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AN EVALUATION OF NON-PROLIFERATION POLICIES: RETROSPECT AND PROSPECT

LAWRENCE SCHEINMAN*

Since the inception of nuclear arms, avoidance of the spread of nuclear weapons has occupied a central role in United States security and foreign policy.¹ Nuclear weapons proliferation has been viewed as simply incompatible with United States security interests and with the goal of maintaining a stable and peaceful world order. It has been regarded as a threat to alliance cohesion and credibility, as a potential source for the intensification and enlargement of local and regional conflicts and, generally, as a factor complicating the management of international politics.

Relatively few policy objectives have enjoyed the same degree of continuity and consistent bipartisan support as has non-proliferation. United States policy in this arena has evolved through several phases during the past few decades with little dissent from any segment of the policy-relevant community and with the approval of public opinion to the extent that it has focused on proliferation-related issues.² Recently, differences within the United States political community have arisen over aspects of non-proliferation policy and the tactics for achieving

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1. See, e.g., *NUCLEAR PROLIFERATION: PROSPECTS FOR CONTROL* (B. Boskey & M. Willich eds. 1970); G. QUESTER, *THE POLITICS OF NUCLEAR PROLIFERATION* (1973); Goldschmidt, *A Historical Survey of Nonproliferation Policies*, 2 *INT'L SECURITY* 69-87 (1977).

2. See, e.g., *Hearings on U.S. Nuclear Nonproliferation Policy Before the Subcomm. on Energy, Nuclear Proliferation and Governmental Processes of the Senate Comm. on Governmental Affairs, 97th Cong., 1st Sess.* (1981) (statements of James L. Buckley, U.S. Under Secretary of State for Security Assistance, Science and Technology; Gerard C. Smith, Principal, Consultants International Group and former Ambassador at Large and Special Presidential Representative for non-proliferation matters; Thomas C. Schelling, Professor of Political Economy, Harvard University; Joseph A. Yager of the Brookings Institution and Jacob S. Scherr, attorney for the Natural Resources Defense Council). See also, *Hearings Before the Subcomm. on Energy and Environment of the House Comm. on Interior and Insular Affairs, 96th Cong., 1st Sess.* (1979) (statements of Joseph M. Hendrie, Chairman, Nuclear Regulatory Commission and John M. Deutch, Acting Under Secretary of the Department of Energy).

mutually agreed upon ends. The discrepancies have given the impression of fragmentation and have led some to conclude that the general United States commitment to non-proliferation is weaker than rhetoric would suggest. While this observation reads too much into the current policy dialogue, it cannot be denied that there is a certain restiveness in non-proliferation policy today.³

Non-proliferation became an important domestic political issue for the first time in the 1976 Presidential campaign. While less evident in the 1980 race, it was an issue to which conservative think tanks such as the Heritage Foundation and the American Enterprise Institute devoted substantial attention. The former, in particular, recommended significant changes of certain features of Carter administration policy in order to reestablish United States leadership and reliability in international nuclear transactions.⁴ President Reagan's offhand campaign trail remark that "non-proliferation is none of our business"⁵—a comment that was quickly retracted—was not exactly a reaffirmation of the importance of non-proliferation in United States political history. Indeed, it encouraged expectations in some quarters, and fears in others, of substantial revisions of Carter administration policies by the incoming president.

In fact, although the Reagan administration's strategies for achieving non-proliferation goals have shifted from comprehensive and global to more selective and discriminatory approaches, they encouraged a round of congressional initiatives designed to hold the line if not tighten certain earlier constraints. In his first official non-proliferation action, President Reagan enunciated policy objectives and goals which were consistent with past United States practice and policies.⁶ At least

3. In 1980, the Carter administration decided to sell nuclear fuel to India despite the fact that India had not signed the NPT. The Administration's decision was almost blocked by a divided Senate. By a margin of only two votes, the Senate rejected a resolution that would have blocked the shipment of fuel for the Indian power station at Tarapur. The 48 to 46 vote reflected congressional uncertainty on how best to achieve non-proliferation goals. See *N.Y. Times*, Sept. 25, 1980, at A1, col. 2.

4. See Barlow, *SALT II: The Basic Arguments*, 98 *BACKGROUNDERS* (1979).

5. President Reagan made this remark in response to a question as to whether he would accept the hypothetical concept of Pakistan's development of its own nuclear weapons—a matter that had strained United States-Pakistani relations.

One hour later, President Reagan called an impromptu meeting with reporters at which he stressed his support for American efforts to stop the proliferation of nuclear weapons. *N.Y. Times*, Feb. 1, 1980, at A12, col. 1.

6. The President declared:

Our nation faces major challenges in international affairs. One of the most critical is the need to prevent the spread of nuclear explosives to additional countries . . . Our nation has been committed on a bipartisan basis to preventing the spread of nuclear explosives from the birth of the atomic age over thirty-five

at present, the arenas of liberalization, purportedly the hallmark of this administration's nuclear policy, have been formulated in a context which continues to reject the acceptability of nuclear weapons proliferation elsewhere, reassert commitment to non-proliferation as a policy objective and endorse development and projection of measures designed to universalize non-proliferation and employ sanctions against those who violate non-proliferation undertakings. Current debate on non-proliferation policy turns largely on issues of strategy and tactics for dealing with particular countries and particular fuel cycle development issues.

Strategies for achieving non-proliferation have varied. Three major phases can be identified: (1) the period of secrecy (1946-1954); (2) atoms-for-peace (1954-1974); and (3) post atoms-for-peace, the era of today.⁷ Shifts from one phase to another have been the consequence of complex considerations including the success of prevailing policies in achieving specified objectives; technological developments resulting in new economic or political opportunities; commercial considerations and changes in the general and specific environments in which nuclear technology is located. Real and perceived changes in energy supply and demand and assessments of the attractiveness of energy alternatives, including advanced nuclear technologies, are examples of what may fall within the framework of environmental change. The emergence of new states from colonialism, imbued with strong beliefs about the relationship between national control over high technologies and modernization, economic development and manifest sovereignty is another example. These considerations, individually and collectively, at times mutually reinforcing and at times contradictory, play powerful roles in shaping the dynamics of non-proliferation.

Certainly the most significant era in the development of our non-proliferation policy has been the atoms-for-peace phase.⁸ Atoms-for-peace was the cornerstone of what has become a continuing effort to

years ago. This commitment is shared by the vast majority of other countries. The urgency of this task has been heightened by the ominous events in the Middle East.

17 WEEKLY COMP. PRES. DOC. 769 (July 16, 1981).

7. See Nye, *Nonproliferation: A Long-term Strategy*, 56 FOREIGN AFF. 603 (1978), for a discussion of these phases.

8. In December 1953, President Eisenhower inaugurated the Atoms-for-Peace program which directed American nuclear export policy for the next twenty years. Atoms-for-Peace pledged United States assistance in promoting nuclear technology to all those nations which promised, in return, not to use that assistance for military purposes. The idea was to trade technological assistance in non-critical areas for the development of international norms and institutions to help maintain that distinction. THE HARVARD NUCLEAR STUDY GROUP, *LIVING WITH NUCLEAR WEAPONS* 225 (1983).

define and institutionalize an international regime of principles, rules, norms and processes to govern the development and use of nuclear technology worldwide while avoiding the erosion of national and international security that could be a consequence of nuclear proliferation.⁹

Three basic beliefs form the foundation of the international regime emanating from the atoms-for-peace era. First, the proliferation of nuclear weapons is not in anyone's interest, and rather than enhancing national security, the acquisition of nuclear weapons might well contribute to reduced security and increased instability. The importance of this belief cannot be underestimated. It not only reflects the growing conviction that national security is better served by eschewing nuclear weapons, but it is also the foundation upon which the illegitimacy of nuclear weapons acquisition is based. Second, nuclear energy has a positive and important role to play in national energy development and it can make a significant contribution to a balanced and diversified national energy security strategy. Third, despite the risks associated with nuclear technology, it is possible to identify, develop and institutionalize appropriate terms and conditions for cooperation that can facilitate widespread access to nuclear energy without substantially increasing the risk of nuclear weapons proliferation. The Non-Proliferation Treaty (NPT),¹⁰ the International Atomic Energy Agency (IAEA)¹¹ and international verification safeguards¹² reinforce this third belief.

These beliefs are widely, but not universally, shared. To the extent they are not, the international non-proliferation regime is correspondingly weakened. Similarly, any fundamental change in one of these basic beliefs by large numbers of states, or by those states most important to regime maintenance, would profoundly affect the very existence

9. By creating or accepting procedures, rules, or institutions for certain kinds of activity, governments regulate and control transnational and interstate relations. These governing relationships are referred to as international regimes. R.O. KEOHANE & J.S. NYE, *POWER AND INTERDEPENDENCE* 5 (1977); Puchala & Hopkins, *International Regimes: Lessons from Inductive Analysis*, 36 INT'L ORG. 179 (1982). The non-proliferation regime is discussed in Nye, *supra* note 7 and in Scheinman, *Towards a New Nonproliferation Regime*, 7 J. NUCLEAR MATERIALS MGMT. 25 (1978).

10. *Treaty on the Non-Proliferation of Nuclear Weapons, opened for signature July 1, 1968*, 21 U.S.T. 483, T.I.A.S. No. 6839, 729 U.N.T.S. 161. See THE HARVARD NUCLEAR STUDY GROUP, *supra* note 8, at 226-27 for a discussion of the NPT as the centerpiece of postwar non-proliferation efforts.

11. *Statute of the International Atomic Energy Agency, Oct. 26, 1956*, 8 U.S.T. 1093, T.I.A.S. No. 3873, 276 U.N.T.S. 3 (entered into force for the United States July 29, 1957).

12. For a discussion of the verification safeguards system, see WORLD NUCLEAR ENERGY 21 (I. Smart ed. 1982).

of the regime. But the absence of universality alone does not deny the existence of efficacy of the regime any more than the absence of universalism negates the prevalence and legal importance of international custom. In this regard, which states fail to endorse the regime and for what reasons are as important as the actual behavior of the holdouts.

In the interest of time and at the substantial risk of oversimplification, I would like to address briefly the general characteristics of the non-proliferation regime as it has evolved in the 1970s and to identify and comment on certain features of policy that can have important implications for the future. I can only hope not to emasculate reality in the process.

The non-proliferation regime that existed in the early 1970s can be summarized as follows: an era of international nuclear cooperation and trade had opened up with the implementation of atoms-for-peace. It entailed a network of bilateral agreements for cooperation; the establishment of an international agency to facilitate and promote the peaceful uses of nuclear energy; the establishment of a substantial number of national nuclear programs involving the training of scientists and technicians from many countries and widespread access to nuclear information in support of peaceful nuclear development; vigorous international nuclear trade in materials, equipment and facilities for nuclear power development and use and progressive commercialization of nuclear technology.¹³

Coextensive with the dissemination of nuclear information, training, technology, equipment and materials, arrangements were made which were designed to impose effective international controls to limit the risk that shared technology or material would be abused or misappropriated for military purposes. Bilateral agreements for cooperation containing verifiable pledges not to misuse nuclear assistance, combined with international undertakings in the form of the NPT, and the development and implementation of international safeguards to ensure compliance and detect misconduct, constituted the bases of the non-proliferation component of this nuclear era.¹⁴

A central characteristic of the period was the widespread consensus on the basic acceptability of a policy of controlled nuclear cooperation.¹⁵ Reliance on external sources of supply, including vital nuclear

13. See generally Nye, *supra* note 7 (description of Carter administration non-proliferation policy); Scheinman, *supra* note 9 (overview of evolving regime); Smith and Rathjens, *Reassessing Nuclear Nonproliferation Policy*, 59 FOREIGN AFF. 875 (1981).

14. See *supra* notes 10-12 and accompanying text.

15. The era of consensus is described in historical perspective in WORLD NUCLEAR ENERGY 1, 19-48 (I. Smart ed. 1982). This period of stability and cooperation (1954-74) followed the postwar period of secrecy and monopoly in Anglo-American policy. *Id.* at

fuel to run reactors, under conditions which limited and restrained certain conduct was not regarded as incompatible with the exercise of sovereignty. Indeed, a substantial number of countries appeared to regard commitments not to develop or manufacture nuclear weapons in exchange for peaceful nuclear cooperation and assistance as contributing to their own national security by reducing suspicions about their nuclear intent and thereby removing possible incentives for their neighbors to seek nuclear weapons themselves. Regarding proliferation as primarily a political act and the consequence of conscious political decision, most states were prepared to put their faith in the ability of the non-proliferation regime, as then formed, to contain proliferation.

As significant as this evolving regime was, it also was fragile. This became evident in 1974, a watershed year. The oil crisis of that year carried economic and political lessons about dependence on external sources of energy supply and stimulated even greater interest in nuclear power. By itself, this presented no particular problem. It was evident, however, that if resource-dependent countries looking to nuclear power were to avoid trading oil dependency for nuclear dependency, they would probably seek to achieve as high a state of fuel cycle independence as was consistent with their assessment of where to strike the balance between energy security goals and good economics. Inevitably this would mean further dispersion of more sensitive fuel cycle technologies, such as the separation and storage of plutonium, a material useful in nuclear weapons as well as nuclear reactors.

It was, however, the convergence of two other factors with this prospect of an increasing spread of nuclear power that engendered concern about the adequacy of the non-proliferation regime and undermined the prevailing consensus on its ability to contain proliferation. One was the detonation by India of a nuclear device developed with external assistance that had been intended for peaceful purposes;¹⁶ the other was the projected transfer of sensitive fuel cycle technology and facilities to several countries with only incipient nuclear programs,¹⁷ two of which, Taiwan and Pakistan, were located in unstable regions and either harbored or were targets of revanchist sentiments. In the

21. The era of consensus began to erode with the Indian nuclear explosion in May, 1974. *Id.* at 36.

According to the International Consultative Group on Nuclear Energy, a primary world policy objective is to re-create an international consensus with the purpose of promoting effective management, safeguards and utilization of nuclear energy. *Id.* at 6.

16. N.Y. Times, May 19, 1974, at § 1, col. 8. See *infra* note 24 and accompanying text.

17. N.Y. Times, Oct. 13, 1976, at 8, col. 2 (discussion of France's intention to sell nuclear fuel reprocessing plants to South Korea and Pakistan).

case of Pakistan, the explicit military interest in nuclear energy was subsequently revealed.¹⁸

This pattern of nuclear spread was not what was initially contemplated by the United States. It was different, it was worrisome and it was deemed to require some kind of response if further erosion of the status quo was to be avoided. Reassessment, response and new initiatives to extend and reinforce the non-proliferation regime dominated the balance of the 1970s. Rather than detail the particulars of this period, I would like to focus on four key elements upon which much of the debate regarding an optimal non-proliferation strategy has turned. The elements are denial, control, capability and motivation.¹⁹

Commentators and analysts, perhaps even some who ought to know better, tend to present these approaches to controlling proliferation as sharply separated from one another, as though they were contradictory and mutually exclusive alternatives. Not only is this view inconsistent with the history of non-proliferation policy, it is also misleading and potentially dangerous. While it is true that the period between 1945 and 1954 represented an American policy to deny access to nuclear technology for any purpose whatsoever, the policy of controlled access which lay at the base of atoms-for-peace did not reflect a complete shift away from denial in favor of control. While the United States liberalized its policy on conventional reactor technology and on offering technical assistance and assured supply of fuel, it never released enrichment technology and information and moved only circumspectly even with regard to unclassified information in the reprocessing field. Indeed, not long after the NPT came into force, the Code Of Federal Regulations²⁰ was amended to remove unclassified nuclear activities related to reprocessing, enrichment and heavy water production from general authorization to cooperate and to require specific approval which was to be given only if such assistance would be supportive of United States non-proliferation objectives. This pattern of relying on a mixture of control and denial is also reflected in the tone and orientation of the guidelines agreed upon by the principal world suppliers in the London supplier group.²¹ In their guidelines, restraint on

18. See London Fin. Times, Oct. 10, 1978.

19. For a recent discussion which deals sensibly and constructively with these concepts, see L. DUNN, *CONTROLLING THE BOMB* (1982).

The arguments presented in the following sections of this commentary are elaborated upon in Scheinman, *Strategies for Proliferation Management*, in *STRATEGIES FOR MANAGING NUCLEAR PROLIFERATION* (Brito, Intrilligator & Zwick eds. 1983).

20. 10 C.F.R. § 810.7 (1983).

21. Nuclear Suppliers Group, *Guidelines for Nuclear Transfers*, reprinted in 11 ATLANTIC COUNCIL, *NUCLEAR POWER AND NUCLEAR WEAPONS PROLIFERATION* 63 (1978). See

the spread of sensitive technologies was circumscribed to an extent and the concept of safeguards on replicated transferred technology was introduced. The guidelines can properly be viewed as the vehicle by which some of the European suppliers assimilated the denial strategy to complement their strong predilection for dependence on measures of international monitoring and control. NPT membership did not ipso facto require the transfer of technology. Whether or not to facilitate a request was to be a function of the supplier's judgment.

What is said regarding the control/denial issue also can be said of the distinction between capability to make nuclear weapons and motivation to do so. These are not mutually exclusive considerations. Former President Carter's focus on capabilities was criticized as emphasizing the wrong issue.²² Proliferation, it was argued, was a political act and it was wrong to link it to the development of the peaceful nuclear fuel cycle.²³ The five nuclear weapon states had all developed dedicated weapons programs to achieve their weapon status, and, although India had derived the material for its explosive device from assistance initially provided in the context of peaceful development,²⁴ that nation represented the exception rather than the rule.²⁵ Furthermore, India had snubbed the NPT and had taken a very strong position on the legitimacy of peaceful nuclear explosions, which is how it characterized its test. Thus, a proper non-proliferation policy, it was argued would emphasize the incentives and disincentives related to "going nuclear."²⁶

Would that the world were so elegantly simple. Carter's policy never discounted or underestimated the motivational factor in non-proliferation policy.²⁷ The decision to proliferate is, of course, eminently political, as most who emphasize attention to capability are

also J. YAGER, *INTERNATIONAL COOPERATION IN NUCLEAR ENERGY* (1981).

22. See Brenner, *Carter's Bungled Promise*, *FOREIGN POL'Y*, Fall 1979, at 94. Professor Brenner is critical of former President Carter's failure to "reconcile the Administration's declaration of war on plutonium with the affirmation that allies had a 'perfect right' to continue building reprocessing plants." *Id.* at 97.

23. See Smith & Rathjens, *supra* note 13. The authors state that "probably the only real long-term hope . . . of stemming nuclear proliferation lies in dealing effectively with the motives that lead nations to want to have nuclear weapons." *Id.* at 888.

24. India used plutonium from a Canadian-supplied civilian nuclear research reactor for its explosion. See Dunn, *Half Past India's Bang*, *FOREIGN POL'Y*, Fall 1979, at 73.

25. For this kind of argument, which seeks to separate peaceful and military fuel cycles, see Walske, *Nuclear Electric Power and the Proliferation of Nuclear Weapon States*, *INT'L SECURITY*, Winter 1977, at 94.

26. See Address by J. Malone, U.S. Nuclear Cooperation and Non-Proliferation Policy: The Implications for Nuclear Exports (Atomic Industrial Forum, Annual Conference, San Francisco, California, Dec. 1, 1978).

27. Nye, *supra* note 7, at 618.

fully aware. Some who emphasize motivation, however, tend to underestimate the difficulty of that political decision and, particularly, the effect that availability of technology, facilities and material can have on a decision to acquire nuclear weapons. The less available that material is, the more difficult the decision to appropriate it. It is not at all unreasonable to argue that decisions about purely national facilities and materials are easier to make, even where circumscribed by international safeguards, than are similar decisions that are additionally encumbered by conditions in agreements for cooperation and by other instrumentalities. Further, the existence of joint venture arrangements, for example, make decisions to appropriate or abuse more difficult still. Capabilities then, are very much related to motivations and it is implausible, even indefensible to decouple them.

Some who accept this argument nevertheless point to another aspect of Carter administration policy which they see as having introduced unnecessary complications: the feature of universalism, of having all countries, high risk and no risk, submit to the same limitations and restraints in the peaceful realm. The tarring of many with a brush directed toward few resulted from complex considerations reflected in a changing United States policy. Among others was the problem of "unanticipated consequences"; the problem of the potential appropriation of facilities and materials never originally intended to be used for anything other than peaceful purposes, which become a target of opportunity for a government confronted with radically different political and environmental conditions than were present at the outset of its nuclear journey. The impact on such a country's domestic decisions when its capabilities are high rather than low adds to the problem. Also at issue was the question of how northern tier states could successfully deflect Third World interest in high risk technologies if the advanced states themselves continued to develop them.

To meet this problem, the Carter administration sought to develop global policies which were basically nondiscriminatory and then to carve differentiating applications out of the general approach in order to accommodate legitimate interests as well as economic, energy and technological differences.²⁸ The Reagan administration appears ready to make distinctions between countries on the basis of assessing their proliferation risk. The legitimate interests of "white hat" states, in the Reagan view, should not be held hostage to misgivings regarding states whose intentions or objectives remain uncertain.²⁹ The approaches are

28. *Id.* at 612.

29. This attitude can be seen most clearly in the plutonium use policy adopted by the Administration in July 1981, which liberalizes official attitudes toward reprocessing and

different; the goal and anticipated end-point is, however, in the same ballpark.

All of this, I believe, has great relevance for the future. Even if the past demonstrates that policies and strategies cannot easily be compartmentalized, but reflect, rather, a significant degree of overlap and even interdependence, the risk remains that increased emphasis on motivation can result in capability being given lip service but not the genuinely adequate attention and support that it needs. That is to say, the rhetoric might become the reality. In light of our observation about the possibility of unanticipated or unintended consequences, we could eventually find ourselves confronted with situations in which sanctions and firebreaks (measures post facto) come to dominate the non-proliferation scene, rather than being components of a broader avoidance-oriented policy.³⁰

There is absolutely no question about the importance of significantly developing those dimensions, and far less attention has been given them than warranted. But this should not come as a consequence of relaxation and a loss of vigilance regarding the first dimension. It will be a dark day indeed when the term "managing proliferation", which is now very much in vogue, comes to mean moving about in a nuclearly armed crowd rather than and to the exclusion of how large a crowd that is in the first instance.

Our non-proliferation strategies need not be and should not be based on the principle of exclusivity. Nor do I intend to suggest that they are. Future policy requires the same mix of strategies and approaches as used in the past. The first line of defense is deterrence of the proliferation event. This means not only trying to avert nuclear explosions, but also weaponization of nuclear programs. Certainly, all of the incentives identified by non-proliferation analysts—security, prestige, maintaining options in order to exert leverage on others and so on—are relevant. But also relevant are the array of political, economic, technological and energy-related *disincentives* which the analytic and policy communities have far less carefully explored. In this regard, positive alternatives to risk-creating national developments are crucial and institutional strategies which involve reaching beyond the traditional nation-state structures assume importance.

Institutional arrangements entailing the pooling of sovereignties are often recommended but, just as often are challenged on the ground

plutonium use. See Nuclear Nonproliferation Policy Statement by the President (Reagan), 17 WEEKLY COMP. PRES. DOC. 768 (July 16, 1981).

30. See DUNN, *supra* note 19, at 95-146, for a detailed discussion of these two methods.

that they tend to be complex, uneconomic and potentially unmanageable. The critics have not adduced impressive evidence in support of their claims. There have been some reasonably successful multinational ventures in which the participants have supported international cooperation and collaboration in lieu of national alternatives. Success in winning support for such enterprises, like all proliferation-related activities, requires a collective approach and may be much more easily supported if they are presented as economic, technological and/or political opportunities, rather than as payoffs for acquiescence in second-tier status.³¹ It may well be that some important institutional approaches to mitigating proliferation risks share a common feature with Christianity: both are difficult to assess as there is no empirical basis for criticism.

31. See Scheinman, *Multinational Alternatives and Nuclear Nonproliferation*, in *NUCLEAR PROLIFERATION: BREAKING THE CHAIN* 77 (G. Quester ed. 1981).

