

CHAPTER 6

PEACEFUL NUCLEAR ENERGY AND THE NUCLEAR NONPROLIFERATION TREATY*

Eldon V. C. Greenberg

The variety of formulations written into Article I and II restricting transfer of and access to nuclear weapons and other nuclear explosive devices must be read to mean that the Treaty negotiators intended, to the maximum extent possible, that the Nuclear Nonproliferation Treaty's (NPT) restrictions would halt proliferation by any means.¹ In Article I, nuclear weapon states, after making their basic nontransfer pledge, undertake "not in any way to assist, encourage or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or nuclear explosive devices, or control over such weapons or explosive devices." In Article II, non-nuclear weapon states party to the NPT, after making their basic nonreceipt pledge, undertake "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 reach of these prohibitions, particularly those in Article I, is poten-

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tially to any activity designated as “nuclear” since, as Mason Willrich has pointed out, “[a]lmost any kind of international nuclear assistance is potentially useful to a nuclear weapons program.²

Squared against Articles I and II is equally expansive language in Article IV. Article IV speaks of an “inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes. . . .” Hypothetically, any nuclear energy application denominated as “peaceful” would escape the prohibitions of Articles I and II. Indeed, it has sometimes been suggested that Article IV reflects a “straightforward bargain” in the Treaty, with the weapon states trading nuclear economic benefits to nonweapon states in exchange for the enhanced security provided to weapon states under Articles I and II.³ But clearly it makes no sense to interpret Article IV in such a fashion, for to do so would be to undercut the fundamental purpose of the Treaty to halt proliferation, primarily through the prohibitions of Articles I and II.

The key to the harmonization of Articles I and II with Article IV lies in the connecting language found in Article IV, para. 1, “in conformity with.”⁴ It is possible to read this phrase as meaning no more than the obvious, namely, that a weapon state cannot transfer to a nonweapon state or assist such a state in obtaining a weapon or other nuclear explosive device as such and, by the same token, a nonweapon state cannot manufacture or otherwise obtain such a weapon or device on its own or with the assistance of others. This, in fact, has been the “unexceptional” interpretation put on the language by several commentators.⁵

In such a reading of the NPT, the phrase is simply necessary because, if there were not a cross-reference

to Articles I and II in Article IV, then the provisions could indeed be read in a conflicting manner. For example, a party could transfer or acquire a nuclear explosive device for allegedly peaceful purposes, and claim in so doing that it was merely acting consistently within its "inalienable right" under Article IV. The cross-reference language in Article IV, para. 1, assures that this cannot be done, but accomplishes no more. Under such a formal reading of the Treaty, Article IV would be subject to the obligations of Articles I and II only insofar as the transfer and acquisition of nuclear weapons or nuclear explosive devices as such were concerned. All other nuclear energy applications would be permissible. In effect, the Treaty would be read through an exclusively "explosives lens."

The implications, however, of this connecting language can be read more broadly. At some point, particular assistance or activities may become so risky, even though they do not involve the transfer and acquisition of weapons or explosives as such, that they can no longer be deemed in conformity with the requirements of Articles I and II, even though by their stated terms they are for peaceful power applications only. Under such a "pragmatic" reading of the Treaty, the "inalienable right" in Article IV, para. 1, and the obligation to "facilitate," and the "right to participate" in Article IV, para. 2, remain subordinate to the prohibitions of Articles I and II, if the practical consequences of the assistance or activity, whether its purpose is denominated peaceful or not, are likely to lead to the proliferation of nuclear weapons. In short, there may be activities other than final assembly and production of a "bomb," "warhead," or other nuclear explosive "device" covered by the prohibitions of Article I and II.

Such an approach makes complete sense in light

of the overall purpose of the NPT to halt proliferation. If risks are great, if there can be no reasonable civilian justification for particular forms of assistance or activities, and if there can be no certainty that safeguards would be effective with respect to such assistance or activities, then a presumption should arise under the Treaty that such assistance or activities are not for a permissible, peaceful purpose but are rather for a weapons or explosive purpose and therefore in violation of Articles I and 11.⁶ Only in this way can there be any assurance that the NPT's objectives will be achieved.

The case for a pragmatic reading of the NPT is well stated in a 1979 report by Albert Wohlstetter and others to ACDA:

Now Article IV of the NPT refers to the undertaking by all parties to the Treaty "to facilitate" and the right of all parties "to participate in the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy." Indeed, it refers to such rights to the peaceful pursuit of nuclear energy, in the language of 18th century natural law, as "inalienable." The contention was made by many of the delegates to the Iran Conference on Transfer of Nuclear Technology at Persepolis in the spring of 1977 that this "inalienable right" includes the stocking of plutonium or other highly concentrated fissile material and was therefore violated by President Carter's proposal to delay commitment to unrestricted commerce in plutonium.

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However, Article IV explicitly states that the inalienable right of all parties to the Treaty to the peaceful use of nuclear energy has to be in conformity with Articles I and II, and it is these Articles that are what make the Treaty a treaty against proliferation. In Article I the

nuclear weapons states promise not to transfer or “in any way to assist, [or] encourage . . . any nonnuclear weapons state to manufacture” nuclear explosives. If the “fullest possible exchange” were taken to include the provision of stocks of highly concentrated fissile material within days or hours of being ready for incorporation into an explosive, this would certainly “assist” an aspiring nonnuclear weapons state in making such an explosive. No reasonable interpretation of the Nonproliferation Treaty would say that the Treaty intends, in exchange for an explicitly revocable promise by countries without nuclear explosives not to make or acquire them, to transfer to them material that is within days or hours of being ready for incorporation in a bomb. Some help and certainly the avoidance of *arbitrary* interference in peaceful uses of nuclear energy are involved. However, the main return for promising not to manufacture or receive nuclear weapons is clearly a corresponding promise by some potential adversaries, backed by a system to provide early warning if the promises should be broken. The NPT is, after all, a treaty against proliferation, not for nuclear development.⁷

As Arthur Steiner wrote in a supporting paper, rejecting the notion of the NPT as a simple, “straightforward bargain”:

Such an interpretation could be taken to imply that, in exchange for an absolute renunciation of the right to acquire nuclear explosive devices, non-weapons states have the absolute right to receive any and all nuclear assistance short of the provision, by outside aid or by their own efforts, of nuclear explosive devices. This interpretation is dubious, for the common sense interpretation of the Treaty, as well as the explicit text of Article IV, is that the latter is subordinate to, and to be interpreted in conformity with Articles I and II. It is, after all, a nonproliferation treaty. The provision of certain types of nuclear technology that defeat the objective of nonproliferation by bringing a non-weapons

state recipient within days or hours of a weapon, cannot be an objective toward a nonproliferation treaty.⁸

To sum up, it is most appropriate to read Articles I and II in light of the recognition that there is a spectrum of activity relating to nuclear weapons, ranging from basic to theoretical physics at one end to the final production, assembly, and deployment of operational weapons at the other, and that there is a need to apply the Treaty at the right point and in the right circumstances to prevent weapons proliferation. Articles I and II should be understood as intended to cover not just the transfer and acquisition of a bomb, but also technology transfer or other kinds of assistance or independent activities in nonweapon states short of final production and assembly of a weapon which, as a practical matter, would mean that such state would have the bomb. By the same token, the rights and obligations in Article IV must be read in a limited fashion, so as to exclude the possibility that such a result could occur in the name of fulfilling such obligations or exercising Treaty rights.

THE HISTORY OF THE NPT

Several elements of the history of the NPT tend to support the case for a pragmatic reading of the Treaty. These include: (1) the efforts of the negotiators to establish a comprehensive, loophole-free agreement primarily aimed at enhancing security; (2) the assumptions of the negotiators with respect to the economics of certain "Power" applications; (3) the negotiators' expectations concerning the role of safeguards; and (4) the recognition of the negotiators that per se rules (i.e., generalized rules applied without consideration

for specific circumstances) concerning permissible activities or assistance were inappropriate.

A Comprehensive, Loophole-Free Treaty to Enhance Security.

From the outset, it was understood that assistance and activities subject to the Treaty's restrictions would have to be broadly defined if the Treaty were to be effective. Thus, the so-called "Irish Resolution" of the United Nations (UN) General Assembly, which launched the negotiations in December 1961, called upon all nations to reach an agreement under which weapon states would refrain, *inter alia*, "from transmitting the information necessary for [nuclear weapons] manufacture to States not possessing such weapons," and nonweapon states would agree "not to manufacture or otherwise acquire control of such weapons."⁹

As the negotiations got underway, the explicit goal of the negotiating parties, as set down by the UN General Assembly, was to develop an agreement "void of loop-holes which might permit nuclear or non-nuclear Powers to proliferate, directly or indirectly, nuclear weapons in any form."¹⁰ The emphasis in General Assembly Resolution 2028 on restricting the spread of nuclear weapons "directly or indirectly" and "in any form" would appear to reflect an understanding that proliferation under the guise of peaceful power applications should be treated no differently than unabashed and explicit weapons proliferation.¹¹

While some have suggested that the non-nuclear weapon states were simply looking for economic benefits (to be embodied in Article IV), not security enhancement, in negotiating the NPT,¹² the better view is that security concerns of all the parties were among

the primary motivating factors leading to conclusion of the NPT.¹³ Consequently, one can conclude, "Given the officially expressed primary importance of national security questions to the majority of the nations of the world in their appraisal of the NPT, it would be surprising indeed if very many of them wanted their potential adversaries to be in a position to possess nuclear weapons in a matter of days or even hours."¹⁴ Assistance and activities which would put potential adversaries in precisely such a position cannot therefore be subject to any obligation or right in Article IV.

Finally, at several points during the negotiation of the NPT, proposals which would have expanded the duty of weapon states to aid nonweapon states to develop peaceful applications of nuclear energy were rejected. Mexico, for example, proposed an amendment to Article IV, para. 2, to establish an explicit "duty" to aid which was defeated.¹⁵ And in the final debates at the UN Eighteen Nation Disarmament Committee (ENDC), the Spanish delegation proposed that Article IV "refer specifically to the entire technology of reactors and fuels,"¹⁶ but this amendment, too, was rejected. Such history leads to a simple conclusion: "It seems quite clear . . . that it was not the intent of the framers of the NPT to create an obligation to supply any and all forms of nuclear energy with a single exception of actual explosive devices."¹⁷

The logic of the NPT does not support the idea that either weapons or nonweapons states wish to have their security reduced by unrestricted commerce in especially dangerous forms of nuclear energy. The history of the negotiations leading to the NPT shows that several attempts to make the provision of all types of nuclear energy an obligation were considered and rejected. The evidence is overwhelming that the

“straightforward bargain” is a dangerous myth.¹⁸
Assumptions Concerning Economic Viability.

The NPT was also premised upon certain assumptions with respect to the economic (and presumably technical) merit of nuclear power applications. Indeed, the negotiators’ views might best be characterized as reflecting hopes for rather than assumptions about the future of nuclear energy. To the extent those hopes have been dashed, the operation of the Treaty should be different than originally anticipated.

There is no question that during the course of the negotiation of the NPT the parties, reflecting the conventional wisdom of the day,¹⁹ considered that civilian reprocessing and plutonium recycling, first for conventional reactors and then for breeders, would someday be a normal part of any nation’s nuclear fuel cycle. The U.S. representatives to the ENDC, for example, repeatedly indicated that permissible transfers under the NPT would include equipment for “processing” and “production” of fissionable material, as well as for the “use” of such material.²⁰ The UN General Assembly, in considering the final Treaty document and commending it to member states for ratification, specifically stated that it was:

Convinced that, pursuant to the provisions of the Treaty, all signatories have the right to engage in research, production and use of nuclear energy for peaceful purposes and will be able to acquire source and special fissionable materials, as well as equipment for the processing, use and production of nuclear material for peaceful purposes.²¹

That the Treaty parties’ understandings related to expectations, not absolute guarantees, however, is made

clear by the history of the NPT before the United States Congress.²² Thus, in hearings before the Senate Foreign Relations Committee in 1968, Glenn Seaborg, Chairman of the Atomic Energy Commission, spoke of his expectations about future uses of plutonium.²³ Other witnesses in their statements likewise spoke, for example, of “look[ing] forward to a world in which plutonium will be readily available in very large quantities in all industrially advanced states and in many developing states.”²⁴ These expectations, presumably premised on anticipated, real economic needs, have, as pointed out above,²⁵ largely proven to be false. In such circumstances, the Treaty should not be interpreted as creating an obligation to facilitate or a right to participate in reprocessing and plutonium use. To the contrary, it is more appropriate to view the Treaty as creating the presumption today that assistance or activities relating thereto have more to do with weapons than with peaceful purposes and, therefore, generally would fall within the prohibitions of Articles I and II.²⁶

Expectations Concerning the Role of Safeguards.

Even if it were the case that a particular nuclear application had no reasonable economic or technical justification, it might be argued that where it is subject to safeguards, the application should still be permissible under the Treaty.²⁷ After all, it may be contended, the Treaty itself provides a mechanism, if there is any doubt, to determine whether the assistance or activity is permissible or not. In the words of Mason Willrich, “[T]he application of safeguards to all peaceful nuclear assistance to non-nuclear weapon states, as required by Article III, provides a way to establish

and clarify the peaceful purpose of most international nuclear assistance."²⁸

Yet there is another way to interpret the NPT. The NPT negotiators contemplated that safeguards had more than a merely formal role to play. If that role cannot be effectively fulfilled with respect to particular assistance or activities, then perhaps, in the presence of other factors (e.g., risk or lack of economic viability), such forms of assistance or activities should fall within the Treaty's prohibitions.

The stated "exclusive" purpose of the safeguards system provided for in Article III is for "*verification* of the fulfillment of [a party's] obligations assured under this Treaty with a view to *preventing* diversion of nuclear energy from peaceful purposes. . . ."²⁹ As ACDA Deputy Director Fisher stated to the ENDC in January of 1968, "[T]he safeguards article . . . will *verify* important treaty obligations and thereby serve as an important instrument for reducing tensions and increasing trust."³⁰ Likewise, in describing the Treaty to the UN General Assembly, Ambassador Arthur Goldberg emphasized in April 1968 that "safeguards . . . have but one function: to verify the treaty obligation that nuclear material shall not be diverted to nuclear weapons. . . ."³¹ If the verification function cannot be performed, the legitimacy of the particular form of assistance or activity to which the safeguards cannot be effectively applied must become dubious.

During the course of congressional deliberations on the NPT, it was made clear that, in evaluating the Treaty, congressional assumptions related to the future, not the present, effectiveness of safeguards. Critics of the NPT made much of the absence of effective safeguards in 1968 and 1969. Thus, for example, Congressman Craig Hosmer stated, "Neither

the IAEA [International Atomic Energy Agency] nor anyone else has the remotest notion what constitutes a normal loss of uranium or plutonium in the peaceful industrial process. Therefore, there is not the slightest possibility of any inspectors spotting illegal diversions because they can't even be told when their suspicion should be aroused."³² Supporters of the NPT responded to such criticisms by stating essentially that the United States had "confidence that the IAEA, by building upon its solid, though modest, foundation of experience in the field of safeguards, will be able to carry out the increased responsibilities assigned to it by the treaty."³³ Even the strongest supporters of the NPT recognized, however, that for the system to work, safeguards would have to be improved.³⁴ The Senate Foreign Relations Committee, which produced two reports on the Treaty,³⁵ while expressing doubts about the current effectiveness of safeguards, sided with the optimists and opted for the assumption that safeguards would work in the future. Thus, the Committee's reports, after acknowledging the arguments concerning the pros and cons of the IAEA safeguards system in 1968 and 1969, stated:

Admittedly, the implementation of the treaty raises uncertainties. The reliability and thereby the credibility of international safeguards systems is still to be determined. No completely satisfactory answer was given the committee on the effectiveness of the safeguards systems envisioned under the treaty. Moreover, the committee was not given a completely satisfactory answer as to what the signatory nations will do if the International Atomic Energy Agency fails to work out mutually satisfactory agreements with individual states or associations of States within the time prescribed by the treaty. The committee hopes that the optimism of the administration will be borne out and

that successful agreements with the IAEA will be concluded without difficulty or delay. Nevertheless, the committee notes that the Euratom States have unanimously agreed that the treaty will only be ratified after a satisfactory verification agreement has been reached between Euratom and the IAEA.

The committee is fully aware of the potential problems in the safeguards field. But it is equally convinced that when the possible problems in reaching satisfactory safeguards agreements are carefully weighed against the potential for a worldwide mandatory safeguards system, the comparison argues strongly in favor of the present language of the treaty.

The committee concludes that the treaty is in the best interest of the United States. The committee is mindful, however, that this treaty is certainly no cure-all for the problems of nuclear proliferation. The success of the agreement will depend on its wide acceptance particularly by those countries with the national capability to manufacture nuclear weapons. Success will also depend on the acceptance and credibility of the safeguards provisions.³⁶

Finally, the Senate debates on the NPT confirm that ratification was premised upon assumptions with respect to future effectiveness of safeguards. Thus, for example, Senator Fulbright, Chairman of the Foreign Relations Committee, noted that the credibility and reliability of agency safeguards were still to be determined, but that he was satisfied that in the future the IAEA would be able to accomplish its tasks.³⁷ Likewise, other Treaty supporters, such as Senator Evan Bayh, expressed the view that, while the IAEA might have shortcomings in 1969, these "could be remedied by appropriate increases in manpower, funding and applied research."³⁸

Given the serious questions which exist concern-

ing the ability to safeguard effectively now or in the foreseeable future certain forms of assistance and activities, such as those related to reprocessing and plutonium recycling,³⁹ it is reasonable to conclude that the contemplated verification function of Article III cannot be fulfilled today. The IAEA's lack of authority to "prevent" diversions of weapons-usable plutonium, despite the provisions of Article III, para. 1, fortifies this conclusion. Therefore, if other factors, e.g., risk or lack of economic or technical justification, are also present, the presumption should again arise that the particular assistance or activity runs afoul of the prohibitions of Articles I and II.

Recognition of the Inappropriateness of Per Se Rules Concerning Permissible Assistance or Activities.

As noted above, there is some NPT negotiating history which might be interpreted as standing for the proposition that any safeguarded, "controlled fission" applications are per se outside the prohibitions of Articles I and II.⁴⁰ Yet, consistent with its nonproliferation purposes, the NPT creates no per se rules with respect to acceptable uses and, indeed, allows a pragmatic interpretation of its prohibitions.

That this is the case was made clear during Senate consideration of the NPT. During the 1968 Senate hearings, Senator Case asked Secretary of State Rusk, "Where do you draw the line between a nuclear explosive device and something in which a non-nuclear nation may work in research and development under another provision of the treaty?"⁴¹ Both Secretary of State Dean Rusk and ACDA Director William Foster initially indicated in response that work on anything

which would lead to “an uncontrolled nuclear reaction available to non-nuclear weapon states” would be prohibited.⁴² Mr. Foster then submitted for the record the following detailed response:

The treaty articles in question are Article II, in which non-nuclear-weapon parties undertake “not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices,” and Article IV, which provides that nothing in the Treaty is to be interpreted as affecting the right of all Parties to the Treaty “to develop research, production and use of nuclear energy for peaceful purposes ... in conformity with Articles I and II of this Treaty.” In the course of the negotiation of the Treaty, United States representatives were asked their views on what would constitute the “manufacture” of a nuclear weapon or other nuclear explosive device under Article II of the draft treaty. Our reply was as follows:

While the general intent of this provision seems clear, and its application to cases such as those discussed below should represent little difficulty, the United States believes it is not possible at this time to formulate a comprehensive definition or interpretation. There are many hypothetical situations which might be imagined and it is doubtful that any general definition or interpretation, unrelated to specific fact situations could satisfactorily deal with all such situations.⁴³

Some general observations can be made with respect to the question of whether or not a specific activity constitutes prohibited manufacture under the proposed treaty. For example, facts indicating that the purpose of a particular activity was the acquisition of a nuclear explosive device would tend to show noncompliance. (Thus, the construction of an experimental or prototype nuclear explosive device would be covered by the term “manufacture” as would be

the production of components which could have relevance only to a nuclear explosive device.) Again, while the placing of a particular activity under safeguards would not, in and of itself, settle the question of whether that activity was in compliance with the treaty, it would of course be helpful in allaying any suspicion of noncompliance.

It may be useful to point out, for illustrative purposes, several activities which the United States would not consider to be per se violations of the prohibitions in Article II. Neither uranium enrichment nor the stockpiling of fissionable material in connection with a peaceful program would violate Article II so long as these activities were safeguarded under Article III. Also clearly permitted would be the development, under safeguards, of plutonium fuel power reactors, including research on the properties of metallic plutonium, nor would Article I contravene the development or use of fast breeder reactors under safeguards.⁴⁴

At first blush, the Foster statement might be taken to indicate that any number of risky activities—e.g., “uranium enrichment,” “stockpiling of fissionable material,” “development . . . of plutonium fuel power reactors,” or “research on the properties of metallic plutonium”—would be permissible as long as they were “safeguarded.” However, the real thrust of the Foster statement is different. First, Foster notes that if “facts indicated that the purpose of a particular activity was the acquisition of a nuclear explosive device,” then that activity may well be considered not in compliance with the Treaty. As noted above, where there is no reasonable economic or technical justification for an assertedly peaceful use, then a presumption should arise that the purpose is not legitimate under the NPT. At the same time, while there are repeated

references to safeguards, Foster stresses that “the placing of a particular activity under safeguards would not, in and of itself, settle the question of whether the activity was in compliance with the Treaty.” In other words, there is not a per se rule that application of safeguards alone means that Articles I and II do not apply. Finally, Foster’s references to various activities which might be permissible under safeguards are preceded by the remark that the United States simply “would not consider [such activities] per se to be violations of the prohibitions in Article II.”⁴⁵ The Foster statement thus plainly leaves open the possibility that such activities could be considered violations of the NPT’s prohibitions, if, for example, they were not for a legitimate purpose or if there were evidence that safeguards could not be effectively applied.

CONCLUSION

Adrian Fisher, one of the chief U.S. NPT negotiators, stated several years after the Treaty’s ratification that the NPT “does not require us to do something foolish.”⁴⁶ Another way of putting it is that the NPT must not be read as requiring actions which may increase, rather than reduce, the risk of proliferation. At the same time, given the lessons learned from past proliferation—particularly India’s development of a nuclear explosive device utilizing the facilities purportedly dedicated to its “peaceful” civilian programs—it would, in interpreting the NPT’s restrictions, seem appropriate to err on the side of caution or restraint and apply such restrictions to facilities and materials which pose unacceptable proliferation risks with no reasonably discernible civilian nuclear power benefits now or in the foreseeable future.⁴⁷

To accomplish this result, the distinction between permissible and impermissible activities must come down ultimately to quite pragmatic considerations. Activities must not be considered free from the Treaty's prohibitions just by virtue of being denominated "peaceful," "civilian," "power," or "research." The Treaty must be interpreted as viewing proliferation through something more than an "explosives lens." Rather, depending upon the facts and circumstances, assistance and activities relating to declared "peaceful," "civilian," "power," or "research" purposes may be subject to the NPT's restrictions if an evaluation of all the facts and circumstances, including such factors as economic or technical justification or effectiveness of safeguards, would indicate that the legitimacy of the assistance and/or activity is questionable. Such a pragmatic, rather than a formalistic reading of the Treaty, is most consistent with its overriding purpose of stemming the proliferation of nuclear weapons.

In the specific case of reprocessing and plutonium use—given the risks, economic and technical questions, and safeguards weaknesses associated therewith—it is appropriate to conclude today that assistance (and/or indigenous activities relating thereto) in non-weapon states should generally be exempt from the obligation to "facilitate" and the "right to participate" in Article IV of the NPT and should instead fall within the scope of the prohibitions of Articles I and II of the NPT.

ENDNOTES - CHAPTER 6

1. As one commentator has stated, "The prohibitive sense of the words 'any', 'whatsoever', and 'otherwise' allows no exception." Shaker, *The Nuclear Non-Proliferation Treaty*, 1980, p. 235.

2. Mason Willrich, *The Treaty on Non-Proliferation of Nuclear Weapons: Nuclear Technology Confronts World Politics*, *Yale Law Journal*, Vol. 77, No. 8, (July 1968), pp. 1447-1519, p. 1447.

3. See, e.g., *The Times* (London), March 23, 1978, reporting on the decision of Mr. Justice Parker in the British inquiry into reprocessing at the Windscale facility.

4. While the phrase “in conformity with” appears only in Article IV, para. I, it would also seem to modify the rights and obligations set forth in Article IV, para. 2. If the right to develop peaceful uses of nuclear energy is subject to Articles I and II, so, too, must be the obligation to “facilitate” and the “right to participate” in peaceful applications of atomic energy. Otherwise, Article IV, para. 2, would be in potential opposition to the restrictions of Articles I and II.

5. Willrich, *Non-Proliferation Treaty: Framework for Nuclear Arms Control* 127, 1969; Willrich, *The Treaty on Non-Proliferation of Nuclear Weapons*; Shaker, *The Nuclear Non-Proliferation Treaty*.

6. Likewise, as noted above, if there is a known or reasonably suspected intent to divert, Treaty prohibitions should come into play.

7. Wohlstetter *et al.*, *Towards a New Consensus on Nuclear Technology*, ACDA Report No. PH-78-04-832-13, July 6, 1979, pp. 34-35. The same report goes on to state:

If, in fact, technological transfers can bring a “non-nuclear weapon state” within weeks, days or even hours of the ability to use a nuclear explosive, in the operational sense that “nonnuclear weapon state” will have nuclear weapons. The point is even more fundamental than the fact that effective safeguards mean timely warning. A necessary condition for having timely warning is that there be “a substantial elapsed time. But if there is no substantial elapsed time before a government may use nuclear weapons, in effect it has them. pp. 36-37.

8. Steiner, “Article IV and the ‘Straightforward Bargain’”

(PAN Paper 78-832-08), in *ibid.*, Vol. II (Supporting Papers).

9. G. A. Res. 1665 (XVI), December 4, 1961.

10. G. A. Res. 2028 (XX) (Nov. 19, 1965), reprinted in ACDA, *Documents on Disarmament*, 1965, pp. 532-534.

11. There is. It should be noted that some contrary indication that the Treaty negotiators considered that power applications were quite distinguishable from weapons or explosives uses and therefore permissible, with little limitation, under the Treaty. Thus, ACDA Director Foster, in describing U.S. proposals to the First Committee of the General Assembly, on November 9, 1966, stated, “[P]eaceful applications of energy derived from controlled and sustained nuclear reactions—that is, reactions stopping far short of explosions, in the exact use of that term—have nothing to do with nuclear weapons. Development work relating to such controlled and sustained nuclear reactions would not—I repeat: would not—be affected by having the prohibitions of a non-proliferation treaty also encompass peaceful nuclear explosives.” A/C.I/PV.1448, reprinted in ACDA, *Documents on Disarmament*, 1966, p. 721. Likewise, Secretary of State Rusk’s characterization of the Treaty, adopted by the Senate Foreign Relations Committee, as “dealing only with what is prohibited . . . [:] bombs and warheads . . . [and] other nuclear explosive devices. . . .” might be taken in the same vein. See Hearings on the Treaty on the Non-Proliferation of Nuclear-Weapons before the Senate Foreign Relations Committee, 90th Cong., 2d Sess. 5 (1968) (Statement of Secretary of State Rusk) (hereinafter 1968 Hearings); S. Ex. Rep. No. 9, 90th Cong., 2d Sess. (1968), reprinted in ACDA, *Documents on Disarmament*, 1968, pp. 642, 644 (hereinafter 1968 Senate Report); S. Ex. Rep. No. 91-9, 91st Cong., 1st Sess. (1969), reprinted in ACDA, *Documents on Disarmament*, 1969, pp. 78, 80 (hereinafter 1969 Senate Report).

12. Eldon V. C. Greenberg, *The NPT and Plutonium*, Washington, DC: Nuclear Control Institute, 1993, p. 18.

13. See e.g., Steiner, “Article IV and the ‘Straightforward Bargain’” (PAN Paper 78-832-08), in Wohlstetter, *et al.*, *Towards a New Consensus on Nuclear Technology*, Vol. II (Supporting Papers) ACDA Report No. PH-78-04-832-33, July 6, 1979. See also Jensen,

Return From the Nuclear Brink: National Interest in the Nuclear Non-proliferation Treaty, 1974, pp. 1-2, 129, 133.

14. *Ibid.*

15. See Statement of the Representative of Mexico to the ENDC, September 17, 1967, ENDC/PV.331, reprinted in *ACDA, Documents on Disarmament*, 1967, pp. 395, 397-398. For a general discussion of this proposed amendment, see Willrich, *Non Proliferation Treaty: Framework for Nuclear Arms Control*, 1969, pp. 131-132.

16. See Spanish Memorandum to the ENDC Co-Chairmen, February 8, 1968, ENDC/PV.361, reprinted in *ACDA, Documents on Disarmament*, 1968, pp. 39-40.

17. Steiner, "Article IV and the 'Straightforward Bargain'" (PAN Paper 78-832-08), in Wohlstetter, *et al.*, *Towards a New Consensus on Nuclear Technology*, Vol. II (Supporting Papers) (ACDA Report No. PH-78-04-832-33), July 6, 1979.

18. *Ibid.*

19. Greenberg, p. 7.

20. E.g., Statement of ACDA Deputy Director Fisher to the ENDC, July 28, 1966, ENDC/PV.277, reprinted in *ACDA, Documents on Disarmament*, 1966, pp. 483-485.

21. G.A.Res. 2373 (XXII), June 12, 1968, reprinted in *ACDA, Documents on Disarmament*, 1968, pp. 431-432.

22. In its discussion of the history of the NPT, this memorandum occasionally relies upon the record of consideration of the Treaty by the U.S. Senate in 1968 and 1969. While in some sense this is *post facto* legislative history, coming after completion of the negotiations, nonetheless the comments made on the Treaty during Senate deliberations generally reflect interpretations reached by the negotiating parties and are most helpful in illuminating the intent of the Treaty.

23. 1968 Hearings, pp. 98, 120.

24. *Ibid.*, p. 212 (Statement of Mason Willrich).

25. Greenberg, pp. 7-11.

26. It is, of course, sometimes argued that, even if economic justification is lacking, reprocessing and plutonium use can be rationalized on a civilian basis as necessary to achieve “energy independence” or “energy security” or as a tool to manage nuclear waste. See Hearings before the Subcommittees on Arms Control International Security and Scientific Affairs and on International Economic Policy and Trade of the House Foreign Affairs Committee on Plutonium Use Policy, 99th Cong., 1st Sess., July 24, 1985, Statement of Ambassador-At-Large Richard T. Kennedy. However, the former ground is far too subjective a benchmark upon which to rely in determining what constitutes permissible assistance or activities under the NPT—virtually anything can be justified in the name of “energy independence”—while the latter ground has been repeatedly shown to be without technical merit. See Feiveson and von Hippel, “Nuclear Energy Without Reprocessing,” Paper presented at the Soviet-U.S. Symposium. on Energy Conservation, Institute for High Temperatures,” Soviet Academy of Sciences, Moscow, June 6, 1985.

27. There is, it should be noted, some negotiating history to the effect that the NPT simply establishes a bright line between safeguarded and unsafeguarded activities and, “if the activity is safeguarded and ostensibly for peaceful purposes,” then it is “in conformity with” Articles I and II. Thus, the Dutch Representative to the General Assembly stated in May 1968:

My delegation interprets article I of the draft treaty to mean that assistance by supplying knowledge, materials and equipment cannot be denied to non-nuclear-weapon States until it is clearly established that such assistance will be used for the manufacture of nuclear weapons or other nuclear devices. In other words, in all cases where the recipient parties to the Treaty have conformed with the provisions of Article III, there should be a clear presumption that the assistance rendered will not be used for the manufacture of nuclear weapons and other explosive devices.

A/C.1/PV.1561, reprinted in ACDA, *Documents on Disarmament*, 1968, pp. 295-296. The Dutch position was endorsed by the Belgians and Luxembourgers. *Ibid.* Similarly, the Australians emphasized that "knowledge, materials and equipment [cannot] be denied . . . until it is clearly established that such activity or supply will be used for the manufacture of nuclear weapons or other nuclear explosive devices." Statement by the Australian Representative to the General Assembly, May 17, 1968, A/C.1/PV.1570, reprinted in ACDA, *Documents on Disarmament*, 1968, pp. 362-366. In fact, the U.S. Ambassador to the UN, Arthur Goldberg, stressed to the General Assembly that virtually nothing could be denied under the Treaty, unless it was clearly for weapons purposes:

The whole field of nuclear science associated with electric power production is accessible now, and will become more accessible under the Treaty, to all who seek to exploit it. This includes not only the present generation of nuclear power reactors, but also that advanced technology, which is still developing, of fast breeder power reactors which, in producing energy, also produce more fissionable material than they consume.

Statement of Arthur Goldberg to the First Committee of the General Assembly, May 15, 1968, A/C.1/PV.1568, reprinted in ACDA, *Documents on Disarmament*, 1968, pp. 336, 344.

28. Willrich, *The Treaty on Non-Proliferation of Nuclear Weapons: Nuclear Technology Confronts World Politics*. See also Shaker, *The Nuclear Non-Proliferation Treaty*. Even under this formulation, it might be noted, where there is assistance to a non-NPT party in the absence of full-scope safeguards, facility-specific safeguards alone would not be enough to establish definitively a peaceful purpose.

29. NPT, Article III, para. 1 (emphasis added).

30. 77 ENDC/PV.357, reprinted in ACDA, *Documents in Disarmament*, 1968, pp. 11, 14 (emphasis added).

31. Statement of Ambassador Goldberg to the General Assembly, April 26, 1968, A/C.1/PV.1556, reprinted in ACDA, *Doc-*

uments on Disarmament, 1968, pp. 221,226.

32. 1968 Hearings, p. 164.

33. Statement of Glenn Seaborg, Chairman, Atomic Energy Commission, in Hearings on the Treaty on the Non-Proliferation of Nuclear Weapons before the Senate Foreign Relations Committee, 91st Cong., 1st Sess. 313, 1969.

34. E.g., Statement of Glenn Seaborg in 1968 Hearings, pp. 99-100. See also Statement of Congressman Chet Holifield, in *ibid.*, p. 155, “[S]afeguards have not as yet been developed to the point that I am satisfied.”

35. There are two Senate reports on the NPT because, while the Senate Foreign Relations Committee approved the Treaty in 1968, the 90th Congress did not act upon it before its term expired. Thus, when the 91st Congress convened in 1969, it was necessary for the Committee to consider the NPT once again.

36. 1968 Senate Report, reprinted in ACDA, *Documents on Disarmament*, 1968, pp. 642, 656 (emphasis added). See also 1969 Senate Report, reprinted in ACDA, *Documents on Disarmament*, 1969, pp. 78, 95-96.

37. 115 Cong. Rec. 5739, March 10, 1969.

38. 115 Cong. Rec. 6207-6208, March 12, 1969.

39. Greenberg, pp. 11-13.

40. *Ibid.*, pp. 17, 25, 50.

41. 1968 Hearings, p. 38.

42. *Ibid.*, p. 39.

43. *Ibid.*

44. *Ibid.*

45. *Ibid.*

46. See Hearings on S.1439 before the Senate Committee on Government Operations, 94th Cong., 2d Sess. 141, 1976.

47. Such risks include not only “overt proliferation” by a nation determined to exercise a weapons option, but “latent proliferation” by a nation with no weapons intent today but which, through the accumulation of large stocks of separated plutonium, may acquire the means rapidly to manufacture weapons in the future in a time of regional or global crisis.