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WORKING DRAFT

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December 7, 1964

PROBLEMS OF NUCLEAR PROLIFERATION OUTSIDE EUROPE (PROBLEM 2)

A. THE NATURE OF THE PROBLEM

1. The Capability to Develop Nuclear Weapons.

The official estimate (NIE 4-2-64) is that at least eleven nations (India, Japan, Israel, Sweden, West Germany, Italy, Canada, Czechoslovakia, East Germany, Rumania and Yugoslavia) have or will soon have the capability of making nuclear weapons, given the requisite national decision. Within the foreseeable future (say 15-20 years), and even within the range of present technology, the number will grow substantially. The Union of South Africa, the United Arab Republic, Spain, Brazil and Mexico may be included. Why has it become so easy to build a bomb? These are the principal reasons:

(a) Uranium, the basic raw material, is available in ample supply in many countries (e.g. India, Israel, Canada) and can be obtained without safeguards (from, e.g., Argentina) when not present naturally. And "peaceful" uranium loadings may be used for weapons purposes though in violation of safeguard agreements.

(b) Peaceful reactors of the low-enrichment, power-producing class, capable of producing weapons-grade plutonium, are present in many non-nuclear countries (e.g. India, Israel, Japan) and continue to be provided by advanced nations in ever-increasing numbers.

(c) Human and technical resources are or soon will be adequate, in most of the countries mentioned; the technology of the bomb is a part of the public literature.

(d) Costs of obtaining a modest nuclear capability are no longer so high as to constitute a barrier; 1-2 bombs a year, via the plutonium route, might cost $150 million as an initial investment (reduced by the value of existing "peaceful" facilities) and $20 million per year thereafter. For India initial membership in

the nuclear club would probably cost only $30-$40 million. As peaceful programs expand and technology improves, costs will probably drop dramatically. The use of the "dirty" plutonium produced by reactors operated in a power mode would not only evade detection more handily; it would also cut weapons costs substantially. Advanced centrifuge technology, if and when (in 10 years?) it becomes generally available, may drastically cut the costs of large-scale uranium-based programs. The fissionless fusion bomb and other breakthroughs now impossible to foresee may change the rules entirely.

(e) Delivery system costs are another matter, if one has in mind the most modern and least vulnerable systems, such as mobile or sea-based missiles. But such systems are not essential except to threaten the most advanced nations. Airplanes, the delivery vehicles used at Hiroshima, are readily available and it would require only a few years for a new nuclear power to weaponize a bomb to fit. Moreover, missiles may in time become cheaper and more readily available: through the satellite programs or surface-to-air missile capabilities provided by advanced nations; through direct assistance such as France now gives Israel; through more widespread "military assistance" programs of competing major powers; or through sale on the open market.

2. Factors Influencing the Nuclear Choice.

It is clear that the capability for nuclear choice will soon exist in many countries outside Europe. Will the choice be made in favor of nuclear weapons? These are the major factors influencing the decision:

(a) Factors inhibiting a nuclear decision.

(i) Fear and abhorrence of nuclear war. There are several levels: the fear that acquisition of nuclear weapons brings war closer; the generalization of that fear to a fear of proliferation; the moral impulses generated by such fears; and, most important, the interplay and mutual reinforcement of such feelings in the World community.

(ii) Fear of responses of neighboring countries, (e.g. India and Pakistan, Israel and the UAR). So far such fears have proved weaker than the need to be the first among hostile neighbors to acquire the bomb. Israel, for example, views a UAR capability as an excuse rather than as a deterrent.

(iii) Cost. Once a substantial factor, its influence is rapidly diminishing.

(iv) Military ineffectiveness. [redacted] and the rational arguments against token forces seem to have little effect. 3.3 (6)(6)

(b) Factors favoring a nuclear decision.

(i) Considerations of military security. Probably the primary factor, and strongest in countries under an immediate military threat (India, Israel).

(ii) Prestige. A nuclear capability serves as a demonstration of great power status, as well as of technological achievement. India and Japan wish to prove they are China's equal; even Mexico is tempted to show she can explode a device.

(iii) Success for the underdog. Many non-European nations believe that nuclear weapons guarantee technological and economic progress; they may also feel that they (poor, colored, exploited) are being denied such benefits by others (rich, white, imperialist-colonialist); and they see the bomb as a way of redressing the balance.

(iv) The ambiguities of a nuclear weapons program. Though public opposition may be strong, the governmental-military elite in some countries (e.g. India, Japan) is far ahead of the public. A nuclear decision may be made and advanced under the guise of a peaceful program while public opinion is shifting.

The effect of the Chinese explosion, for the Nth nations as for the United States, is to force immediate attention to the problem

and to underscore the urgency of nuclear weapons decisions. The weeks which have followed the Chinese blast have already seen a dramatic weakening of the inhibitions and strengthening of the desires. This trend will probably continue as China tests more bombs; it will receive added impetus if China (unlike India) is treated with increased dignity as a consequence of nuclear accession; it may become irreversible if still others join the nuclear club.

If we are to stop proliferation, we urgently need a program (multilateral, bilateral or U.S.) which, in playing upon the factors affecting national nuclear choice, can halt the trend before it is too late. The time to act is probably short; the Indian decision may be made in the next several months, and India could probably explode a device within 18 months.

3. Do we Wish to Stop the Spread of Nuclear Weapons?

It has generally been assumed that we do. Recently, this assumption has come under reexamination. The arguments for permitting or encouraging nuclear spread (along with the arguments to the contrary) seem to be these:

(a) Nuclear proliferation is inevitable. We should not waste time and effort trying to stop it, but should concentrate instead on what can be done to control and influence it, and to ensure that a bearable world survives it.

Contra

Proliferation may not now be inevitable but soon will be if we do not act promptly; efforts to stop it need not be competitive with contingency plans for use in the event such efforts fail; at least we can slow things down and provide more time in which to adapt to the new environment.

(b) The chances of stopping or retarding proliferation are so low that we should not sacrifice other worthwhile projects (such as the MLF) in the attempt.

Contra

The MLF could probably be modified so that it would not stand in the way of non-proliferation agreements. Moreover,

the MLF may have been overtaken by events. If proliferation continues, and if the Indians, Japanese, Israelis and others have independent nuclear capabilities, will the Germans be content with an MLF they cannot control? In any event, the priorities should be reversed. Even a small chance of halting proliferation may be worth a dozen MLFs.

(c) The risks involved in halting proliferation are unacceptably high. We are committed to defend Europe, and properly so, but it may be unwise to undertake the new commitments elsewhere which might be necessary to reduce the urge to acquire defensive nuclear weapons.

[redacted]

3.3
(6)(5)

Contra

There is no course of action or inaction which can be undertaken without risk. We, Europe, China and India are all on the same planet, and a nuclear decision taken somewhere is necessarily felt everywhere. India cannot acquire nuclears without creating nuclear demands in Pakistan; Indian and Japanese accession will encourage Indonesian and then Australian; all of these events will have their inevitable effects in the Middle East, in Europe and elsewhere. Even if we withdraw to Continental United States the time will come when we are no longer safe, as Brazil, Mexico and others of our nearer neighbors acquire nuclear capabilities, and as those who are more remote acquire more modern delivery systems. We must act now and do what we can to shape the course of events.

B. POSSIBLE APPROACHES TO A SOLUTION

1. Multilateral Agreements.

Multilateral agreements alone cannot halt proliferation; guarantees, incentives and sanctions will also be required. Yet the two approaches are not competitive; they are complementary and mutually reinforcing. These are the multilateral agreements which have been suggested, along with their pros and cons:

(a) The non-dissemination, non-acquisition agreement.

Pros

(i) Such an agreement is the surest and most direct way of harnessing the moral enthusiasm of the World for controlling nuclear weapons.

(ii) The non-spread agreement finds its strength in the quid pro quo of foregoing nuclears on the agreement of others, including one's neighbors, to do likewise. Such mutual constraints, weak at first, might achieve increasing stability with time.

(iii) If coupled with meaningful inspection provisions relating to the peaceful facilities of non-nuclear powers, the agreement could impose physical, as well as moral, restraints on proliferation.

(iv) The agreement could conceivably serve as a framework for security guarantees for non-nuclear signers and for sanctions against those who would violate its terms.

Cons

(i) The agreement will be effective only if widely supported. China and her satellites, and perhaps France will not join; nor will the USSR so long as the MLF is pending. And joint U.S.-Soviet backing is the key to widespread support.

(ii) It will be easy to maintain the option of converting peaceful facilities to weapons production. In this sense the agreement will impose few meaningful restraints.

(iii) Inspection provisions will be resisted by the non-nuclear powers; considerable pressure will be needed to overcome such resistance and we and others may not wish to apply it.

(b) The Complete Test Ban.

Pros

(i) The complete ban would also harness enthusiasm (though less so than the atmospheric test ban); it could ease the way of an NDNA agreement; it may be made to look like a major power concession as a quid pro quo for small-power relinquishment of nuclear aspirations.

(ii) The ban would make it substantially more difficult to develop a new nuclear-strategic capability: tests below the threshold of detection would probably be difficult for emerging nations; without testing, weapons could not easily be miniaturized and matched with delivery systems; it might be difficult to develop a nuclear weapons capability in which one had confidence.

(iii) In this sense the treaty could work to the advantage of advanced powers who would find it easier to conduct non-explosive "experiments" and explosions below the threshold of detection.

Cons

(i) Inability to test could inhibit the development of ABM's and other devices which could afford a successful defense against second-class nuclear capabilities.

(ii) Increased sophistication would permit nuclear testing below the threshold of detection. If phrased in absolute terms, the ban would therefore reward dishonesty and set a bad disarmament precedent.

(iii) There are serious operational problems relating to inspections, even assuming that an appropriate number could be agreed upon. Why would

inspection be more effective than that of the ICC in Laos?

(iv) The French, and China and her satellites almost surely would not sign up. Would their continued freedom to test impose unacceptable risks?

(c) Nuclear Free Zones.

Pros

(i) Some such zones (Africa, Latin America) might serve as strong regional reinforcements of Worldwide NDNA provisions.

(ii) As a part of an overall treaty package, nuclear free zones might enhance attractiveness of NDNA agreement.

Cons

The principal objection is the threat to U.S. nuclear deployments and transit rights. In weighing such a threat, it is necessary to be precise. Meaningful distinctions may exist between various U.S. security needs:

(i) Use of the open seas, particularly for Polaris submarine deployments.

(ii) Rights of nuclear transit by way of canal, strait, or passage (e.g. Panama, Suez, Sunda, Cape Horn).

(iii) SAC overflight rights. (Are they needed in peacetime? Would we bother with them in general war?)

(iv) Nuclear overflight rights for limited wars or police actions. (Would we use nuclears in such conflicts?)

2. "Nuclear Denial" by Great Powers.

Some argue that the great rich white powers cannot ask the emerging poor colored powers to forego nuclear weapons without some correlative sacrifice in the nuclear field (perhaps accompanied by efforts to de-glamorize possession of nuclears). The advantages of such an approach, largely psychological, are matters of judgment. The disadvantages must be examined in the light of specifics. These are some of the suggestions:

(a) Separation of nuclear from non-nuclear U.S. forces; diminished visibility of the former:

The theory is that the less we see of nuclear weapons, the less attractive they will become. The particular proposal might have some slight effect upon European confidence in the U.S. nuclear umbrella with resultant increased desire for independent or European nuclear capability.

(b) Return of all nuclear weapons to Continental U.S., in exchange for an equivalent Soviet concession; switch to air-deployed MRBM's:

Again the emphasis is on diminished nuclear presence. Unless accompanied by a general European settlement, this proposal might create intense German desires for an independent nuclear capability. It might also erode confidence elsewhere in U.S. willingness to back its commitments.

(c) Formal U.S. announcement of a no first use policy:

Though this might merely confirm present de facto U.S. policy, the announcement would be a direct attack on U.K., French and FRG strategies for the defense of Europe; it would surely create strong demands for independent European capabilities. [redacted] 3.3 (b)(5)

(d) Agreement with Soviets on a freeze and modest (e.g. 30%) reduction in delivery vehicles:

This would be a substantial great power concession which might be of help in bargaining for non-spread agreements.

The military advantages and disadvantages have been thoroughly explored, and the risks are probably not serious.

(e) A unilateral U.S. "Arms Holiday," including scrapping of obsolete systems, a freeze or modest cut in delivery vehicles, and a reduction in fissile material production:

This dramatic gesture might generate considerable enthusiasm for arms control. It has the obvious uncertainties of any unilateral reduction. Risks could be diminished by making the initial reductions only in obsolete and programmed (rather than existing) systems.

(f) Negotiation with Soviets to reach minimum deterrence posture:

This one deemphasizes nuclear weapons in a major way, and is indeed a striking great power concession. (It was recently advocated by India's Homi Bhabha.) The major difficulty is such massive reductions would make it easy for medium-sized powers to have a first-rank deterrent; and they might thereby reward and encourage proliferation.

3. Restricting Assistance to Nuclear-Strategic Programs.

Here are a few hypotheses for testing:

(a) Reactors and nuclear materials.

(i) It is now too late to undo Atoms for Peace and related activities: the programs are too far advanced; international competition of suppliers is too great; and, most important, the great powers cannot deny to others the alleged benefits of nuclear progress.

(ii) This does not necessarily mean that the programs should be liberalized or expanded. It may not make sense to force underdeveloped nations into nuclear activities, even those nominally peaceful. Nuclear power plants which are less efficient than thermal power plants, subsidization of nuclear development at the expense of non-nuclear, and encouragement of Plowshare-type

activities may be unwise. We have learned by bitter experience that peaceful nuclear activities may encourage rather than inhibit desires for bombs.

(iii) Much more can and should be done by way of inspection and control. The primary obstacles are national resistance, difficulties of coordination among supplying nations, and technological and operational problems and the need for sanctions for violators. Possible approaches may be:

a. IAEA inspection and sanctions as a part of an NDNA treaty package; the U.S., Russia and other major powers might agree to controls upon their own peaceful reactors.

b. Agreement among supplying nations on more rigorous controls on reactors, raw materials and reactor output, with withheld technology as a lever for obtaining compliance.

(b) Delivery systems and major components.

(i) Ships and aircraft will be difficult to control; like reactors they have predominately peaceful uses, and their possession is ambiguous.

(ii) Missiles should be distinguishable. Though weather observation and satellite development may cause problems, there are no "peaceful" ballistic missiles. Should we not make greater efforts to prevent our allies (French, FRG) from helping others with missile development?

(c) Technological controls.

(i) We now have machinery which enables us to control end products, such as computers. The problem is that others almost as good may be available elsewhere. Yet there is something to be said for declining to participate in a wrong even though it will nevertheless be committed.

(ii) We cannot now effectively control general technology, components, and items of ambiguous utility; we do not know what elements are critical to a given country program or where else they may be obtained. Expanded intelligence efforts would help.

(iii) Better controls would not greatly affect nuclear-strategic development though they might retard it somewhat. Their primary utility may be as levers to shape programs in optimum directions. Ever here it is difficult to make them effective on a unilateral basis.

4. Prestige Without Nuclear Weapons.

How can we satisfy national desires for the power, influence and prestige which nuclear weapons are thought to bring with them? There are several proposals:

(a) Technological substitutes for nuclear weapons.

(i) Assistance with satellite and other space programs.

Such assistance has been suggested for India and Japan as a way of demonstrating national technological superiority. The catch is that we would be providing a modern delivery system to go with the bombs which can be made from the output of the peaceful reactors.

(ii) Expansion of peaceful nuclear activities as a distraction from the bomb. The specific suggestions include:

a. Assistance with plutonium fast reactor technology. (Though intended to provide a peaceful use for power reactor output, such assistance should also increase incentives for manufacture of weapons grade plutonium.)

b. Help with Plowshare-type peaceful explosions. (The problems include violation of the test ban, the inevitable help with bomb technology, and the difficulties of guaranteeing peaceful use while maintaining the appearance of local enterprise.)

c. Subsidization of peaceful power reactors. (Should we subsidize the atom? Should we not instead downgrade it, or at least make it compete with other forms of energy?)

d. Help with isotope and medical research. (This suggestion avoids direct aid of the bomb, though it does focus on the atom. Could it be expanded to include medical research on a broad scale? What of a cure for cancer? Of better birth control?)

(b) Political rewards without nuclear weapons.

The idea is to bestow great power status and influence as a reward for not developing nuclear weapons. For example, we could:

(i) Recognize that it is not the bomb which makes a great nation but the economic and technological capabilities which make a bomb possible; work for inclusion of such nations as India and Japan in disarmament discussions; consider an Indian seat on the Security Council.

(ii) Avoid rewarding nations which have obtained new nuclear weapons capabilities. (This may be a good reason for keeping China out of the UN.)

(iii) Emphasize the moral superiority of nations which elect not to make bombs.

5. Guarantees and Security Arrangements.

For those nations directly threatened by a nuclear capability (e.g. India), or in need of a deterrent against a conventional capability

(e.g. Japan) the need for nuclear weapons may become overwhelming in the absence of alternative security arrangements. In the beginning only a few nations might require such guarantees. If proliferation were to proceed, the number needed would expand. For some, such as India, with her non-alignment notions, commitments might have to be either secret or made on a multilateral basis (U.S.-Soviet? UN or NDNA treaty sponsorship?) It is difficult to predict how explicit the commitments might have to be or what deployments or other tangible evidence of will might be required to back them up. These are some of the possible arrangements:

(a) Assurances and guarantees.

(i) Generalized assurances of protection from nuclear blackmail.

President Johnson has already done this on a regional basis in his speech following the Chinese explosion; it seems to have had no real effect on the Indians or the Japanese as yet.

(ii) Increased MAP support in non-nuclear fields, coupled with expressions of support.

(iii) A commitment to retaliate against nuclear use.

This is the minimum commitment which might be effective; it is relatively easy to make now, but will become more risky as Chicom delivery capabilities increase.

(iv) Guarantees against major conventional attack.

Both India and Israel would like nuclear weapons as a deterrent against conventional attack (Japan, because of the intervening sea, may be differently situated). Arguments about the ineffectiveness of token nuclear forces may miss the point. Should Shastri be more sophisticated than de Gaulle?

Should we issue such guarantees? They too will become more dangerous with time. Should they be phrased in general or specific terms? Could we successfully combine them with related threats? Could we stop proliferation without them?

(b) U.S. (U.K., Soviet?) military deployments.

Verbal (or even treaty) assurances may not be enough; we may have to make a tangible pledge, as in Germany.

(i) Increased military presence. More carriers to the Indian Ocean; increased U.K. mobility out of Aden.

(ii) Stationing of ground forces in the threatened nations.

(iii) Bilateral nuclear sharing on two-key arrangements.

(iv) Regional security arrangements; an Asian MLF (but who would join?)

(c) Counter-proliferation; providing nuclear weapons without a commitment.

(i) "Tailored" nuclear weapons; nuclears which can be used only within-country (ABM's, demolition weapons) or within another specific country [redacted]

3.3 (b)(5)
6.2 (a)

(ii) Emergency nuclear weapons; U.S.-supplied nuclears at a central facility, to be distributed in time of need; development of and training in compatible delivery systems.

(iii) Gift or sale of nuclear weapons.

6. Sanctions.

We may need the stick as well as the carrot. There are a number of threats which might prove effective in discouraging the desire for nuclear weapons. They would be made privately and would be coupled with military assurances and economic incentives:

(a) Reduction or elimination of economic assistance. But the assistance role may be assumed by others (e.g. Russia with India); and if the threat were carried out, undesirable economic stagnation would result.

(b) Trade restrictions. These could be useful with Japan and perhaps Israel.

(c) Political sanctions.

(d) Reduction or elimination of MAP support. As with economic assistance, others could take up the burden.

(e) Withdrawal of all military commitments. India and Israel might be told that if they make the bomb they are on their own: Would they believe us? Might they simply speed up the nuclear weapons effort? Earlier hints to Israel seem to have had small effect.

(f) Providing nuclear weapons to neighboring enemy. The UAR or India could be told that the development of a nuclear capability would result in one just a bit better for Israel or Pakistan. We could make the threat in both directions. Would we be believed? Could we follow through?

Threats such as these would be more credible if our policies toward the newer nuclear powers were consistent with them; if we punished, rather than rewarded nuclear accession. Unfortunately, we have little leverage on China and would have to pay a heavy price for punishing France.

(a) [redacted] 3.3 (b)(5)

(b) Really serious technological controls on exports to France. No U-235 or modern computers; no parts for KC 135's; no peaceful nuclear cooperation. France might obtain these elsewhere but we would have made our point.

[redacted] 3.3 (b)(5)

CONCLUSIONS

If we are to stop the spread of nuclear weapons at all, we must stop it very soon before nations such as India, Israel and Japan make the decision to develop nuclear weapons.

The job will not be easy. Wishes, persuasion, incentives, even limited threats may not be enough. Hard decisions must be made and unpleasant costs may have to be borne. Even then, we may fail and proliferation will proceed.

The present costs of an effort to stop the spread of nuclear weapons must, however, be weighed against the costs of living in a world where proliferation has moved on: where all the Sukarnos and Ben Bellas have bombs; and where China, Indonesia, Egypt and Brazil each may have the direct capability of destroying tens of millions of American lives. The net prospects for U.S. security in such a world must be evaluated, taking into consideration that, on the one hand, independent centers of nuclear power might make it possible for the U. S. to avoid involvement in a major nuclear war; but that, on the other hand, the probability of nuclear war occurring somewhere would be increased and the new nuclear powers would certainly not be able to defend themselves against the USSR or probably Communist China without U.S. assistance. In addition, in this evaluation, consideration must be given to the facts that the U.S. would be faced with the threat of nuclear attack by an ever-increasing number of independent nuclear powers and that the U.S., in cutting its overseas commitments, would, in the process, reduce its influence in international affairs.