclear weapons or explosives is bad. It goes further, however, to argue that the possession of a latent capacity contributes to this end, and as such, is not a good thing. Hence, a NSG reading of the NPT would see two potentially contradictory principles: non-dissemination is bad; peaceful benefits are good. Since the overriding principle of the NSG seems to be that non-dissemination is good, then all practices which can be seen as contributing to this end have their utility. In this way, the NPT acts as a supplement or adjunct to the NSG.

Since the currency of power within the regime is nuclear capabilities, and NSG members command a dominant share of these capabilities, they are at least capable of implementing their approach to non-dissemination and their interpretation of the NPT, notwithstanding the repercussions this may have with respect to other NPT members. If NSG members coordinate supply practices effectively, and these practices (i.e. controls over and above those required by the NPT alone) show up regularly in civilian bilateral nuclear cooperation agreements, then in fact, their supply conditions coincide with the supply conditions of the "non-proliferation regime".[56]

The conclusion that there is a single nuclear export control regime in the non-dissemination issue area which is centered on the NSG is bound to be highly controversial. First of all, it implies that Van Doren's argument that Article IV of the NPT creates no new rights or obligations, but guarantees those rights reflected in the nuclear cooperation agreements and practices of dominant suppliers prior to and during the NPT negotiations, is a correct one and could be formally accepted. This in turn implies - above all - that the non-NSG NPT signatories have been woefully misled about the nature of the NPT regime. And, even if this is the case, one would expect NSG members, who see the NPT as a crucial mechanism for control, to challenge this conclusion above all others.[57]

A less controversial conclusion is that the NPT regime was the only regime in the non-dissemination issue area up until the negotiations of the NSG Guidelines. Since the NPT did not fully incorporate all understandings of the non-dissemination and mechanisms for dealing with it, the NPT can be seen as incomplete vis-à-vis the issue area. On one hand, supply practices based on alternative understanding evolved to fill in the gap. These alternative analyses and practices coalesced around the NSG Guidelines and formed a second regime in the non-dissemination issue area - one based on nuclear export controls. On the other hand, the NPT failed to gain universal acceptance: important NNWS who, in some cases, have advanced civilian nuclear energy programs remain outside the NPT regime, and for that matter outside the NSG. These states have their own understanding of the dissemination problem which departs from that of the NPT. Since the NPT regime did not draw together all analyses and practices, it does not quite stand at the center of the non-proliferation issue area. It remains the dominant and perhaps most obvious focus, but it is located slightly off-side.[58] The effect of the NSG and other "extra" regime elements on the stability of the NPT regime will be explored in the conclusion.

Second Tier Suppliers

Although the NPT boasts just over 130 signatories, at least thirty countries have neither signed nor ratified it.[59]

Of these thirty, at least seven have significant nuclear capabilities, and are active exporters of nuclear goods and services. This category includes: Argentina, Brazil, South Africa, Israel, China, India, and Pakistan. While some have a common approach to the NPT, they comprise more of a residual and heterogeneous group.[60] Nevertheless, the policies and supply practices of these states do have important ramifications with respect to the stability of the NPT regime, and as such, are noteworthy.

While both Israel and South Africa do not emphasize the discriminatory underpinnings of the NPT to the extent of their counterparts in Latin America and South Asia, they have nonetheless been traditionally hostile to the NPT. Their less than benevolent position on the NPT stems mainly from security concerns, resulting from their respective status as regional pariahs.[61] Israel sees the NPT's security assurances as ineffectual vis-à-vis potential Arab nuclear blackmail, and the IAEA safeguard provisions as ineffective in preventing dissemination.[62] This latter perception was implicit in Israel's bombing of the safeguarded Iraqi Osiraq reactor in June 1981.

While the possibility of being confronted by a hostile nuclear neighbour may not be as pressing a security concern for South Africa as it is for Israel, the decolonization in the region in the 1960's combined with a marked decline in its internal security situation, also prompted South Africa to

explore the possibility of developing nuclear weapons.[63] Like Israel, not much is known about the weapons program of South Africa, and much of the available information rests on media speculation.[64] In the past, South Africa declined to sign the NPT on the basis that it might be required to place IAEA safeguards on its uranium mines and ore-processing plants, and hence be vulnerable to industrial espionage.[65] More recently, South Africa has suggested that it would sign the NPT if it could gain supply assurances for its own nuclear needs.[66] In terms of its own nuclear exports, it has been cautious. It uses the NSG Guidelines as the basis for its conditions of supply, and requires IAEA safeguards on exports of enriched uranium and sensitive technologies.[67]

Although China is a NWS, and therefore under the terms of the NPT it would not be subject to NNWS obligations, it has in the past denounced the NPT as a "great conspiracy against all peace-loving countries and peoples."[68] Its longstanding attack on the NPT as discriminatory has been largely based on its sensitivity to its image in the Third World. The extent of China's export activities with the developing world is largely unknown. Substantial evidence exists, however, that it has engaged in varying degrees of cooperation with other emerging suppliers. In 1982, for example, China was reported to have sold unsafeguarded enriched uranium to South Africa, and heavy water and enriched uranium to Argentina.[69] China's nuclear assistance to Pakistan has also been the subject of no

small amount of speculation, especially with respect to the development of a Pakistani enriched uranium centrifuge plant.[70] In recent years, however, China's attitude to the NPT has become markedly less hostile. In January 1984, China joined the IAEA. Since then, policy statements issued by the Chinese leadership have indicated a more conservative stance with respect to their nuclear exports.[71]

In general terms, Argentina, Brazil, India and Pakistan have a common perception of the NPT. They view the NPT as discriminatory, and are suspicious of the balance of obligations that it does embody. Their hostility toward the NPT stems primarily from a perception that it would hamper the development of their civilian nuclear energy programs. They have all argued that research and development in the area of nuclear explosives has a spin-off effect, and that the prohibition of the right to develop peaceful nuclear explosives would place them at an unfair disadvantage vis-à-vis the NWS in developing the commercial and industrial aspects of civilian technology. Since they have retained the right to develop peaceful nuclear explosives, they are unwilling to accept full scope safeguards which are designed to verify the absence of this particular end-use.[72]

Argentina, Brazil, India, and Pakistan have been traditionally hostile to safeguards in part, because they see them as imposing greater cost burdens. More generally, they see safeguards as a means by which they may become more

vulnerable to nuclear supply conditions. The supply assurances under Article IV of the NPT have been greeted by these states with no small amount of scepticism. They have particularly questioned the extent to which an acceptance of full scope safeguards under Article III would actually be reciprocated by guaranteed access to civilian nuclear technology under Article IV. Castro Madero, President of Argentina's National Atomic Energy Commission, for example, articulated his country's position as follows:

> The country ... is not prepared to sign a blank check, which is what signing total safeguards would amount to. Argentina believes that the countries which placed their trust in and signed the Non-Proliferation Treaty, which wrote a blank check, (sic) in exchange for the promise that they would get all the technology they needed for their nuclear development for peaceful purposes, have been completely defrauded.[73]

Conceivably, Madero's statement could have been made by anyone of his counterparts in Brazil, India, and Pakistan. Each of these states tends to view the NPT as a form of "atomic colonialism". Their nuclear energy programs are geared toward self-sufficiency, and they have been committed to avoiding safeguard commitments where possible.[74]

Another perception of the NPT common to Argentina, Brazil, India and Pakistan, is that it does not go far enough with respect to NWS disarmament commitments. Although India has been the most outspoken of the four, the others have also to varying degrees pronounced their disinclination toward signing an agreement which they perceive as "disarming the

unarmed". Conversely, these states have - either through adherence to the Partial Test Ban Treaty, or in the cases of Argentina and Brazil, through their signature on Tlatelolco - demonstrated a willingness to accept approaches to non-dissemination which concretely address vertical proliferation concerns.[75]

Although Brazil, Argentina, India, and Pakistan have a common position on the NPT, regional rivalry has inhibited Argentine-Brazilian and Indo-Pakistani nuclear cooperation. It has also inhibited the development of an alternative suppliers regime based on a common anti-NPT stance. Subramanian notes:

> The interests of the STS (Second Tier Suppliers), unlike those of the NSG, are not convergent and can best be characterized as local interests, ones that are confined to their immediate environs ... since Argentina would prefer to deny Brazil nuclear weapons, as would India for Pakistan, and China for India, any inhibitions that the STS states may have to put nuclear materials on the export market is likely to stem from neighbourhood non-proliferation concerns.[76]

Attempts to improve relations in the Latin American or South Asian context could, however, include confidence building measures in the form of nuclear cooperation. This is already evident in the case of Argentina and Brazil. A relaxation in Argentine-Brazilian relations in the mid-1970's paved the way for their May 1980 nuclear cooperation agreement. Although the Falkland War in the early 1980's temporarily stalled discussions for further cooperation, by

1985 both sides were exploring the possibility of mutual inspections on each other's nuclear facilities.[77] India and Pakistan, on the other had, have only cursorily explored the possibility of nuclear cooperation.[78] Nonetheless, it is not inconceivable, especially in light of the warmer relations between the Bhutto and Gandhi governments, that both sides could agree to some form of nuclear cooperation in the near future. While China has the most extensive network of nuclear cooperation agreements with the other second tier suppliers, Israel and South Africa have tended to cooperate almost exclusively between themselves.[79]

While regional rivalry has been the main barrier to the build-up of a sizeable network of civilian nuclear cooperation agreements between Brazil, Argentina, India, Pakistan, and China as second tier suppliers, they are nevertheless aware of the commercial benefits of exporting their technology, particularly to other NNWS in the Third World. They have geared their own programs toward nuclear autarky, and at the same time have increasingly aspired to produce above and beyond that which is needed for domestic consumption. The cumulative effect of the export activities of these alternative suppliers has not yet threatened the monopoly of the NSG.[80] However, there has been a marked increase in nuclear cooperation agreements between these states and other non-NSG members over the past twenty years.

If this trend continues, the commanding position of the NSG will be challenged.[81]

The potential benefits of South-South cooperation has not been lost on other non-NSG/non-NPT members either. Malaysian Prime Minister Magatir Bin Mohammed made the following remarks, for example, at a press conference after signing a nuclear cooperation agreement with Pakistan in 1984:

> The western countries who control nuclear technology will not give it to us on a golden plate and, therefore, the developing countries must cooperate in this field to help each other.[82]

The export activity of the emerging suppliers has raised concerns about their conditions of supply to other NNWS. Although little research has been done in this area (largely because of the relative newness of this problem), existing evidence suggests a trend toward caution. Argentina, for example, has announced that it will require IAEA safeguards on its nuclear exports; India reportedly turned down a Libyan request for a nuclear explosive device.[83] As stated, China has recently pledged not to aid others in the development of nuclear weapons. However, it is unlikely that Brazil, Argentina, India, Pakistan or China would require NPT membership as a condition of supply as long as they remain non-signatories. Moreover, attempts to co-opt these states into the NSG would be fraught with difficulties, not the least of which is their common perception of the NSG as a nuclear supply cartel.[84]

While the STS stand outside the NPT regime, they nonetheless have had a substantial influence on it. As architects of the "balance of obligations" argument, both Brazil and India contributed to the conceptualization of the proliferation problem embodied in the NPT. However, like the other emerging suppliers, the NPT did not fully incorporate or adopt their conceptualization of the proliferation problem. As a result, the NPT regime remains incomplete vis-à-vis the issue area, and is subject to strain as it interacts in a recalcitrant external environment.

Footnotes, Chapter Four

[1] There are four major procedures used in the NPT's safeguards operations. They are: design reviews, material accountancy, operator's reports, and inspections. See D.A.V. Fischer, The International Non-Proliferation Regime (Geneva: United Nations Institute for Disarmament Research, 1987), 37-45.

[2] Lawrence Scheinman, The International Atomic Energy Agency and World Nuclear Order (Washington, D.C.: Resources for the Future, 1987), 124-5. Scheinman notes, for example, that safeguards are not designed to prevent the national accumulation of safeguarded weapons usable materials.

[3] The IAEA Statute proscribes the use of Agency aid to "further a military purpose." The definition of "military purposes" was left undefined in the Statute. Fischer notes: "in 1955 and 1956 there were in fact some discussions as to what precisely was meant by "... furthering a military purpose: but the issue was whether nuclear submarines and other naval vessels would also fall under this proscription or, more facetiously, whether the use of reactors to produce electricity to supply electricity for male (or female) military personnel was also proscribed." The proscriptions in the IAEA Statute are thus potentially broader than that of the NPT which simply proscribes nuclear explosive devices. See Fischer, op. cit., 38; see also Alan McKnight, Atomic Safeguards: A Study in International Verification (New York: United Nations Institute for Training and Research, 1971), 35-6.

[4] J. Barton and L.D. Weiler suggest that the IAEA was the first collateral measure negotiated between the U.S. and Soviet Union. See International Arms Control: Issues and Agreements (Stanford: Stanford University Press, 1976), 82.

[5] See, for example, Joseph S. Nye, "Maintaining a Non-Proliferation Regime," International Organization 35 (1981), 34-5; Joseph F. Pilat, "Arms Control, Non-Proliferation, and U.S. National Security," Pilat (ed.), The Non-Proliferation Predicament (New Jersey: Transaction Books, 1985), 109-118; Benjamin Schiff, International Nuclear Technology Transfer: Dilemmas of Non-Dissemination and Control (New Jersey: Rowman and Allenhead, 1984), 80.

[6] J.F. Keeley and S.K. Singh, "Before and After: The Comprehensive Test Ban and the Non-Proliferation Treaty," paper, presented at the Annual Meeting of the Canadian Political Science Association (Quebec City: June 1989), 14.

[7] D.A.V. Fischer, op. cit., 17.

[8] T.L. Neff, and H.D. Jacoby, "Non-Proliferation Strategy in a Changing Nuclear Fuel Market," Foreign Affairs 57 (Summer 1979), 1125; Micheal J. Brenner, "Carter's Non-Proliferation Strategy: Fuel Assurances and Energy Security," Orbis 22 (Summer 1978), 334.

[9] Bertrand Goldschmidt, for example, labelled the Indian explosion as "a kind of unethical loss of nuclear virginity"; see "Proliferation and Non-Proliferation in Western Europe: A Historical Survey," A European Non-Proliferation Policy: Problems and Prospects (Oxford: Clarendon Press, 1987), 27. The outrage with respect to the Indian detonation was perhaps most forcefully articulated in A. Wohlstetter (et. al.), Swords From Plowshares: The Military Potential of Civilian Nuclear Energy (Chicago: University of Chicago Press, 1979).

[10] G. Smith and G. Rathjens, "Reassessing Nuclear Non-Proliferation Policy," Foreign Affair 59 (Spring 1981), 876.

[11] Neff and Jacoby, op. cit., 1126.

[12] Ibid. See also Smith and Rathjens, op. cit., 877.

[13] For the technical aspects of uranium enrichment and "dissemination" sensitivity see Stockholm International Peace Research Institute, Uranium Enrichment and Nuclear Weapon Proliferation (New York: Taylor and Francis, 1973), 12-39; for the technical aspects of reprocessing technology and "dissemination" sensitivity see Stockholm International Peace Research Institute, Nuclear Energy and Nuclear Weapon Proliferation (London: Taylor and Francis, 1979), 91-139.

[14] Smith and Rathjens, op. cit., 877.

[15] Goldschmidt, in Muller (ed.), op. cit., 27.

[16] Ibid, 24-5.

[17] Those states which have indicated their compliance with the Guidelines by letter to the IAEA are: Australia, Finland, Denmark, Greece, Austria, Luxembourg, Ireland and Bulgaria. In 1984, South Africa announced it would follow the Guidelines as well. See Schiff, op. cit., 158 fn. 80; G.C. Smith and J.J. Holst, Blocking the Spread of Nuclear Weapons: American and European Perspectives (Brussels: Centre for European Policy Studies, 1986), 126.

[18] See "Nuclear Suppliers Group Guidelines for Nuclear Transfers" in Smith and Holst, ibid, 122-5; J.F. Keeley and S.K. Singh, "Atomic Discipline: The Creation of the NPT," paper, presented at the Annual Meeting of the Canadian

Political Science Association (Windsor, Ontario: June 1988), 11.

[19] Smith and Rathjens, op. cit., 880.

[20] For a detailed account of the development of the 1979 U.S. Non-Proliferation Act see Micheal J. Brenner, Nuclear Power and Non-Proliferation: The Remaking of U.S. Policy (Cambridge: Cambridge University Press, 1981).

[21] See Paul Gummet, "From NPT to INFCE: Developments in Thinking About Nuclear Non-Proliferation," International Affairs (R.I.I.A.), (Autumn 1981), 549-567.

[22] Smith and Rathjens, op. cit., 878.

[23] Ibid.

[24] Following the Indian detonation, Canada similarly made full scope safeguards a condition of nuclear supply. See Department of External Affairs, Canada's Nuclear Non-Proliferation Policy (Ottawa: External Information Programs Division, 1985), 13.

[25] Smith and Rathjens, op. cit., 879.

[26] "Fact Sheet on the Proposed Nuclear Non-Proliferation Act, April 27, 1977," Presidential Documents; Jimmy Carter, 1977, 13 (May 2, 1977), in Brenner, Nuclear Power and Non-Proliferation, op. cit., 292.

[27] Ibid; see also Comptroller General of the United States, An Evaluation of the Administration's Proposed Nuclear Non-Proliferation Strategy (U.S. General Accounting Office, October 4, 1977), 9.

[28] Ibid.

[29] Neff and Jacoby, op. cit., 1123.

[30] D.A.V. Fischer, op. cit., 18-19.

[31] See, for example, Brenner, Nuclear Power and Non-Proliferation, op. cit., 156.

[32] See, for example, Joseph Ny, "Prospects for Non-Proliferation" in Jones, et al. (eds.), The Nuclear Suppliers and Non-Proliferation (Lexington, Mass.: Lexington Books, 1985), 219-25.

[33] Charles N. Van Doren, Nuclear Supply and Non-Proliferation: The IAEA Committee on Assurances of Supply

(Congressional Research Service, Library of Congress, Research Report No. 83-2025, October 1983), 100.

[34] Ibid.

[35] Goldschmidt points to this as well: "(i)t is unfortunate that the danger, from a proliferation point of view, of the enrichment and reprocessing steps is nowhere reflected in the NPT which in Article IV underlines the right of access to the civilian fuel cycles of all member countries. However, understandable in the increased development of atomic energy in the world, these restrictions on the transmission of sensitive technologies can be construed as a breach of the promise given in Article IV of the NPT." See "A Historical Survey of Non-Proliferation Policies," International Security, 2 (Summer 1977), 80.

[36] This possibility was first explored in Keeley and Singh, "Atomic Discipline: The Creation of the NPT," op. cit., 10-13.

[37] Rydell notes this too: "Nuclear export laws, regulations, export licensing mechanisms, export control organizations, and statistical records of nuclear trade are all much neglected areas in the published research on nuclear non-proliferation. We know a little about the formal legal commitment that states make, an the political commitments that their leaders make, and about general trading patterns. National case studies, comparative analyses, quantitative studies of published nuclear trade statistics, and both microeconomic and macroeconomic studies of foreign nuclear trade are topics that require substantial research." See Jones et al. (eds.), "Navigating the Archipelago: Non-Proliferation Orientations of Emerging Suppliers," op. cit., 116.

[38] For a full articulation of the technological imperative hypothesis, see Stephen M. Meyer, The Dynamics of Nuclear Proliferation (Chicago: University of Chicago Press, 1984), 8-12.

[39] Keeley and Singh, "Atomic Discipline," op. cit., 11.

[40] The Combined Development Trust was the operational wing of the Combined Policy Committee set up during World War II, primarily for the purpose of securing access to the world's uranium supplies. For an overview of the activities of this group see National Security Council, Memorandum for the President, "Atomic Energy Policy With Respect to the United Kingdom and Canada," March 2, 1949. Declassified Documents Reference System, 1952-000551; for the activities of the Committee with respect to the coordination of a common

declassification policy see G.H.E. Simms, A History of the Atomic Energy Control Board (Ottawa: Minister of Supply and Services, June 1980), 179-80.

41 The U.S. denied Britain permission for cooperating with these states under the 1943 Anglo-American Quebec Agreement. See Goldschmidt, The Atomic Complex: A worldwide History of Nuclear Energy (La Grange Park, Illinois: American Nuclear Society, 1982), 297-8.

42 Ibid, 372.

43 Glen T. Seaborg, Stemming the Tide: Arms Control in the Johnson Years (Lexington, Mass.: D.C. Heath and Co., 1987), 261-6; see also, S. Gorove, "Controls over Atoms for Peace: U.S. Bilateral Agreements with Other Nations," Columbia Journal of Transnational Law 4 (1966), 181-205; "Safeguarding Atoms for Peace: U.K. Bilateral Agreements with Other Nations," West Virginia Law Review 68 (1966), 263-73; "Controls over Atoms for Peace Under Canadian Bilateral Agreements with Other Nations," Denver Law Center Journal 42 (1965), 41-9.

44 Duffy argues that the Soviet Union had its own "Atoms for Peace" program with its pre-1958 nuclear exports to China. In the early 1960's, the Soviet attitude toward non-dissemination was that each side "take care of its own". See "Soviet Nuclear Exports," International Security 3 (Summer 1978), 84-90. See also William Potter, "Soviet Nuclear Export Policy," Limiting Nuclear Non-Proliferation Snyder and Wells (eds.), (Cambridge, Mass.: Ballinger Publishers, 1985), 213-52.

45 Duffy, ibid, 88.

46 Goldschmidt, "A Historical Survey of Non-Proliferation Policies," op. cit., 84.

47 Duffy, op. cit., 87-8.

48 The Soviets advocated the most strict controls over nuclear exports during meetings of the NSG in 1976 and 1977; ibid, 96; Soviet commentary on the NPT also tends to reinterpret Article IV. See, for example, A. Iorich and A. Rogov, "Nuclear Export an the Non-Proliferation of Nuclear Weapons," International Affairs (Moscow) (October 1985), 48-54; V. Mischarin, "To Consolidate the International Regime of the Non-Proliferation of Nuclear Weapons," International Affairs (Moscow) (no. 9) (September 1985), 130-5.

49 The Western industrial nations met in London between 1960 and 1965 to coordinate a unified safeguards policy for

their nuclear exports. They were unable to secure agreement on account of the French. See Goldschmidt, The Atomic Complex, op. cit., 286.

50 Benjamin Schiff, op. cit., 142.

51 Ibid.

52 Ibid, 143-4.

53 Ibid, 142.

54 Goldschmidt, "A Historical Survey of Non-Proliferation Policies," op. cit., 80; Goldschmidt also argues that the Ascheson-Lilienthal Report was the intellectual forerunner of current supply practices of dominant suppliers; see The Atomic Complex, op. cit., 72-3, 78; Keeley and Singh, "Atomic Discipline," op. cit., 11-12.

55 This possibility was first explored in Keeley and Singh, "Atomic Discipline," op. cit., 22-3.

56 Ibid, 22.

57 Ibid, 23.

58 Ibid, 21.

59 Leonard Spector, Going Nuclear: The Spread of Nuclear Weapons 1986-1987 (Cambridge, Mass.: Ballinger Publishers, 1987), 342-43.

60 Rydell, op. cit., 115. For an account of the nuclear capacities of this group see J.E. Katz and O.S. Marwah, Nuclear Power in Developing Countries (Toronto: Lexington Books, 1982); D. Poneman, Nuclear Power in the Developing World (London: George Allen and Unwin, 1982).

61 Miller argues that both Israel and South Africa have been prompted to seek a weapons option because of their "pariah" status. See "Pariah States and the Threat of Nuclear War," paper, presented at the Annual Meeting of the Canadian Political Science Association (Winnipeg, Manitoba: June 1986), passim.

62 Shalheveth Freier argues, for example, that: (i)n view of the hostility of most Arab countries towards Israel and their express intention to pursue their goals also by military means, the limitations inherent in the nuclear safeguards system under the NPT assume special importance for Israel. The majority of the NPT parties consider that these limitations are rectifiable defects. However, to a country

whose security depends on the effectiveness of the system, they are of paramount concern." See Goldblat (ed.), "Israel," Non-Proliferation: The Why and the Wherefore (London: Taylor and Francis, 1985), 127.

63 Miller, op. cit., 116.

64 This is perhaps and exaggeration. Academic study has been conducted on the weapons programs of both South Africa and Israel. Nonetheless, given the clandestine nature of both programs, such work tends to be speculative and conjectural, and more akin to investigative journalism. See, for example, Robert S. Jaster, "South Africa," Snyder and Wells (eds.), op. cit., 161-75; Georges Quester, "Israel," Snyder and Wells (eds.), ibid, 43-58; Leonard Spector, op. cit., 130-45 (Israel) and 220-239 (South Africa); George Barrie, "South Africa,", Non-Proliferation: They Why and the Wherefore Goldblat (ed.), op. cit., 151-59; Paul Pry, Israel's Nuclear Arsenal (Boulder, Colorado: Westview Press, 1984), passim.; T.F. Dorian and L. Spector, "Covert Nuclear Trade and the International Non-Proliferation Regime," Journal of International Affairs 35 (Spring/Summer 1981), passim.

65 Barrie, op. cit., 155.

66 Rydell, op. cit., 112.

67 Ibid., 114.

68 Quoted in Reinhard Drifte, "China," Nuclear Proliferation: They Why and the Wherefore, Goldblat (ed.), op. cit., 48.

69 R.R. Subramanian, "Second-Tier Nuclear Suppliers: Threat to the NPT Regime?", The Nuclear Suppliers and Non-Proliferation, op. cit., 97-9; Rydell, ibid, 110.

70 Subramanian, ibid.

71 Rydell, op. cit., 114-15.

72 For a general overview of the positions of these states with respect to the NPT see: Stockholm International Peace Research Institute, The Near Nuclear Countries and the NPT (New York: Humanities Press, 1972); George Quester, The Politics of Nuclear Proliferation (Baltimore: John Hopkins Press, 1973) chs. 4 and 8; Daniel Poneman, "Nuclear Proliferation Prospects for Argentina," Orbis 27 (Winter 1984), 853-81; H.J. Rosenbaum and Glenn M. Cooper, "Brazil and the Nuclear Non-Proliferation Treaty," International Affairs (R.I.I.A.) 46 (January 1970), 74-90; R.J. Rao, "India and the

Treaty on Non-Proliferation of Nuclear Weapons," Eastern Journal of International Law 3 (October 1971), 228-238.

73 Quoted in Poneman, ibid, 875.

74 Rydell, op. cit., 108.

75 Rydell, ibid, 112; Onkar Marwah, "The Non-Proliferation Policies of Non-Nuclear Weapon States," Dewitt (ed.), Nuclear Non-Proliferation and Global Security (London: Croom Helm, 1987), 112; Jorge A. Aja Epsil, "Argentina," Non-Proliferation: The Why and the Wherefore, op. cit., 73-9; Jose Goldenberg, "Brazil," ibid, 81-2.

76 Op. cit., 97.

77 Spector, op. cit.

78 Ibid, 79-80.

79 See footnote 69 above.

80 Subramanian, op. cit., 95.

81 See Rydell, op. cit., passim.

82 Quoted in Rydell, ibid, 105.

83 Subramanian, op. cit., 96.

84 Argentina did attend the 1982 meeting of the NSG in Japan, although nothing concrete emerged thereafter.

CONCLUSION

As discussed in the Introduction, the definition of a regime, and the issues it covers are themselves a source of controversy. A regime is never simply a given. Tensions evident in the construction of a regime will become manifest in the regime structure. These tensions may become more acute over time as the regime faces a resistant environment. For heuristic purposes, the existence of the "NPT regime" was put forth as the starting point of inquiry. The body of the thesis addressed the questions of what were the analyses and approaches to the non-dissemination problem embodied in the regime, and alternatively, outside of it. A few questions remain. First, what are the boundaries of the NPT regime? Is it co-extensive with the treaty, or is it the most formalized centrepiece of the regime? Second, can the NSG export control policies be said to constitute a regime, and if so, what is its relationship to the NPT regime?

The NPT regime cannot be said to be merely co-extensive the NPT. It is the centrepiece of the regime because a) it constitutes the most formalized articulation of the regime; and b) it has near universal membership. The NPT regime embodies and reflects two basic analyses and approaches to the non-dissemination problem. First, it is based on a

specific understanding of the relationship between vertical and horizontal proliferation: simply put, vertical proliferation encourages horizontal proliferation. Second, it is based on the "end-use" conceptualization of the horizontal proliferation problem: possession of civilian atomic technology is not problematic unless it is used for military (i.e. weapons) purposes. There are several elements outside the NPT which do not reflect both factors but can nonetheless be counted as part of the NPT regime. They either serve in the functioning of the regime, or they overlap with it.

The IAEA Statute and safeguard system are an integral part of the NPT regime. As we have seen in Chapter One, the formulation of the non-dissemination problem embodied in the IAEA Statute was the precursor to that embodied in the NPT. Moreover, Article III of the NPT mandates the IAEA to provide safeguards to verify non-dissemination pledges under Article II. IAEA resources are not only used with respect to Article III, but also to pursue the technical development objectives of Article IV. Finally, all civilian nuclear cooperation agreements arising between two NNWS NPT-signatories would automatically be subject to IAEA safeguards, and hence, be considered part of the NPT regime.

While not as clearly as part of the NPT regime as the IAEA, there are other elements which can be considered to overlap with it. These elements comprise the vertical proliferation techniques, sanctioned in the NPT, which have

non-dissemination effects. These include nuclear weapon free zones (NWFZ) , and the Partial Test Ban (PTB) Treaty. The NPT sanctions NWFZ's under Article VIII, which was included largely as a means of recognizing the Latin American Nuclear Weapon Free Zone, under the Treaty of Tlatelolco. The NPT also recognizes in its preamble, the Partial Test Ban Treaty. Both of these measures can be said to overlap with the NPT regime, but they are not necessarily a part of the regime. They both have an approach to non-dissemination sanctioned by the NPT, but unlike the IAEA, the functioning of the NPT is in no way contingent on their existence. Similarly, they also act for the most part independently of the NPT regime. In the case of the Treaty of Tlatelolco, member states submit to IAEA safeguards, however, NPT membership is not a prerequisite for membership. The relationship between the PTB Treaty and the NPT regime is an ambiguous one, and will be discussed in further detail shortly. In both cases there is some overlap with the NPT regime, but they are more peripheral aspects of the regime.

The relationship between the NPT regime and the NSG is tricky. Chapter four outlined two possible scenarios. One was that the NSG policies constituted a export control regime which rivalled the NPT regime. The other scenario pointed to the possibility that the NSG-based export control regime had subsumed the NPT regime altogether: instead of one incomplete regime based on the NPT, the NSG formed the centre of a

non-dissemination regime which subsumed the NPT. Looking at the issue area today, the first scenario seems to be the more likely one. Both regimes are essentially incomplete. While it is true that the latent definition and approach to non-dissemination is broader than the end-use approach embodied in the NPT, the supply control regime only controls the supply of nuclear technologies. It is not a non-dissemination treaty. It is one thing to control the supply of nuclear technology, it is quite another to get the NNWS to renounce nuclear weapons altogether. Moreover, the NSG has not formalized the latent proliferation definition. The NSG rules do not have the Treaty status of the NPT, nor do they have an enforcement mechanism. In this sense, the NSG is an informal regime.[1]

The NPT and NSG regimes are mutual rivals, in the sense that a) they embody a contradictory understanding and mode of approach to the dissemination problem; and b) they are competing for primacy. The NPT embodies the largest formal consensus regarding the transfer of nuclear technology, however, key supplier states have evolved their own interpretation of Article IV. The original terms of Article IV are considered sacrosanct by the developing states. Apart from supplier competition, Article IV of the NPT provides the greatest barrier to the formalization of NSG rules. Such a formalization would, in the eyes of the developing states, be tantamount to a nuclear supply cartel

directly contravening Article IV. NSG members have presented their rules as supplementary to the NPT because such rules cannot take the place of the formal renunciatory elements of the NPT. The NSG therefore needs the NPT, but since it stands in contradistinction to the NPT in terms of analysis and approach, it must remain an informal regime as long as the NPT exists. The best it can do is to attempt to superimpose its own understanding of Article IV, without substantially weakening Articles I - III.

The NPT Regime: Life Under Strain

The history of the NPT Review Conferences suggests that all is not well with the NPT regime. A fragile consensus prevailed at the 1975 and 1985 Conferences, but members at the 1980 and 1990 Conferences were unable to reach the level of agreement required to produce a final document. The fact that strains exist should not be surprising. As Seaborg notes, the Treaty is, by its own terms, a "treaty on trial".[2] While the Review Conferences were mandated to assess the operation of the Treaty's provisions and preamble, they were offered in the first instance as a concession to NNWS so that they could have a continued source of leverage over the NWS after the Treaty became operative. Disputes at the Review Conferences have largely been an extension of the disputes which arose during the NPT negotiations. Since the central points of dispute during the Treaty negotiations revolved around the "balance of

obligations" argument, and the key Treaty provisions which attempt a balance between NWS and NNWS obligations are Articles IV and VI, the key disputes at the Review Conferences revolve around the proper interpretation and implementation of these Articles. While this constitutes the major internal strain of the regime, there are two external strains which are connected to and exacerbate the internal strain. The first external strain is posed by the NSG; the second is posed by the non-NPT/non-NSG "threshold" states.

Contention over the Implementation of Article VI

The main point of contention between the NWS and the NNWS over Article VI has revolved around what properly constitutes NWS progress in the area of disarmament. Within the context of the Review Conferences, the conceptualization of the proliferation problem embodied in the NPT has not been reopened for debate, or openly challenged by the NWS.[3] In fact, the NWS have themselves reinforced the connection between vertical and horizontal proliferation since the NPT was open for signature. When the U.S. announced the commencement of the SALT negotiations on 16 July 1968 in the ENDC, it noted its obligations under Article VI of the NPT.[4] The NPT was subsequently acknowledged in the preamble of SALT I, as well as in other major U.S.-Soviet arms agreements up to and including the December 1987 I.N.F. Treaty.

Although the NNWS have "welcomed" superpower arms agreements, they have failed to find satisfaction in superpower conduct with respect to Article VI. This has largely resulted from the failure of the NWS to conclude a Comprehensive Test Ban Treaty (CTB). A CTB was established as the key NWS obligation under Article under Article VI soon after the NPT was open for signature. Sweden in particular drew on the "balance of obligations" argument to push for continued CTB negotiations. In 1973, for example, Sweden made the following argument for a CTB:

> And five years ago, an even more compelling pledge was included as the much-quoted Article VI of the NPT. As that Treaty was discriminatory in character, great store was set by us on Article VI as indicating a balance of obligations ... The Parties who should soon requite themselves of these obligations, can not be all of us; it refers, of course, to the Parties that do the testing and the Parties that are conducting the nuclear arms race. (emphasis in original)[5]

While other non-aligned states also picked up on the CTB as a measure which would balance the obligations between NWS and NNWS under the NPT, such connections were also made by Britain and other U.S. allies. For example, in the ENDC, the U.K. delegate made the following remarks in conjunction with the CTB issue:

> But our major task now is to explore all the possibilities for further measures of arms control and disarmament that are opened up by the Treaty. Indeed we have an obligation to do so under the terms of Article VI and the preamble to the Treaty itself ... (W)hile the treaty was a most important step forward, and valuable in itself, it was even more

> important as an essential precondition of further measures ... (W)e must expect that the rate of ratifications of the treaty may well be greatly influenced by our rate of work here...[6]

Canada also drew on the "balance of obligations" argument in conjunction with the CTB issue, and suggested that the failure to conclude a CTB could "jeopardize" the NPT. In 1972, the Canadian representative in the U.N. Conference of the Committee on Disarmament argued for a CTB as follows:

> A question which warrants serious examination is whether the hesitation of at least some "near-nuclear" Powers to adhere to the NPT may in part be due to the failure of the superpowers to carry out their part in one of the undertakings cited above, "the discontinuance of all test explosions of nuclear weapons." At any rate, recognizing that the non-proliferation regime, for which so many strove for so many years, is in jeopardy, parties to the NPT, and particularly those with advanced nuclear technology, are surely justified in calling for serious effort to begin to implement those undertakings with regard to nuclear-weapons testing.[7]

For their part, the superpowers did not publicly question the CTB as a NWS responsibility under Article VI, and at least indirectly noted the CTB connection with the NPT. The 1974 Threshold Test Ban Treaty for example (which banned underground nuclear tests yielding in excess of 150 kilotons), acknowledged in its preamble, the Partial Test Ban Treaty, the continued desire to achieve a CTB, as well as the NPT.

By the time of the 1975 Treaty Review Conference, a CTB had become the key criterion for evaluating NWS performance under Article VI. During the 1975 Review, the key

role of the CTB in the NPT regime was reinforced and formalized. The final declaration of the Conference contained the following statement with respect to the performance of NWS obligations under Article VI:

> While welcoming the various agreements on arms limitation and disarmament elaborated and concluded over the last few years as steps contributing to Article VI of the Treaty, the Conference expresses its serious concern that the arms race, in particular the nuclear arms race, is continuing unabated ... The Conference affirms the determination expressed in the preamble to the 1963 Partial Test Ban Treaty and reiterated in the Preamble of the Non-Proliferation Treaty to achieve the discontinuance of all test explosions of nuclear weapons for all time. The Conference expresses the view that the conclusion of a treaty banning all nuclear weapons tests is one of the most important measures to halt the nuclear arms race... It applies to these state (NWS NPT signatories) to make every effort to reach an agreement on the conclusion of an effective comprehensive test ban.[8]

The CTB issue has since dominated the politics of the NPT. The 1980 Review Conference was hamstrung over Article VI largely on account of the suspension of the trilateral test ban talks in Geneva after the Soviet invasion of Afghanistan.[9] While the 1985 Conference avoided an impasse on disarmament matters, the CTB issue still figured prominently.[10] During the Conference, the non-aligned states submitted a draft resolution which urged the NWS to negotiate and adopt a CTB by 1985. Another draft resolution called upon the NWS to place a moratorium on nuclear testing pending the conclusion of a CTB.[11] The final declaration again called upon the NWS to

conclude a CTB, but noted the dissenting opinions of the U.S. and the U.K.[12]

The failure of the NWS to conclude a CTB or even ratify the Threshold Test Ban Treaty had become a standard line of criticism: some NNWS have threatened to pull out of the NPT altogether on the grounds that the NWS have failed to live up to their part of the bargain under Article VI. While much of the non-dissemination literature tends to ignore Article VI of the NPT altogether, some academic commentary on the NPT has picked up on this "NPT in jeopardy" theme, and has advocated the conclusion of a CTB to save the NPT.[13] Although the superpowers have clearly moved away from the consideration of a CTB, the question of a test ban will continue to dominate the politics of the NPT regime.

The relationship between the CTB and non-dissemination has not been constant over time.[14] As noted in Chapter Two, in the early days of the test ban negotiations, a CTB was presented as a positive non-dissemination measure in its own right. This theme was carried over in the Partial Test Ban talks as well. However, concern that additional dissemination would forestall or jeopardize a CTB led to the separate consideration of a non-dissemination agreement, and ultimately to the conclusion of the NPT. Now its seems that the NPT is being used as a vehicle to get a CTB, and the continued failure of the NWS to conclude a CTB threatens the NPT.

The CTB has gained political and symbolic importance for the NNWS; its salience largely derives from the fact that it has been closely associated with both vertical and horizontal non-proliferation concerns, and that it is sanctioned in the preamble of the NPT. The NNWS negotiated the NPT on the assumption that it was part of a greater effort at disarmament, or that it was a collateral measure to disarmament. In other words, the issue of non-dissemination was seen as an adjunct to the broader issue area of disarmament. In Haas' terms, this was at least a fragmented linkage. The "balance of obligations" argument was not merely accepted by the NWS as a politically opportune quid pro quo, but rather was the result of a sustained intellectual argument regarding the relationship between non-dissemination and disarmament. The NWS accepted, at least implicitly, that vertical proliferation encourages horizontal proliferation.

The importance of the CTB issue in the politics of the NPT regime can be attributed to the fact that it serves both concretely and symbolically to ground the issue of non-dissemination within the larger issue area of disarmament. While other partial disarmament measures were listed in the preamble (i.e. the cessation of weapons manufacture, the liquidation of nuclear stockpiles, and the elimination of nuclear delivery vehicles), a CTB remains the central issue since it provides a key link between non-dissemination and disarmament.[15]

The dominance of the CTB issue in the NPT regime points to a larger explanation why dissatisfaction with NWS conduct under Article VI in an endemic feature at the Review Conferences. Paul F. Power characterized NNWS frustration over Article VI as follows:

> The wording of Article VI owes much to the aspirations of the period in the 1960's when the NPT was drafted. Fifteen years on, Article VI's idealism about disarmament, which American and Soviet leaders have endorsed in their competitive, utopian statements, is still the council of perfection. These aspirations have given rise to a repeated pattern of disappointment, cynicism, and even despair.[16]

While the NPT was negotiated with a view to disarmament, the issue area of disarmament has changed substantively. After the conclusion of the NPT, and the advent of SALT I, U.S.-Soviet arms negotiations became increasingly oriented toward bilateral "arms control" agreements.

The distinction between "arms control" and "disarmament" as objectives of policy is crucial in assessing contention surrounding Article VI of the NPT. Barton and Weiler offer the following distinction:

> "Disarmament" involves the reduction or elimination of armaments or armed forces. "Arms Control" or "arms limitation" involves limitations on the nuclear or types of armaments or armed forces, on their deployment or disposition, or on the use of particular types of armaments; "arms control" also encompasses measures designed to reduce the danger of accidental war or to renounce concern about surprise attack.[17]

On this definition, the partials negotiated in the 1960's were essentially arms control measures. Substantively, they restricted the deployment of nuclear weapons in certain environments (i.e. the 1957 Antarctic Treaty and the 1967 Outer Space Treaty); they restricted the testing of weapons in certain environments (i.e. the 1963 Partial Test Ban Treaty); and they reduced the dangers of accidental war (i.e. the 1963 Hot-line Agreement). Although they were, in effect arms control measures, the partials retained a strong orientation to disarmament. While the superpowers moved away from considering bold and sweeping disarmament proposals in the mid-1950's, they continued to submit Complete and General Disarmament proposals to international disarmament fora, as late as 1965. Since the partial measures were negotiated concomitantly with disarmament negotiations, they were seen as incremental steps, each building on the other, toward the gradual elimination of all nuclear weaponry.

While the partial measures were negotiated multilaterally, within the context of disarmament, the bilateral arms control measures negotiated subsequently lost their orientation to the end goal of disarmament. This was largely the result of the increased role of deterrence theory in superpower thinking on the arms race in the mid-1960's.[18] When the superpowers accepted, and placed their faith in deterrence as a means of preventing nuclear war, or conventional war more generally (i.e. within the context of

Europe), the goal of Complete and General Disarmament was displaced by that of stabilizing and strengthening the evolving deterrent system. This logic was implicit, for example, in the SALT I Agreement.[19]

This distinction between disarmament and arms control in terms of their end goals or objectives, points to a limitation in the definition offered by Barton and Weiler. Arguably, arms control is aimed at regulating and managing the superpower arms relationship. Disarmament, on the other hand, is aimed at the elimination of arms, and the elimination of the superpower arms relationship more generally. In order to stabilize the arms relationship, arms control may adopt techniques from disarmament. It may, for example, involve the actual reduction of arms. It need not do so, however, because it does not seek, in any immediate or necessary sense, to eliminate arms altogether.[20]

Superpower practices in the area of vertical proliferation have changed substantively since the NPT was negotiated. The rationale behind current arms control practices is at odds with the connection between vertical and horizontal proliferation embodied in the NPT. In effect, deterrence serves to legitimize the superpower arms relationship: if deterrence serves to prevent war, then nuclear weapons held by some may in fact be a good thing. This would be congruent with an understanding that posits an inverse or negative correlation between horizontal and

vertical proliferation. The possession of nuclear weapons by some is not only good because it may prevent war, it may also serve to prevent further dissemination because NWS might extend the deterrent to other NNWS.[21]

The retrenchment from multilateral (partial) disarmament talks in favour of bilateral arms control talks superimposed a new context on Article VI.[22] Since NNWS evaluate NWS performance within the context of Article VI's original intentions, in a context displaced from contemporary superpower arms control practices, they have been constantly frustrated over the implementation of Article VI. It is this frustration which is evident at Review Conferences. The NNWS see arms control measures as "nice", but simply not enough. They want the reduction and elimination of nuclear weapons, not arms limitations that serve to stabilize the arms race.[23] The insistence on a CTB reflects their commitment to the old-style disarmament approach to non-dissemination, and the arms race more generally.

Although an interpretation of the Treaty provisions within its original disarmament context has the advantage of historical accuracy, it has a definite disadvantage of being somewhat disjointed from what is actually happening in the practice of both vertical and horizontal proliferation. Since the superpowers can define the former, and retain, along with the NSG members, a commanding position with respect to the latter, they in fact have the ability to develop and enforce

interpretations of the NPT which differ from its original meaning. In contrast, the NNWS have relatively few means at their disposal to enforce its original meaning. This is true with respect to Article VI, and equally so with respect to Article IV.

Contention over the Implementation of Article IV

Contention over the implementation of Article IV has largely emanated from the interaction between the NPT and NSG regimes. While the NSG members have attempted to gain increased supplier controls within the IAEA, other NNWS NPT signatories have argued that supply assurances are non-negotiable. For these states the NSG Guidelines are seen as a retrenchment from NPT rules.

The major point of departure between the NSG members and other NNWS NPT signatories, centres on what seems to be a different frame of reference for evaluating the legitimacy of the NPT regime. NSG members evaluate the legitimacy of the NPT on the grounds of its effectiveness as a non-dissemination device. Conversely, the others - especially signatories from the developing world - question the legitimacy of the regime in terms of the fulfilment of NWS obligations under Article IV. Goldschmidt and Kratzer articulated this dichotomy as follows:

> Confidence, in the international nuclear environment, is a two way street. It has involved, on the one hand, confidence that non-proliferation undertakings will be met

> and, in a broader sense, that nuclear exchange will not foster proliferation ... confidence in this sense has been of particular importance to the policies and actions of suppliers ... On the other hand, the term also embraces the confidence of recipient nations in the dependability of the supply undertakings of suppliers, and in a broader sense, the willingness of the advanced nations to share the benefits of peaceful nuclear technology in a non-discriminatory manner.[24]

In general terms, this dichotomy in evaluating the NPT was exemplified in the North-South reactions to the Israeli attack on the Iraqi Osiraq reactor in 1981. Although Israel itself is not an NPT member, the Western reaction to the raid was muted. The West saw the raid as underlining the weakness of the efficacy of the IAEA safeguard system. It was seen as an act of preventative medicine, or the effect of a non-dissemination policy based on "active denial". Western commentary on Osiraq leaves behind a sneaking suspicion that it was in fact secretly applauded: the Israelis, it seems did what others lacked the political will to do about the spread of latent capacities.[25]

In the South, the Osiraq raid also led to a general re-evaluation of the legitimacy of the NPT regime. However, instead of questioning the NPT as an effective non-dissemination device, these states saw Osiraq as further exacerbating the discriminatory underpinnings of the NPT. They saw a non-NPT member get away with destroying a research reactor that had been acquired by an NPT member who had ostensibly played by NPT rules.[26]

The Osiraq incident caused the South to a push for the revocation of Israel's membership in the IAEA. It also rocked the 1985 NPT Review Conference. The Group of 77 members wanted the final document to censure Israel forcefully, and call for sanctions in retaliation. The U.S., in particular, did not accept any language which was harsher than "expressing profound concern" for the incident.[27] The developing NNWS saw Western tolerance for the Israeli action as underlining the discriminatory aspects of the NPT, especially with respect to the implementation of Article IV. It underlined for the South, the preoccupation with the spread of latent capacities in the North, and led to a growing suspicion that this preoccupation was rooted in racism.[28]

This dichotomy in evaluating the legitimacy of the NPT constitutes the most fundamental strain on the regime. While NSG members may be correct in their concern over the spread of latent capacities, the prime area where latent capacities are spreading stands outside the NPT regime. NSG attempts to halt the spread of latent capacities, however, undermines the legitimacy of the NPT in the eyes of other NNWS NPT signatories.[29] Resistance to the NSG has provided a basis for convergence between signatories and non-signatories in the developing world. In other words, NNWS signatories from the South have become associates with those states which are not positively disposed to the NPT. This is particularly evident in the IAEA where NNWS tend to vote as a bloc on the basis of

Group of 77 membership, rather than on the basis of NPT membership.[30]

While NNWS NPT-signatories outside the NSG see the NPT rules as an absolute maximum in terms of what is required (i.e. a ceiling), NSG members see NPT rules as a bare minimum (i.e. a floor). If NNWS see NSG rules as too intrusive or burdensome, they may increasingly look to second tier suppliers for their nuclear needs without compromising their NPT status or adherence to NPT rules.

The non-NPT/non-NSG threshold states pose a problem for both the NPT and the NSG. If NNWS NPT signatories see supply advantages accruing to non-NPT signatories by virtue of the fact that they have not signed the NPT, they will further question the legitimacy of the NPT regime. On the other hand, NSG members are concerned with the dissemination risks posed by the threshold states, as well as by their supply practices. Although the threshold states do pose the greatest dissemination risks, if they increasingly export nuclear goods and services on their own terms, they can also contribute to the spread of latent capacities elsewhere. An increase in the spread of latent capacities on this basis will cause NSG members to further question the effectiveness of the NPT as a non-dissemination device. Ultimately, it will also have the effect of undermining the NSG.

It seems as if the NPT regime is being pulled in one direction by the NSG, and in the opposite direction by the

threshold states. The disputes over supply conditions at the Review Conferences, the INFCE exercise, and the IAEA's Committee on Assurances of Supply reflect this tension. Although these efforts are aimed at reconciling the various analyses and practices extant in the non-dissemination issue area, they have been largely unsuccessful. It is doubtful given the nature of the differences, that a reconciliation will occur. The NSG Guidelines are so divergent that they suggest an export control regime at odds with the NPT regime. Any attempt at reconciliation which does not address these basic differences is bound to be tentative and unstable. It is unlikely, given the nature of the differences, however, that they can ever be fully resolved. What is more likely to occur is the subordination of some analyses and practices to others. In specific terms, this means that the second scenario outlined in Chapter Four could occur. In other words, it is conceivable that the NPT regime could become subordinate to the NSG.[31]

The NPT Regime in the 1990's

Looking ahead to the 1995 Treaty Extension Conference, two things seem certain. First, contention over Articles IV and VI will continue. Second, it is doubtful that the Treaty will collapse, either on account of lack of progress in the area of disarmament, or on account of increased supplier controls.

While current NWS practices in both areas of vertical and horizontal proliferation constitute a substantial revision of the NPT regime, the Review Conferences are, and have always been, an important form of leverage of the NNWS over the NWS. In order to preserve this leverage, the NNWS must use the means provided by this forum, which includes drawing on the balance of obligations argument, pressing for a CTB, and threatening to withdraw from the Treaty altogether. These threats to withdraw are inherent in the nature of the politics of the regime. It is highly unlikely that the NNWS will actually risk the Treaty altogether on account of NWS behaviour, precisely because they stand to lose the forum and style of thought associated with it. The collapse of the NPT would leave the NNWS without the same recourse against increased NSG controls. Without Article IV, NNWS would no longer have the legal backing for unfettered technology transfers.

More importantly, NNWS will be unlikely to risk the Treaty, because they share an implicit recognition that non-dissemination is a good thing in itself. Although the language of evaluation and style of thought associated with it prevents a frequent and forceful articulation of this principle, NPT membership has risen steadily since it was open for signature. Moreover, the slow rate of dissemination itself suggests, on the one hand, that Articles I - IV compromise the guts of the NPT; and on the other, that the

internal logic of the NPT - the logic that connects vertical and horizontal proliferation - doesn't tally up vis-à-vis current realities. As Power notes:

> Is the welfare of the NPT directly linked to the record of the nuclear giants on nuclear arms control? Despite the conventional stress on Article VI, this interdependence is tenuous. Contrary to dire predictions, the NPT-IAEA system and the balance of the non-proliferation regime have not become unravelled because of lack of progress on nuclear arms control ... Given the low proliferation rate since 1968, the evidence is all the other way. There are no signs that this state of affairs will change. This unpalatable condition should be accepted, not to justify horizontal or vertical proliferation, but in order to bring a sense of realism into nuclear arms control and the debate about international security. Those who focus on the NPT as a disarmament "bargain" should acknowledge that the non-proliferation regime has stood, and has to stand, on its own merits, defects, achievements, and shortcomings. In this respect, Articles I - IV are the most important components of the Treaty.[32]

Given the substantial reworking of the NPT regime by the NWS and the NSG more generally, the Treaty has in fact become more of a non-dissemination treaty than a treaty dealing with both horizontal and vertical proliferation concerns. It is this reworking that is reflected in the Western literature, although it is rarely acknowledged as such. It is this reworking that frustrates the South. Nonetheless, the NPT will likely continue the rocky path it has travelled since 1968. The NWS along with the dominant suppliers will continue to redefine the NPT , and the NNWS will continue to harangue them about it. The NPT will

increasingly become a non-dissemination treaty, but its public language of evaluation will remain rooted in the late 1960's. NWS and NSG members will not formalize the shift because it would be tantamount to an admission of guilt vis-à-vis the original terms of the NPT. NNWS will continue to express their discontent.

In the long run, Articles IV and VI will continue to dog the politics of the NPT regime. In the short to medium term, controversy over Article VI may pose the most difficulties. NNWS are still wedded to a CTB, and even with the dissolution of East-West tensions, neither superpower seems predisposed to negotiate one. The issue of nuclear supply has been muted in recent years because NNWS themselves have reassessed the link between nuclear energy and economic development. Peaceful nuclear explosives have become a dead letter, and the development of a viable civilian nuclear energy program has proven to be prohibitive in terms of costs alone.

If the demand for nuclear goods and services remains fairly depressed (as it has been over the past decade), NNWS will not be as inclined to fight tooth and nail against increased supplier controls. If, on the other hand, demand is subject to a rapid increase then the NPT regime will be subject to greater strain. The spread of latent capacities among non-NSG members of the NPT will become a more pressing problem, and the restrictive export policies of the dominant

nuclear suppliers will serve to exacerbate, in the eyes of these states, the discriminatory underpinnings of the NPT - or more specifically, the NPT as it becomes increasingly redefined by the NSG.

Non-dissemination and Regime Theory: Some Concluding Thoughts

The tension between hegemony and international redistribution as a whole is mirrored within the NPT regime. Schiff aptly notes that while the North seeks stability, the South seeks redistribution of power and resources.[33] Failure to explore the underlying power relations upon which regimes rest is an oft-cited difficulty of regime theory itself. Haggard and Simmons note that the effect of bipolarity on regimes has been all but overlooked.[34] North-South tensions have also been ignored or glossed over.[35] This is perhaps the most abiding problem of the traditional regime approach.

Krasner has argued that regimes can be seen as intervening variables between power and outcomes. While regimes are affected by basic configurations of power and interest in the international system, they can also affect them. They can serve to a) alter actors' calculations of how to maximize their interests; b) alter interests themselves; c) serve as a source of power to which actors can appeal; and d) alter power capabilities of different actors.[36] Insofar as they have an independent impact on state behaviour, regimes matter. Conversely, Susan Strange has argued that regimes are

merely epiphenomena: they do no more than reflect the structural relations of power in the international system. For Strange, there is a direct and immediate relationship between power and interests and outcomes. Regimes do not affect outcomes, hence they do not matter: "All those international arrangements dignified by the label regime are all to easily upset when either the balance of bargaining power or the perception of national interest (or both together) change among those states who negotiate them."[37]

Do regimes matter? The NPT regime can, in a limited sense, be said to affect outcomes. It has enhanced the flow of information regarding NNWS civilian nuclear capabilities, and as such, acts as a confidence building measure in the international system. NNWS NPT signatories have the confidence that their neighbourhood counterparts are not "cheating" with respect to the collective good of non-dissemination. Moreover, the NPT regime acts as a moral barrier to the decision to go nuclear. This is especially important with respect to the threshold states. They have all retained their nuclear options, but the NPT serves in a limited sense to de-legitimize any formal decision to go nuclear.[38] The NPT regime also acts as a source of power to which NNWS can appeal against restrictive nuclear supply policies of the more technically advanced states. Article IV forms the basis of resistance to the NSG. Finally, since the currency of power within the regime is nuclear capabilities,

insofar as the NPT facilitates the transfer of technology to the developing world, it may have the effect of altering power capabilities of different states.

Having conceded that the NPT regime may in fact matter, however, should not suggest an exaggerated or overrated emphasis on regimes as intervening variables. The preceding analysis suggests an approach to regimes which is critical of the traditional approach based on description and taxonomy. Identifying principles and norms may be a convenient means of organizing complex material, but it has the grave disadvantage of obfuscating what is really going on in an issue area. In the final analysis, specific international regimes are an inherently contestable part of the international order. The "convergence of actors expectations" reflected in principles and norms, cannot therefore be treated by assumption, but rather, should act as the starting point of inquiry. Regimes may matter in a limited sense, but they do not matter as much as the underlying power relations from which they rise. The NPT regime may potentially alter the power capabilities of recipient states, but the mere existence of the NSG is telling. The North seeks stability notwithstanding the NPT; the NSG serves to ensure that power capabilities of recipient states are not significantly altered. Hence, we may speak of regimes as intervening variables, but there is no necessity that we give equal weight to each variable.

There are few doomsday specialists who would argue that, in the event that the Treaty collapses in 1995, the world will see rampant and widespread dissemination of nuclear weapons. Indeed, if the NNWS decide that the NPT will not do what it originally intended, and they are willing to forgo the advantages it offers them, they could decide not to extend it. If they do, then it is hardly likely that there will be a rush on nuclear weapons manufacturing in the developing world. The NSG may come together formally to secure export controls in anticipation of such an eventuality. Moreover, although the collapse of the NPT could result in the collapse of some safeguard arrangements, there are a substantial number of civilian nuclear co-operation agreements which contain fall-back safeguard arrangements in the event that they are no longer covered under the NPT.

The fundamental reason, however, why NNWS developing states will not rapidly disseminate is because they decided, on the basis of their individual economic, political and security objectives, that their interests were better served by either abstaining from the nuclear game altogether (as in the case of the NPT signatories) or being ambiguous in their intentions (as in the case of the threshold states). That the NPT and non-NPT signatories from the developing world find common ground in the IAEA should not be surprising. Problems inherent in the structure of the NPT regime reflect North-South tensions more generally. This is why both the NPT

and NSG regimes have failed most notably with respect to the threshold states. The basic rationale behind the NSG was to prevent the spread of latent capacities to non-NPT/non-NSG members. Instead, it has had the effect of undermining the legitimacy of the NPT in the eyes of the NPT signatories from the developing world, and has encouraged the threshold states toward nuclear autarky. For its part, the NPT simply cannot accommodate the analyses and approaches of those states standing outside it.

Neither the NPT nor the NSG address the underlying domestic security concerns which shape the politics of "problem" regions such as Latin America, South Asia, and the Middle East. Neither the NPT or the NSG can cope with the regional dynamics of the Indo-Pakistani, Israel-Iraqi, or Brazil-Argentine conflicts. As Ashok Kapur notes:

> The NPT has not changed the regional power relationships in the Indian subcontinent, the Persian Gulf, the Middle East, South America, and Southern Africa ... that is, the distribution of economic and military power and the pattern of foreign policy and military alignments within the regions. From the point of view of these states, NPT issues are like an empty drum which makes a lot of noise. Nuclear power is one component of national power; it is not a substitute for economic and military strength and political will.[39]

Defenders of the NPT and NSG regimes, rarely look to the domestic and regional factors which prompt states to go nuclear in the first place. While much attention is devoted to the level of technical proficiency each "problem" state is

attaining in the civilian realm, the decision to "go nuclear", as Kapur notes, is intrinsically a political one. NNWS will not go nuclear simply because they possess a civilian nuclear energy program, or because the NWS have not disarmed. Each state has its own security imperatives; decisions to go nuclear will be based on a matrix of calculations which aim to ensure domestic security. The non-dissemination literature, it seems, has got stuck on the "intervening variables" (i.e. the NSG and NPT regimes), rather than the real meat and potato issues. In a sense, efforts to halt the spread of nuclear weapons must "get back to basics". Instead of lamenting the fact that the NPT is in trouble, or that the threshold states will not sign it, perhaps a more fruitful endeavour would be to focus on possibilities for regional security arrangements which would address the real security concerns of the dominant regional actors. This, of course, is easier said than done, but at least we will not be expending undue energy on something which precariously borders on the epiphenomenal.

Footnotes, Conclusion

[1] Oran Young discusses the notion of imposed regimes. See "International Regimes: Problems for Concept Formation," World Politics 32 (April 1980), 357-405.

[2] Stemming the Tide: Arms Control in the Johnson Years (Lexington, Mass.: D.C. Heath and Co., 1987), 380.

[3] This is not the case with respect to academic commentary on NPT. See, for example, fn. 32 below. See also Joseph Nye, "Prospects for Proliferation," in R. Jones et al. (eds.), The Nuclear Suppliers and Non-Proliferation (Lexington, Mass.: Lexington Books, 1985), 222.

[4] ENDC/PV. 381 (July 16, 1968), 20.

[5] CCD/PV. 600, 14.

[6] ENDC/PV. 381 (July 16, 1968), 24-33.

[7] CCD/PV. 546, 7-8.

[8] NPT/CONF/35/I (Geneva: 1975).

[9] John Simpson, "Nuclear Non-Proliferation in the 1990's: An Agenda of Issues and Policy Choices," in Simpson (ed.), Nuclear Non-Proliferation: An Agenda for the 1990's (Cambridge: Cambridge University Press, 1987), 195-7. Shaker notes that the 1980 Review Conference broke down over Article VI, and not Article IV, even though the NSG Guidelines were published in 1977, and the U.S. Nuclear Non-Proliferation Act was passed in 1978. see "The Third NPT Review Conference: Issues and Prospects," in Dewitt (ed.), Nuclear Non-Proliferation and Global Security (London: Croom Helm, 1987), 5-6.

[10] The "success" of the 1985 Conference was more the result of the extensive preparatory work leading up to the Conference, and the rules of procedure adopted at the Conference, than an increased consensus on Article VI. See Mohammed Shaker, "The Legacy of the 1985 Nuclear Non-Proliferation Treaty Review Conference: The President's Reflections," in Simpson (ed.), Nuclear Non-Proliferation: An Agenda for the 1990's, 10-14.

[11] Ibid, 15.

[12] Neither the U.S. nor the U.K. rejected a CTB completely. They argued that a more pressing concern centred on actual arms reductions, suggesting that undue attention on a CTB might obfuscate the matter. The Soviets, conversely,

expressed their readiness to negotiate a CTB at any time. See D.A.V. Fischer, "The Third NPT Review Conference, Geneva, 27 August to 21 September 1985: A Retrospective," in Dewitt (ed.), Nuclear Non-Proliferation and Global Security, 217-223. For the test of the Final Declaration of the 1985 Review Conference see NPT/CONF.III/64/I (Geneva: 1985).

[13] See, for example, William Epstein, "Reviewing the Non-Proliferation Treaty," Background Paper No. 4 (Ottawa: Canadian Institute for International Peace and Security, March 1986), 6-7. D.A.V. Fischer, ibid, 229. M.I. Shaker, "The Third NPT Review Conference," 22.

[14] For a more detailed account of the relationship between the CTB and the NPT see J.F. Keeley and S.K. Singh, "Before and After: The Comprehensive Test Ban and the Non-Proliferation Treaty," paper, presented at the Annual Meeting of the Canadian Political Science Association (Quebec City: June 1989).

[15] Simpson argues that the CTB gained political symbolism with respect to the NPT regime after the Reagan administration withdrew from the Geneva test ban talks. He states:

> This reversal of United States Policy has made negotiations on a CTBT symbolic of the attitude and commitment of the Reagan administration towards nuclear disarmament negotiations ... The Soviet Union's unilateral moratorium on nuclear testing and the lack of any overt United States reciprocal response has compounded this situation. As a consequence, negotiations on a CTBT have acquired a political symbolism within the international community which gives them a significance independent of the concrete advantages that might flow from the treaty.

See "Nuclear Non-Proliferation in the 1990's," 196. While the position of the Reagan administration may have served to strengthen the CTB issue, as we have seen it gained symbolic importance much earlier, and for reasons other than the intransigence of the U.S. See also Keeley and Singh, ibid.

[16] "The Mixed State of Non-Proliferation: The NPT Review Conference and Beyond," International Affairs (RIIA) 62 (Summer 1986), 479.

[17] International Arms Control: Issues and Agreements (Stanford: Stanford University Press, 1976), 3, fn.3.

[18] The doctrine of mutual deterrence, of course, came to dominate the thinking of policy makers much earlier, especially in the U.S. While the Soviets subsequently adopted their own variant of deterrence in their strategic doctrine, the role of deterrence in the superpower bilateral relations solidified in the mid-1960's and became manifest in bilateral arms control negotiations thereafter. See ibid, 126-9.

[19] Ibid, 121.

[20] This distinction is debatable, yet nonetheless seems capture most accurately what the superpowers have been doing since the late 1960's. See Keeley and Singh, "Before and After," 15-6, 20, fn. 33.

[21] Roger K. Smith argues that this was the logic implicit in the NPT. See "Explaining the Non-Proliferation Regime: Anomalies for Contemporary International Relations Theory," International Organization 41 (Spring 1987), 253-81. As we have seen, the reverse was in fact the case.

[22] Some academic commentary on Article VI reflects this reworking. While some scholars read Article VI contextually, and on that basis advocate a CTB, others evaluate existing arms control agreements and ongoing negotiations in connection with Article VI. See, for example, Steven Smith, "Strategic Arsenals, Arms Control and Nuclear Disarmament in the 1990's," in Simpson (ed.), Nuclear Non-Proliferation, 91- 105. Joseph Pilat, "Arms Control, Non-Proliferation, and U.S. National Security," The Non-Proliferation Predicament (Oxford: Transaction Books, 1985), 109-118.

[23] The Group of 77 Working Paper for the Second NPT Review Conference, for example, listed the following measures as constituting fulfilment of Article VI:

> a) Cessation of the qualitative improvement and development of nuclear weapons;
>
> b) Cessation of the production of all types of nuclear weapons and their means of delivery, and the production of fissionable materials for weapons purposes;
>
> c) a comprehensive agreed program with agreed time frames, whenever feasible, for progressive and balanced reductions of stockpiles of nuclear weapons and their means of delivery, leading to their ultimate and complete elimination at the earliest possible time.

"Working Paper, States Members of the Group of 77 Participating in the Second NPT Review Conference," reproduced in T.T. Poulouse, Nuclear Proliferation and the Third World (Atlantic Highlands, N.J.: Humanities Press, 1982), 143.

[24] "Peaceful Nuclear Relations: A Study of the Creation and Erosion of Confidence," in Ian Smart (ed.), World Nuclear Energy: Toward a Bargain of Confidence (Baltimore: The John Hopkins University Press, 1982), 25.

[25] Richard Betts, "Nuclear Proliferation after Osiraq," Arms Control Today 11 (September 1981), 1.

[26] Although the outbreak of the war with Iran did result in a temporary suspension of IAEA inspections, Iraq does have full scope safeguards on its nuclear installations. See ibid.

[27] D.A.V. Fischer, "The Third NPT Review Conference," 228.

[28] This theme permeates academic and political commentary emanating from the South. Subramanian, for example, maintains that NSG members "adopt an almost racial attitude toward the non-Caucasian nations in the Third World." See "Second-Tier Nuclear Suppliers; Threat to the NPT Regime," in Jones, et al. (eds.), The Nuclear Suppliers and Non-Proliferation, 97.

[29] Munir Ahmad Khan captured NNWS sentiment as follows:

> It is no exaggeration to say that the NPT has undergone some important de facto modifications. The obligations of non-nuclear weapon states have been unilaterally increased while the undertakings of the nuclear-weapon states have been diluted. This has undoubtedly seriously undermined the confidence and faith in the NPT among the non-nuclear weapon states, and particularly among the LCDs. (Less Developed Countries).

See "Nuclear Energy and International Co-operation: A Third World Perception of the Erosion of Confidence," in Smart (ed.), World Nuclear Energy, 62.

[30] For a more detailed account of the effect of Group of 77 bloc voting on the functioning of the IAEA, see Lawrence Scheinman, The International Atomic Energy Agency and World Nuclear Order (Washington, D.C.: Resources for the Future, 1987), 242-6.

[31] J.F. Keeley and S.K. Singh, "Atomic Discipline: The Creation of the NPT," paper, presented at the Annual Meeting of the Canadian Political Science Association (Windsor, Ontario: June 1988), 21-2.

[32] "The Mixed State of Non-Proliferation", 479.

[33] B. Schiff, International Nuclear Technology Transfers: Dilemmas of Dissemination and Control (New Jersey: Rowman and Allenheld, 1984), 206.

[34] S. Haggard and B. Simmons, "Theories of International Regimes," International Organization, 41 (Summer 1987), 503.

[35] R. Keohane glosses over this problem by drawing upon the rather vague notion of "empathy". This supply-side apologia is offered in After Hegemony: Cooperation and Discord in the World Political Economy (Princeton, N.J.: Princeton University Press, 1984), 120-5.

[36] "Regimes and the Limits of Realism: Regimes as Autonomous Variables," in S. Krasner (ed.), International Regimes (Ithaca: Cornell University Press, 1983), 359-67.

[37] "Cave! Hic Dragones: A Critique of Regime Analysis," in Krasner (ed.), International Regimes, 345.

[38] Note how India was careful to present its 1974 detonation as a "peaceful" nuclear explosive.

[39] "World and Regional Power Relations Without the NPT," J.F. Pilat and R.E. Pendley (eds.), Beyond 1985: The Future of the NPT Regime (New York: Plenum Press, 1990), 127.

ANNEX

NPT - The Full Text

The States concluding this Treaty, hereinafter referred to as the "Parties to the Treaty",

Considering the devastation that would be visited upon all mankind by a nuclear war and the consequent need to make every effort to avert the danger of such a war and to make measures to safeguard the security of peoples,

Believing that the proliferation of nuclear weapons would seriously enhance the danger of nuclear war,

In conformity with resolution of the United Nations General Assembly calling for the conclusion of an agreement on the prevention of wider dissemination of nuclear weapons,

Undertaking to cooperate in facilitating the application of International Atomic Energy Agency safeguards on peaceful nuclear activities,

Expressing their support for research, development and other efforts to further the application, within the framework of the International Atomic Energy Agency safeguards system, of the principle of safeguarding effectively the flow of source and special fissionable materials by use of instruments and other techniques at certain strategic points,

Affirming the principle that the benefits of peaceful applications of nuclear technology, including any technological by-products which may be derived by nuclear-weapon States from the development of nuclear explosive devices, should be available for peaceful purposes to all Parties to the Treaty, whether nuclear-weapon or non-nuclear-weapon States,

Convinced that, in furtherance of this principle, all Parties to the Treaty are entitled to participate in the fullest possible exchange of scientific information for, and to contribute alone or in cooperation with other States to, the further development of the applications of atomic energy for peaceful purposes.

Declaring their intention to achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures in the direction of nuclear disarmament,

Urging, to cooperation of all States in the attainment of this objective,

Recalling the determination expressed by the Parties to the 1963 Treaty banning nuclear weapons tests in the atmosphere, in outer space and under water in its preamble to seek to achieve the discontinuance of all test explosions of nuclear weapons for all time and to continue negotiations to this end,

Desiring to further the easing of international tension and the strengthening of trust between States in order to facilitate the cessation of the manufacture of nuclear weapons, the liquidation of all their existing stockpiles, and the elimination from national arsenals of nuclear weapons and the means of their delivery pursuant to a Treaty on general and complete disarmament under strict and effective international control,

Recalling that, in accordance with the Charter of the United Nations, States must refrain in their international relations from the threat or use of force against the territorial integrity or political independence on any State, or in any other manner inconsistent with the purposes of the United Nations, and that the establishment and maintenance of international peace and security are to be promoted with the least diversion for armaments of the world's human and economic resources,

Have agreed as follows:

Article I

Each nuclear-weapon State Party to the Treaty undertakes not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly, or indirectly; and not in any way to assist, encourage, or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices.

Article II

Each non-nuclear-weapon State Party to the Treaty undertakes not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or explosive devices directly, or indirectly; not to manufacture or otherwise acquire nuclear

weapons or other nuclear explosive devices; and not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices.

Article III

1. Each non-nuclear-weapon State Party to the Treaty undertakes to accept safeguards, as set forth in an agreement to be negotiated and concluded with the International Atomic Energy Agency in accordance with the Statute of the International Atomic Energy Agency and the Agency's safeguards system, for the exclusive purpose of verification of the fulfilment of its obligations assumed under this Treaty with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices. Procedures for the safeguards required by this article shall be followed with respect to source or special fissionable material whether it is being produced, processed or used in any principal nuclear facility or is outside any such facility. The safeguards required by this article shall be applied on all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere.

2. Each State Party to the Treaty undertakes not to provide: (a) source of special fissionable material, or (b) equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to any non-nuclear-weapon State for peaceful purposes, unless the source or special fissionable material shall be subject to the safeguards required by this article.

3. The safeguards required by this article shall be implemented in a manner designed to comply with Article IV of this Treaty, and to avoid hampering the economic or technological development of the parties or international cooperation in the field of peaceful nuclear activities, including the international exchange of nuclear material and equipment for the processing, use or production of nuclear material for peaceful purposes in accordance with the provisions of this article and the principle of safeguarding set forth in the preamble.

4. Non-nuclear-weapon States Party to the Treaty shall conclude agreements with the International Atomic Energy Agency to meet the requirements of this article either individually or together with other States in accordance with the Statute of the International Atomic Energy Agency. Negotiations of such agreements shall commence within 180 days from the original entry into force of this Treaty. For States depositing their instruments of ratification or accession

after the 180-day period, negotiation of such agreements shall commence not later than the date of such deposit. Such agreements shall enter into force not later than eighteen months after the date of initiation of negotiations.

Article IV

1. Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and conformity with Articles I and II of this Treaty.

2. All the Parties to the Treaty undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy. Parties to the Treaty in a position to do so shall also cooperate in contributing alone or together with other States or international organizations to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States Party to the Treaty, with due consideration for the needs of the developing areas of the world.

Article V

Each Party to the Treaty undertakes to take appropriate measures to ensure that, in accordance with this Treaty, under appropriate international observation and through appropriate international procedures, potential benefits from any peaceful applications of nuclear explosions will be made available to non-nuclear-weapon States Party to the Treaty on a non-discriminatory basis and that the charge to such Parties for the explosive devices used will be as low as possible and exclude any charge for research and development. Non-nuclear-weapon States Party to the Treaty shall be able to obtain such benefits, pursuant to a special international agreement or agreements, through an appropriate international body with adequate representation of non-nuclear-weapon States. Negotiations on this subject shall commence as soon as possible after the Treaty enters into force. Non-nuclear-weapon States Party to the Treaty so desiring may also obtain such benefits pursuant to bilateral agreements.

Article VI

Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.

Article VII

Nothing in this Treaty affects the right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories.

Article VIII

1. Any Party to the Treaty may propose amendments to this Treaty. The text of any proposed amendment shall be submitted to the Depositary Governments which shall circulate it to all Parties to the Treaty. Thereupon, if requested to do so by one third or more of the Parties to the Treaty, the Depositary Governments shall convene a conference, to which they shall invite all the Parties to the Treaty, to consider such an amendment.

2. Any amendment to this Treaty must be approved by a majority of the votes of all the Parties to the Treaty, including the votes of all nuclear-weapon States Party to the Treaty and all other Parties which, on the date the amendment is circulated, are members of the Board of Governors of the International Atomic Energy Agency. The amendment shall enter into force for each Party that deposits its instrument of ratification of the amendment upon the deposit of such instruments of ratification by a majority of all the Parties, including the instruments of ratification of all nuclear-weapon States Party to the Treaty and all other Parties which, on the date the amendment is circulated, are members of the Board of Governors of the International Atomic Energy Agency. Thereafter, it shall enter into force for any other Party upon the deposit of its instrument of ratification of the amendment.

3. Five years after the entry into force of this Treaty, a conference of Parties to the Treaty shall be held in Geneva, Switzerland, in order to review the operation of this Treaty with a view to assuring that the purposes of the preamble and the provisions of the treaty are being realized. At intervals of five years thereafter, a majority of the Parties to the Treaty may obtain, by submitting a proposal to this effect to the Depository Governments, the convening of further conferences with the same objective reviewing the operation of the Treaty.

Article IX

1. This Treaty shall be open to all States for signature. Any State which does not sign the Treaty before its entry into force in accordance with Paragraph 3 of this article may accede to it at any time.

2. This Treaty shall be subject to ratification by signatory States. Instruments of ratification and instruments of accession shall be deposited with the Governments of the Union of the Soviet Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America, which are hereby the Depository Governments.

3. This Treaty shall enter into force after its ratification by the States, the Governments of which are designated Depositaries of the Treaty, and forty other States signatory to this Treaty and the deposit of their instruments of ratification. For the purpose of this Treaty, a nuclear-weapon State is one which has manufactured and exploded a nuclear weapon or other nuclear device prior to 1 January 1967.

4. For States whose instruments of ratification or accession are deposited subsequent to the entry into force of this Treaty, it shall enter into force on the date of the deposit of their instruments of ratification or accession.

5. The Depository Governments shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of each instrument of ratification or of accession, the date of the entry into force this Treaty, and the date of receipt of any requests for convening a conference or other notices.

6. This Treaty shall be registered by the Depository Governments pursuant to Article 102 of the Charter of the United Nations.

Article X

1. Each Party shall in exercising its national sovereignty have the right the withdraw from the Treaty if it decides that extraordinary events, related to the subject matter to this Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to all other Parties to the Treaty and to the United Nations Security Council three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

2. Twenty-five years after the entry into force of the Treaty, a Conference shall be convened to decide wether the Treaty shall continue in force indefinitely, or shall be extended for an additional fixed period or periods. This decision shall be taken by a majority of the Parties to the Treaty.

3. This Treaty, the English, Russian, French, Spanish and Chinese texts of which are equally authentic, shall be deposited in the archives of the Depository Governments. Duly certified copies of this Treaty shall be transmitted by the Depository Governments to the Governments of the signatory and acceding States.

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