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CONSIDERATIONS INVOLVED IN A SEPARABLE FIRST STAGE
DISARMAMENT AGREEMENT

1 October 1963

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I

INTRODUCTION

The discussion within the Administration concerning a Separable 1st
Stage Disarmament Agreement (hereafter referred to as SFSDA) has been unsatisfactory because the parties to the debate have started from divergent positions.

One school has tended to look at the problem primarily from the standpoint of what appears to be negotiable with the Soviets judged primarily in the context of the Geneva negotiations or, if not negotiable, of what would have favorable propaganda implications for the United States. Another school has become convinced that none of the Separable 1st Stage proposals so far suggested are to the U.S. interest but has tried to accommodate (within the limit that no such SFSDA be actually agreed to) to the propaganda demands of our situation at Geneva. A third school has held that the USG should seek out and analyze the substantive elements of potentially desirable SFSDAs, ones the U.S. could live with, before considering the tactical and propaganda issues of negotiation (whether at Geneva or in other forums).

This paper endeavors to continue the evaluations of the latter school. It deals first with certain basic considerations, second with the four main substantive elements: strategic systems, conventional forces, tactical systems, and concurrent political developments and only indirectly with the tactics of negotiation.

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BASIC CONSIDERATIONS

The fact without which the entire disarmament effort would have collapsed long ago, is that control and reduction of armaments can benefit both sides, that it is not entirely a zero sum game. But in part it is a zero sum game; what improves the relative position of one side, harms the relative position of the other. The Soviets will certainly attempt to optimize their relative position. Not only must we attempt to optimize ours as an offset to their attempt, but also to offset a very real asymmetry in the position of the two blocs: We proclaim, and are, a defensive alliance; they proclaim and are an offensive alliance, in which the debate is only as to the level of violence to be used in pursuing the aims of the alliance. Our task in devising a SFSDA is therefore complex. It involves fully exploiting the potential of the non-zero sum aspects of arms control (those which benefit both the USSR and ourselves) while preserving or improving the relative Western position in the zero sum aspects.

Principal U.S. interests are: (1) the maintenance of our ability to contain Soviet or Chinese expansion; (2) a reduction in the risk of nuclear war, either from escalation of undeterred Soviet or Chinese expansionism under (1) above or in the form of a direct nuclear attack on the U.S. or its allies, and (3) a reduction in the destructiveness of nuclear war should it nevertheless occur, and (4) continuation of the prospect that US (nuclear and other) forces surviving a nuclear war would be able to ensure

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a settlement of hostilities favorable to the United States.

Principal Soviet interests are: (1) a reduction in the prospect that the U.S. might escalate to general nuclear war a local confrontation resulting from what the Soviet leadership would consider the inevitable expansion of the area of Communism; (2) a reduction in the prospect that U.S. military forces surviving a nuclear war would allow the US to dictate terms of settlement of hostilities and (3) a reduction in the destructiveness of nuclear war should it nevertheless occur. From the Soviet standpoint very substantial cold war gains could occur if we failed to preserve our objective (1) while they succeeded in achieving their objective (1). In such a situation they could expect a rapid dissolution of NATO and a loosening of the ties holding together the forces standing in the way of clear Communist domination of the European-Asia land mass. They could then concentrate their full effort on securing their primacy over their Chinese "partners".

III

THE FOUR SUBSTANTIVE ELEMENTS OF THE PROBLEM

A. The Strategic Nuclear Relationship

1. Present Trends

Projections through 1968 of programmed U.S. strategic forces, on the one hand, and NIE estimates of Soviet forces, on the other, indicate that without arms control the U.S. should be able to maintain a 2 to 3-fold superiority in numbers of intercontinental alert weapons, and a superiority in the average survivability factor of those forces. The megatomnage of the Soviet strategic forces may, however, come to exceed those of the U.S.

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forces and under all but the most favorable circumstances the percentage of the U.S. population expected to be casualties after a nuclear exchange might exceed that of the USSR. Under no foreseeable circumstances, however, could the USSR, even if it struck first, have high confidence in ending the initial exchanges with a superiority in surviving strategic forces.

In the absence of arms control the U.S. should therefore be able, at least through 1968, to maintain a very credible deterrent, a deterrent adequate, not only to protect the U.S. against a premeditated nuclear attack (Class I Deterrence), but also to keep low the risks of escalation the Soviets could prudently face in bringing pressure against Europe or in support of their policy in other areas vital to the West (Class II Deterrence). The sacrifice of this advantage in any SFSDA would have to be weighed against US non-zero sum and other zero-sum gains.

2. Objectives

In considering the strategic nuclear delivery vehicle part of a SFSDA the following U.S. objectives come to mind:

- a. To reduce the size, weight, and likelihood of success of a Soviet strike against the US or its allies.
- b. While doing so, insure against unacceptable risk to our security, or to that of our allies, through cheating, including withholding of undeclared weapons, clandestine production, or improvement of weapons, and abrogation with the purpose of gaining a significant time advantage in rearmament.

Discussion

If both sides reduce the size and weight of their strategic attack

capabilities, it should be possible to retain and even enhance Type I Deterrence. As the strategic forces are brought under control, major instabilities resulting from the psychology of the arms race should diminish. Decreased concern on either side about the survival of its retaliatory force should remove lingering incentives toward, or fears of, premeditated attack against one another.

The same course could seriously damage Western deterrence in Type II situations to the extent it is based on quantitative superiority. Compensations would have to be sought in arrangements either contained in the disarmament treaty or permissible under the treaty. These might involve (1) a full spectrum of deterrence below the strategic level, and/or (2) capabilities for deliberate, selective, controlled response.

None of the reductions contemplated would reduce the possible destructiveness of an all-out war, if it occurs, even close to the levels known through World War II. Since it takes relatively few missiles to target the major cities on either side, and since substantial fractions of each side's missiles are targetted on each other's strategic forces mutually agreed reductions in their number could proceed with little effect on the number of cities which might be at risk to residual forces. The casualties experienced in any actual war perhaps would be reduced somewhat because of (1) reduction in collateral damage with diminished counterforce exchange, and (2) decreased number of nuclear detonations in any one area resulting from lower damage expectancies because of smaller force levels. In other words, the number of nuclear hostages might be better controlled at roughly the level considered necessary for effective deterrence. The level of prospective own damage (in terms of percentages of population casualties or of industrial destruction) at which the USSR would certainly be deterred is an arguable figure. It is probably higher for the USSR than for the US.

3. Other Variables

Important variables in analyzing the optimum solutions to these objectives are the assumptions as to the general political context including the possible impact of arms control measures on our European allies, the provisions of other portions of the SFSDA and the degree of inspection which is considered desirable or negotiable. This paper assumes that a SFSDA will not come into being except after, or concurrently with, a comprehensive test ban agreement, a comprehensive non-diffusion agreement, some improvement in the Berlin-German Reunification situation and other points of immediate high risk. The variables in other parts of the SFSDA will be taken up as they appear pertinent. Different solutions will be proposed for a high inspection case, a medium inspection case and a low inspection case.

4. How many?

Some number of permitted U.S. strategic delivery vehicles between 100 and 1000, should assure the U.S. a high order of counter city, Class I Deterrence, provided the number permitted the Soviets were smaller or, at least, no greater.

Let us assume no controls over Anti-Ballistic Missile (ABM) Systems, no control over civil defense programs, no control over nuclear materials or warheads and a low level of permitted inspection. At the upper range of the suggested numerical limit, say 1000 weapons, it should still be possible for us to create a mix of super-hardened, dispersed, large, multiple-warhead missiles, plus Polaris submarines plus dispersed or air-borne planes with improved air-to-surface missiles which would be able adequately to survive any conceivable Soviet attack. Such a Soviet attack must be assumed to include the

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permitted Soviet vehicles, plus vehicles which could escape detection plus vehicles which could be produced and deployed during any time gap in rearmament by clandestine Soviet preparation for abrogation. US forces should be able to survive in sufficient volume to penetrate to at least 50 Soviet cities with sufficient weight to wreak very great destruction on these cities and cause casualties of at least 10% of the Soviet population.

Such a solution would not, however, make any substantial contribution to the objective stated in III A 2 a. above of significantly reducing the possible size and weight of a Soviet attack below what is now projected without a SFSDA. The USSR could theoretically opt for missiles of 100 MT or larger size up to its full permitted number if only numbers are to be limited. Within any plausible ratio of Soviet numbers to US numbers, say 50% of the US permitted figure, the weight of a Soviet attack could be virtually totally devastating. Therefore, more complex solutions must be considered.

Two measures which would greatly increase the certainty of effective
US retaliation within lower numbers would be measures prohibiting the deployment of AEM Systems or prohibiting the construction of elaborate civil defense shelters. (Of these two categories prohibition of AEM Systems would have less problems since it is psychologically more difficult for a nation to deny its citizens the basic individual security of civil defense.) Both of these measures could be reasonably well monitored through unilateral surveillance and intelligence. The cost of a strategically significant ABM system would be of the order of magnitude of at least 10 to 20 billion dollars. A significant shelter construction program would also be costly. Both would probably be necessary substantially to reduce the destruction and casualties to be expected even from two or

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three hundred multiple-warhead weapons on target. No such large scale programs could be clandestinely executed.

If one did not have to be concerned with substantial AEM and civil defense programs, it would be possible to assure unacceptable damage without hardened multiple or multi-megaton warheads. 150 one-megaton warheads (of say 500 lbs weight) on target would certainly be able to demolish the fifty leading industrial and population centers of the USSR and leave a reserve for contingencies.

Soviet cities are, of course, only one part of the target structure as presently understood. Other main components, and their implications for disarmament, are as follows:

- a. The Soviet Nuclear Threat. In present war plars, Soviet bombers and missiles and their supporting bases are the highest priority class of targets. If strategic forces are stabilized at anything approaching parity, counterforce targetting probably will be less and less remunerative. Depending on vulnerability of the opposing forces, some reduction of enemy capabilities may continue to be attractive as a first-strike objective; but the level of reduction achieved probably could not be decisive. To make strategic bases less compelling second-strike targets, missile refire or bomber recycle capabilities might be controlled.
- b. Other Military Capabilities. Certain tactical airfields and general military targets in Europe are now targetted by SAC. These could just as well be covered by European theater forces, if survivable weapons systems were provided SACEUR. A consistent set of categories would have to be constructed for the disarmament agreement in order to prevent strategic force limitations from injuring the position of NATO vis-a-vis the Warsaw Pact countries.

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The conclusion here seems to be that, provided theater forces are considered separately, one alternative would be to relate the number of strategic weapons more or less directly to the urban-industrial (second-strike retaliatory) target structure.

What number of permitted strategic delivery vehicles, then, would be necessary to assure the ability to detonate 150 warheads on target? The answer is a function of the survivability of the vehicles and their reliability. If one assumes a reliability of .66 (in other words, two out of three surviving vehicles could be expected to reach target with adequate accuracy), we would then have a requirement that 225 of our vehicles be able to survive any counterforce attack the Soviets could aspire to mount with (a) their permitted vehicles, (b) vehicles not declared, vehicles clandestinely produced, and vehicles converted from civil aircraft, etc., and (c) vehicles produced during any time gap achieved by preparation for hostile abrogation. No precise computation of the starting number of U.S. vehicles required is possible; too many variables are involved. 500 vehicles would, however, not seem to be an unreasonable figure.

If both sides were limited to permitted delivery vehicles with a lifting capacity sufficient only for one megaton warheads, a fantastic improvement in present day standards of accuracy and reliability would be needed to give the Soviets confidence in taking out one of our hardened missiles without devoting at least three to the task. (A 1 MT weapon with a CEP of $\frac{1}{4}$ NM would have 72% chance of severely damaging a 400 PSI Silo). If a method could be devised to limit guidance systems to a CEP no less than one mile at inter-continental range, they would have to devote about 30 missiles to take out one of ours. In any case, such of our missiles as were in Polaris submarines at sea would be comparatively

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invulnerable to this form of attack, as would air-to-surface missiles in air-borne alert aircraft. Moreover, in the evolution of weapons mixes under any such agreement the US might make major shifts away from hardened, fixed strategic missiles in favor of mobile land and sea based types.

The magnitude of effort required to supplement the permitted system with covert delivery means sufficient for a counter-force attack effective against the opposing strategic delivery system (considered as a whole) seems so great as to make the attempt hardly worthwhile. Even if one were to assume a clandestine force as large as the permitted force, and a force created during the time gap after hostile abrogation of equal size again, this would give the Soviets only a three fold superiority in numbers which, assuming present day reliability and accuracy factors, would not be adequate to assure a high level of destruction even of the fixed base portion of our permitted systems. Future improvements could, of course, change this estimate.

In summary, it appears that something of the order of 500 permitted vehicles would be adequate to protect against the risks of deception provided, (a) ABM systems were prohibited, (b) major civil defense shelter construction were prohibited, and (c) the lift capacity of permitted systems were limited to one megaton warheads, (d) no great improvement in accuracy to the order of $\frac{1}{4}$ NM CEP, were in prospect.

The most sensitive variable in arriving at this judgment is that CEPs of less than a 1,000 ft. at inter-continental range will not be within the state of the art until the 1970's. Thought should be given to prohibitions and controls over terminal guidance, etc., designed to make such super accuracy impossible. The increasing yield and decreasing CEP of the attacking weapon can be offset to a degree by hardening the target.

5. Larger and Smaller Yields

It is generally agreed that a very difficult thing to hide, and therefore SECRET

easy to control, is a launching facility for an inter-continental missile. It cannot, however, be demonstrated that it would be impossible, assuming the necessary effort, to conceal individual launchers. That it would be possible to hide hundreds of such launch facilities becomes less credible.

To check on the lift (payload) capacity of a system is more difficult; the necessary assurance would probably require on-site inspection of the vehicle.

To check on the accuracy of the system will be still more difficult. It would require: 1) mutual observation of strategic missile test firings of the other side to observe accuracy plus sufficient inspection of emplaced missiles to be sure they were the same design as those tested; 2) construction of strategic delivery vehicles by a third state (e.g. Sweden) for both sides; or 3) other radical inspection procedures.

There has therefore been a tendency, in considering SFSDA's to concentrate on number of launch vehicles rather than on yield or accuracy. With sufficient yield, accuracy and reliability, it is possible to approach a one-for-one kill probability against even super-hardened dispersed launch sites. With multiple, guided warheads it might at some future time be possible to reduce the exchange-ratio to less than unity, but this is not within reach of present technology. Furthermore, the destructiveness of even 50 100-megaton warheads is such as to fail to meet the objective in III A 2A, while less than a hundred permitted delivery vehicles would seem to present far too great a risk of successful elimination through counterforce or covert attack. Control over super-weapons, therefore, seems indicated. One possible alternative would be to prohibit all intercontinental land-based missile launching facilities, relying solely upon sea or airborne vehicles. But 25,000 lb. warheads can also be carried by plane and probably sub-based missiles could be devised

to launch such weights. Substantial inadequacies therefore would appear to inhere in any SFSDA which provides only for control over numbers of launch vehicles.

If controls over lift capacity and accuracy are to be included in a SFSDA, then the question becomes pertinent as to whether limitation of warhead weight and yield below one megaton might not be advisable. Against most Soviet unprotected industrial and population centers, 100 KT would be adequate for destruction; against large industrial ereas such as Moscow and Leningrad. 5 to 8 such weapons would be adequate. An adequate surviving U.S. deterrent force of 100 KT delivery systems, therefore, might be 300-350 as opposed to the 225 one-megaton vehicles suggested in the previous section. If the Soviets are similarly limited to 100 KT weapons, the number of weapons they would have to allocate to insure killing one of ours would be three times that necessary with one-megaton weapons. No significant increase above 500 in the permitted number of delivery vehicles would therefore seem required even if lift capacity is limited to 100 KT warheads (say 150 lbs.). A crucial question, however, is whether the weight carrying capacity of a given system can be accurately enough controlled to guard against substantial deviations in the yield of warhead which could be delivered. All existing ICBM systems would have to be scrapped and new ones meeting precise criteria substituted. closer both sides come to the practical limits of improvement of yield-toweight ratios, the more feasible weight limitations would be since the margin for clandestine yield/weight improvements would be narrowed.

6. Other Possible Controls

In the above light, a suggestion worth exploring is the prohibition of all inter-continental delivery systems except for submarine-based missiles.

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This could be coupled with limitations on the number, size, range and deployment of such submarines and missiles. Let us assume that each side is limited to 100 missile-carrying submarines, each submarine being limited to four launch tubes capable of lifting a 200 lbs. warhead 2,500 miles, with no weight allowance for inflight course correction equipment. Peacetime deployment of these submarines within 3,000 miles of the other's territory would be prohibited and monitored. There might also be a limitation on the number and range of attack submarines and a prohibition against deep sea mining. Under such an arrangement it is difficult to see how a counterforce attack would be conceivable. (An alternative would be to limit all intercontinental missiles to hardened land-based sites. The 1 MT yield limitation would make a counterforce attack extremely unlikely. The need for monitoring submarine deployments would be unnecessary and the expense would be less.)

The principal difficulty with such arrangements is that the principle of a mix of retaliatory systems is sacrificed. It may be that this difficulty is less than that of allowing a mix of systems, some of which, particularly bombers, seem to be inherently uncontrollable as to precise small scale lift capability.

A further possible control is over nuclear materials and warheads. As will be seen, later, some such controls may be required in the tactical nuclear field. The confidence which one can have in such controls is not, however, adequate to give much assistance in the strategic field where the number of warheads is small and the amount of fissionable material required to produce major changes in capabilities insignificant. It would be reasonable to back up controls over numbers, lift capacity, accuracy, range, etc. with production controls to guard against clandestine improvement in numbers or characteristics. The elaborateness required in controls over production would vary with the sensitivity of the arrangements to detect cheating.

7. Optimum Solutions Varying with the Degree of Inspection which can be SECRE Negotiated

a. Low Inspection

On-site inspection is probably not required to control an agreement prohibiting the deployment of ABM systems, or an elaborate shelter construction program. It also would be difficult clandestinely to deploy large numbers of intercontinental missiles with large weight lifting capacity. Clandestine production and deployment of large numbers of submarines or heavy bombers would also appear difficult.

If little on-site inspection can be negotiated, weight yield, range and accuracy limitations would be impossible. Numbers limitation, which would not be critically upset from a counterforce viewpoint by clandestine deployment of several hundred weapons, would be possible. If AEM and substantial shelter construction are prohibited, numbers approximating 500 would seem appropriate. If there is no prohibition on AEM's and shelter construction, numbers approximating 1,000 would seem appropriate. Particularly in the latter case, we would have to assume the Soviets would be striving for large yield, hardened multiple warheads, etc., etc. We would therefore have to compete strenuously in the same direction as well as deploying an AEM system and engaging in a substantial shelter construction program.

In either of these cases the Class II Deterrent effect of our strategic nuclear capability would be small and would be seen to be small by our allies. There would be no credibility in our adopting a counterforce strategy and a city-busting strategy would be clearly and totally ruinous. The same would apply equally to the Soviet Union. The correlation of forces in the conventional and tactical nuclear fields would then become even more significant to both sides.

b. Medium Inspection

If it were possible to negotiate a declaration of retained and replacement delivery vehicles, plus periodic inspection of such vehicles, plus SECRET

a reasonable program of random inspections to provide a check against clandestime production or deployment, a more useful arrangement should be possible.

In addition to prohibition of AEM systems, and shelter construction and a limitation on numbers, it would then be possible to control weight lifting capacity, range, and possible accuracy if observation of test firings or physical inspection of missiles were permitted. Whereas under a above, there could be no assurance by either side that the other would not build up to a megatonnage in excess of 10 or 20 thousand, under this alternative one could have reasonable assurance that megatonnage of permitted systems could be kept below one thousand for each side and could perhaps be reduced below one hundred.

With no control over nuclear materials, warhead production or warhead stockpiles, there would, however, always be the threat of the deployment of large weapons in ships, civil air craft, etc. While such deployment would be unlikely to have significant counter-force potentials, it would continue as an unsettling and suspicion arousing possibility.

c. Optimum solutions with high degree of inspection

If in addition to the controls suggested under <u>b</u> sbove, it were possible to negotiate controls over nuclear materials, warhead production, and warhead stockpiles, further possibilities of designing a system maximizing the non-zero sum advantages to both sides might, over time, become possible. There seems to be no scientific way in which one could have high confidence that nuclear materials or warheads had not been secreted in some remote or subtly concealed storage area, in magnitudes perhaps as great as ten or twenty per cent of existing Soviet stockpiles. Security in the United States is not such that we could have confidence in executing such an operation ourselves. It is possible,

should the Soviet leaders desire to do so, that ways could be found to give us confidence that they also were no longer in a position to do so. Transitional arrangements would undoubtedly be necessary to cover the period during which such confidence was being established. Even such transitional steps would, however, seem useful in getting on toward the objectives stated in III A 2 a.

A possible transitional step might permit stockpiles of warheads sufficient to supply the permitted systems with a reserve, plus continuously inspected additional stockpiles in some state of remoteness from delivery systems or in some stage of incomplete fabrication so that there would be a time delay in their availability sufficient to make them useless in a counterforce role, but short enough to make clandestine withholding or concealment of little value to the other side.

8. Relationship of control among strategic, conventional, and tactical systems

a. General

Control over strategic weapons increases the importance of tactical nuclear weapons to deterrence of the use of conventional forces while at the same time the problem of control in the tactical nuclear and conventional force area get more complicated.

b. Strategic and Tactical Nuclear Systems

In surveying the controls of strategic nuclear weapons, which have been discussed under the low, medium, and high inspection cases, it becomes apparent that the more stringent the limits and controls under this category of weapons, the greater would be the degree of control required over tactical nuclear forces. The reason for this correlation is that the more

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stringent the limits and controls over strategic weapons the greater would be the pay-off to a potential aggressor in "pocket battleship" developments within the tactical category. Moreover, the more stringent the limits over strategic weapons, the more destabilizing would be the disparities in tactical nuclear weapons which would be possible without controls.

c. Relationship of Conventional to Nuclear Forces

The greater the degree of control over strategic and tactical nuclear forces, the greater the importance of conventional forces and therefore the greater the need for controls over these conventional forces which would assure that negotiated balances are not violated. The history of cenventional arms races needs no recounting. The achievement of agreements for controls over nuclear weapons is most likely to be observed if both sides are able to achieve a non-zero sum agreement on their conventional forces which achieves certain political objectives for each. (This in turn implies a degree of political settlement which will be discussed later).

B. Conventional Weapons

1. Area Considerations

a. NATO-Warsaw Pact Relationship

This is the key area of the world. The vital interests of both blocs confront here. For that reason it is here that it is most difficult and most important to achieve a non-zero sum settlement. Until the political environment has changed appreciably (such as might eventuate if EEC integration continues or if the European satellites achieve significant disorientation from the USSR) the best hope for a balance of conventional forces in this area is a limited rapproachment and disengagement as part of a broader arms control package. For

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example, should the U.S. give up its preponderance of strategic weapons with its concomitant Class II deterrence, the USSR IRBM threat to Europe would have to be eliminated, and some conventional balance would have to be negotiated. This could not be assimple numerical parity. The interior, continental lines along which the USSR forces operate (as opposed to the sea lanes over which the U.S. must support Europe) are an advantage which would require compensation in a stable settlement. This might be achieved by permitting appropriately larger NATO land forces in Europe, than the Warsaw nations would be allowed to have West of the Bug River or West of a Leningrad-Smolensk-Odessa line. Alternatively, a formula might be worked out which allowed the NATO powers to continue to have larger tactical air forces while the Warsaw-NATO nations had parity of land armies within a defined area in Europe. Still another alternative, or an added element of security, might be to negate offensive opportunities for conventional forces by creating a "nuclearized" zone -- a jointly planted, jointly policed, jointly controlled ADM zone, half of which either side could set off at will. The balance to be sought is that the advantage should lie with the defending forces regardless of which side initiates the offensive. The higher the controls over the strategic and tactical nuclear forces, the more critical the European conventional balance becomes.

b. China

Here both superpowers have potential problems.

(1) The U.S. relationship

It is difficult to visualize the lineup of U.S. conventional forces which could handle the problem of China in Asia. While U.S. seapower could insure the defense of Japan, Formosa, the Philippines and other Pacific islands, and, with land forces, could make a creditable defense in

the Korean peninsula, the problem of Southeast Asia would have to be met:

- a) by depending on superior US conventional sirpower and the manpower of allies;
- b) by resort to a retained superiority in tactical nuclear weapons; c) by increasing the size of U.S. conventional forces by an amount which might be difficult to sustain, politically; d) by relinquishing Southeast Asia to the Chinese Communist (India, with US support, and given adequate Indian motivation might still be defensible); e) by insisting upon a reduction in the land and air forces of China. Of these possibilities, the retention of tactical nuclear weapons seems to be the most feasible alternative for the foreseeable future.

2) The USSR relationship

The increasing preoccupation of the Soviet leadership with the problem of China and the differential in manpower resources give evidence of a similar need for the USSR to retain tactical nuclear weapons to redress the potential imbalance in conventional forces.

3) US-USSR Non-Zero Sum

Both superpowers have a mutual interest not only in redressing potential mampower imbalances vis-a-vis China, with tactical nuclear weapons but also would gain advantage by maintaining mechanized land forces of greatly superior mobility and firepower to the Chinese. The tactical air forces of the USSR, deployed well eastward to honor a European settlement, and the Pacific sea forces of the U.S. would be indirectly supporting a common mission in many respects. More important, any detente in Europe, with force levels reduced within European geographical limits, would free land forces from both sides to be deployed against the threat of China.

Over the long haul, the military facts of life might persuade the Chinese Communists to ease their burden by joining in a second generation series

of arms control measures but this could only come if those measures negotiated in the first generation had permitted a good margin for containment of China's aspirations.

4) The Zero Sum Aspect

The great hazard of Communist China to the U.S. is the potentiality that would exist for the USSR and Chinese Communists to patch up ideological differences and jointly concert against U.S. security interests.

c. Middle East-Africa-Latin America

The conventional forces of these areas are relatively insignificant in comparison to the forces of the major powers. With the exception of the Israeli-Arab strife, the peacekeeping record of the overt forces of the nations of these areas in recent years is a reasonably enlightened one. Within this framework, a reduction in indigenous forces would be likely to retain present power balances and to free increasing proportions of limited national incomes for economic improvement. If properly monitored, such reductions should not increase political instability. Thus, arms control constraints on the conventional forces of the superpowers would have an important relationship to the power balance in these areas. Ideally the reductions to be negotiated should be calculated to make it less likely that USSR land forces could become engaged in these areas, thus producing a zero sum advantage to the U.S. in the increasing degree to which these areas would be dependent on sea lines of communication. A settlement on conventional forces which merely resulted in European deployment constraints, and which left sizeable forces in the USSR strategic reserve, would make it possible for the USSR to deploy into the Middle East or Africa unless the U.S. retained a preponderance of conventional sea forces and equality of strategic reserve land and conventional air forces.

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d. US-USSR relationships

Beyond the discussion of the US-USSR relationship in Europe, China, Middle East-Africa-Iatin America, there remains to be discussed their respective capabilities as the heartland bases of conventional weapons and forces. Given the achievement of a balanced power situation around these two nuclei, and given a European mainland in which the advantage would lie with the defense, the resulting overall advantage would lie with the US on three counts. First, the power balance would contribute, by the neutralization of military forces as a tool of aggression, to the US strategy of maintenance of a relatively stable world order in which orderly changes can occur, and would be in contraposition to that required for the Communist concept of the destruction and reordering of political patterns. Second, the U.S. for the foreseeable future would retain the greater industrial capability with which to be able to mass produce to regain a larger power plateau -- conventional or nuclear -- should that become necessary for such fundamental reasons as Communist abrogation of arms control agreements or restoration of military cooperation between the USSR and China. The third reason follows.

e. Freedom of the seas

The stability postulated in a lineup of forces along the foregoing lines, depends on the tying together of the remaining forces of the U.S. and her allies throughout the world. This binding together of conventional forces of the Free World, in contraposition to the retained forces of a potentially united continental Communism can only be affected by insuring the freedom of the seas. The present preponderance in seapower is a function of superior naval forces and possession of adequate bases within the sea community of the Free World.

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Arms Control settlements which negotiated parity of military seapower as between the continental landpower of the USSR and the sea community of the U.S. and NATO would result in a basic reduction in the relative balance of power by denying redeployment of the U.S. strategic reserve land forces and denying logistic support to any point under pressure from Communist lower order conflict. This vital need of the U.S. to retain a preponderance of surface seapower and air power may require us, in equity, to concede the right of the USSR to a net superiority of ground forces, under suitable deployment constraints. In a world in which the threat of nuclear war had been tamped down, the power advantage to the US, in such circumstances, could be considerable, depending upon the relative balance struck. The extent to which an overall preponderance in Soviet ground forces could be counter balanced by preponderance of U.S. conventional air and seapower would require careful calculation and would be difficult to define since two very different things would have to be balanced. The imbalance must be sufficient to provide security to the continents of the Western Hemisphere, Africa, and Australia, but not so great as to prevent the necessary US support of NATO land armies and occasional support of US allies in South and Southeast Asia.

2. Control Considerations

a. For Tactical Air. As mentioned earlier, the two superpowers, if they are to maintain their power positions vis-a-vis Communist China, and other nations, require superiority over these nations in conventional tactical air forces. This superiority is one of the vital factors which would make it possible for both the US and USSR to match the conventional land power of Communist China and for the US to meet commitments in several areas of the world simultaneously with small land forces. First, the same vehicles used for conventional tactical air support are susceptible of use as tactical nuclear delivery vehicles. This

problem will be discussed in another section but the need of these vehicles for conventional power prevents their elimination as the solution to the nuclear threat. This dichotomy can be lessened by deployment constraints discussed in a later section.

The tactical air force requirements for NATO in Europe are, as elsewhere, related to the Army levels negotiated. If parity of NATO-Warsaw forces in Europe, west of the Eug, or if percentage reductions of current European force balance were negotiated, NATO would still require a superiority of tactical air to counterbalance the inferiority of exterior sea lines of reinforcement over Soviet landlines of communication. The protection against rapid redeployment of USSR tactical air forces from the USSR to Europe would have to rest on US capability to redeploy rapidly from the US mainland. This in turn would require approximate parity of tactical air forces in the two heartlands. Beyond this, the US would require additional tactical air forces (perhaps naval air) to maintain a favorable balance of power against the Chinese Communist threat in the Pacific. This means that the overall balance of tactical airpower would have to rest with the West: some superiority in Europe; equality within the two mainlands (for this purpose the USSR mainland should be defined as USSR east of the line Leningrad-Smolensk-Odessa) and superiority in the Pacific. This requirement for a favorable balance of tactical air forces could be legitimized in several ways: 1) by insisting on percentage reductions in current levels of tactical air forces, including naval air, 2) by having the European powers provide a large portion of European NATO tactical air forces, while granting parity of US and Soviet tactical air forces excluding naval air; 3) by winning acceptance of the right to superior US tactical air forces as well as sea forces to compensate for superior Soviet land armies.

b. For Tactical Air Defense. The stabilizing aspects of tactical air defense forces, especially SAMs are: 1) these expensive installations are a protection to the conventional forces of each large power against the crude nuclear assault of smaller Nth powers; 2) they are stabilizing to the defense, against surprise attack by air forces of the other superpower; 3) they would, to some extent, reduce the advantage one superpower might gain by clandestine retention of tactical nuclear weapons for use in tactical air assault.

The destabilizing aspects are: 1) the superpower which builds heavy tactical air defenses is in a better position to launch its own air attack with less concern for enemy retaliation in kind; 2) any allowed superiority of tactical air is partially negated by opposing air defenses. In this case the stabilizing aspects appear to be controlling. If the US were able to negotiate an arrangement which permitted tactical air superiority, substantial air defenses would still appear to be the desired situation.

c. Manpower. Notwithstanding the fact that the US might have to be prepared to grant higher manpower levels to the USSR to achieve the necessary preponderance in other conventional areas, sticky problems of control would remain. Within any agreed force levels there would be complicated problems of definition. We would need to be sure that both sides interpreted force levels as applicable to all personnel engaged in agreed military chores. The use of civilians by one side to increase the virtual effectiveness of the uniformed personnel could not be unilateral. Similarly, there would have to be commonality of definition of reserve forces although not necessarily parity. If force levels were defined in terms of divisional strength there would have to be some agreed definition of what a division and division slice could be.

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In the manpower area these problems would require a high degree of inspection in order to achieve assurance against cheating. With lesser degrees of inspection, only very rough manpower controls would appear feasible.

- d. Mobility and Firepower. It is necessary for both the US and USSR to retain a high degree of mobility and firepower in their conventional forces if they are to retain their power superiority over other potential rivals. Yet the equipment which makes this possible represents a threat to the opposing superpower by making it possible to overcome, suddenly, deployment constraints. Furthermore, such equipment is more easily produced clandestinely or cached than is the case with strategic weapons. The control over these categories of weapons which is feasible is directly related to the amount of inspection permitted. And since it is mobility and firepower which could be most dangerous during aggression in an arms control environment, the greater the limitations at the nuclear end of the spectrum of weaponry, the greater the control we would require over weapons providing conventional mobility and firepower to insure that negotiated balances are not overcome.
- e. <u>Bases</u>. Bases have correctly been identified by the USSR as the Achilles heel of the US in arms control negotiations, because of a two-fold, distinct asymmetry in the US-USSR relationship: 1) As a continental land power the USSR does not need overseas bases to protect vital national interests with conventional power; 2) as an aggressive ideology Communism uses subversion and indirect aggression rather than the overt forces and bases required by the more defensive free world. Elimination of US bases in any overseas area tends to sever that sea lane in the military sense. Under major reductions of conventional forces or thinning out in an area, some bases might be given up or reduced in strength but this would have to be the follow

on of and not the substance of an arms control agreement. If, subject to the foregoing, the USSR insisted on a listing of the bases to be liquidated, the US should insist on a similar reckoning of bases within the satellite and Soviet areas which were being rolled up and should require inspection to make sure that such areas remained, in effect, demilitarized.

f. <u>Deployment</u>. The non-zero sum gains resulting from controls on deployment are: 1) the two blocs could reduce the extent of the confrontation in Europe, yet; 2) this could be done without decreasing and even while increasing conventional commitments elsewhere. As suggested earlier, overall US security could be enhanced if a "thin-out" of conventional forces in Europe, both NATO and Warsaw Pact forces, resulted in a better relative balance for the West in Europe, an increased strategic reserve of troops in the US, and/or some greater deployment into the Pacific. If disarmament negotiations developed in such fashion that an overall reduction in the armed forces were essential to get an otherwise intelligent agreement, deployment constraints in Europe which permitted stability at lower levels there probably would be mandatory. Whatever the approach, thinning out in Europe would surely require the US to retain superiority of tactical air forces and naval forces, together with sufficient airlift and stockpiling of additional sets of protected division equipment, to provide rapid response to a major Soviet conventional thrust in Europe.

Deployment constraints might be policed: by a border ADM field; by construction of a broad commercially useful canal along the border in the German plains; by stationing of fixed ground post observers at road and rail junctions and sea and air ports; by exchange of military missions between NATO and Warsaw headquarters units, and by reciprocal aerial surveillance.

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Other variations of deployment constraints could be considered. It might be possible some day, if the satellites continue present political trends, to negotiate demilitarization of East Germany in exchange for an Austro-Hungary type "real-union" of the two Germanies which maintained two sovereign administrative systems and which kept FRG security forces out of the East German territory. Or a denuclearized zone extending a specified distance on either side of the iron curtain might improve the stability of the conventional force lineup, provided the zone were not so wide as to prevent stationing of tactical nuclear weapons in Europe for rapid re-entry into the zone if required. A variant which would appear to have marked disadvantages would be to create a demilitarized zone-shorn of conventional as well as nuclear forces -- on both sides of the present iron curtain border. In general, for the foreseeable future, the West would have greater difficulty in sweeping back into a demilitarized zone with conventional forces than would the USSR, particularly if there is a debilitating effect on the NATO allies of a withdrawal of forces to their homelands.

g. Production Controls. The non-zero sum gains from controls on production would be: halting the expense and destabilizing effect of the conventional arms race; while preserving the supericrity of both superpowers over other possible rivals. Curtailment of expenses and stabilization of the race could be accomplished by: prohibition of production of all armaments except agreed categories (such as are in the US GCD Treaty Outline) in which inventories would have to be reduced by specified amounts; replacement of weapons on a one-for-one basis; prohibition of testing and production of new types of armaments; prohibition of equipping or construction of new production facilities or expansion of existing ones. Preserving the superiority of the big two requires:

setting inventories for these two at a level superior to any combination of rivals in which one superpower does not join; authorizing one-for-one replacement within category so that old production lines would not have to be restarted and so that each side could gradually improve the quality of its force to the maximum state of the art at the time R&D were halted.

A disadvantage to the US in any reduction of active inventories is the superiority of the reserve stocks of conventional Soviet equipment, especially tanks. To minimize this fact the US should try to negotiate a correlation between personnel and inventories on a TO&E basis.

h. <u>Budget Controls</u>. The openness of the US society and the basic elements of the capitalistic system insure that budgetary control on US defense spending would be largely effective. In the USSR, the extent of secrecy of its closed society would present very real inspection obstacles. More significantly, the artificiality of the USSR's pricing system, in which unit prices may be set much lower than actual cost and the shortage made up by overpricing in other areas, and other "Socialist" strategems could result in grossly higher production of military hardware than a true budget would permit. This control is therefore a zero sum disadvantage and should be avoided unless it can be effectively coupled with other controls which are effective.

3. Possible Solutions

a. <u>Low Inspection</u>. A low inspection case might consist of Soviet willingness to permit observers to witness bonfires of equipment, declared but uninspected inventories and perhaps an exchange of fixed ground observation points. Under such circumstances the US could place reasonable assurance, using unilateral means, on USSR compliance with controls on: inventories of tactical air forces, tactical air defense and surface naval vessels, utilization of bases. Limited

confidence could be placed on Soviet compliance with controls on deployment. Controls on total manpower, production, and budget would not be high confidence measures. This would make negotiated reductions in army strength dangerous. And in view of the need for the Free World Community to rely on superior air and sea strength, any reductions in these forces without inspected reductions in armies, could be dangerous and destabilizing.

- b. Medium Inspection. This case might include (in addition to those elements of the low inspection case) inspection: of conventional production by stationing of resident inspectors in all plants declared to be engaged in final assembly of agreed armaments; plus a limited quota of inspections at plants not so declared, to check against clandestine production; plus some areas open to inspection by roving USMIM type patrols; plus aerial inspection of all of Europe, Western USSR and Eastern US. Under such criteria, and coupled with unilateral intelligence, the US could place reasonable confidence in controls on tactical air forces, tactical air defenses, naval forces, utilization of bases, deployment, and fair confidence in inventories of conventional army weapons and equipment. This would make some reductions in army (and possible naval) strength acceptable and equivalent reductions in tactical air forces could therefore be risked.
- c. <u>High Inspection Case</u>. In this case, to the elements of the two inspection cases above, we might add: inspection of declared inventories; stationing of resident inspectors at factories producing sub-assemblies for finished agreed armaments; a large quota of random inspections at undeclared factories suspected of clandestine production; relatively unlimited areas open to roving USMIM type patrols; and unrestricted aerial inspection. Access to production and budget data might in this case be of additional assistance. Under this rigorous inspection system the US could safely afford to negotiate major reductions in and deployment constraints upon all aspects of its conventional

force, subject to the caveats discussed concerning area and exterior IOC problems.

C. Tactical Nuclear Weapons

1. Context - Discussion of these weapons has to be treated in the light of a world which, in order to control the awful aspects of its strategic weapons, must arbitrate controls over conventional forces and tactical nuclear weapons. Consideration of control over tactical nuclear weapons subsumes that there has been a comprehensive test ban treaty, a non-diffusion pact, some degree of control over strategic weapons, and sufficient political settlement between the superpowers to reduce tension at such pressure points as Laos, Berlin and Cuba.

The problem of Communist China would be a major factor in such considerations.

2. General Considerations

a. What Can Contribute to Stability?

The overriding complexity introduced into a SFSDA by the consideration of tactical nuclear weapons is that modern conventional delivery systems (tactical air, artillery, rockets, mortars etc.) are capable of being nuclearized. This fact presents the greatest difficulty in constructing suitable controls over tactical weapons systems except with relatively intense inspection procedures. It seems necessary to require some degree of control over both the range and deployment of conventional delivery systems in order to limit the range and impact area which would be affected by their surreptitious converstion to nuclear use.

An important difficulty in the discussion of tactical nuclear weapons is the sematics problem as to what is meant by a "tactical nuclear system."

As we consider stringent controls over a reduction of what are commonly accepted

as strategic weapons, those delivery systems which have commonly been considered tactical Guld increasingly become the logical instruments of clendestine strategic surprise attack. Moreover, weapons which might not be considered, even after reduction in SDVs, to be strategic, by the US, might very well be considered strategic by our European allies who would see a reduced strategic umbrella in the US mainland and who also might see large numbers of delivery vehicles in the Eastern Europe capable of reaching Western European targets. It may be necessary, in order to win allied support for arms control agreements limiting SDVs, to adopt as the definition of tactical nuclare delivery systems, those systems which are capable of attacking the urban-industrial complexes of any Nato-Warsaw nation from outside of its national boundaries.

These factors require consideration both under the strategic weapons analyses, discussed earlier, and also in this section.

Whatever the resolution of the peculiar sematics question, it seems basic to the consideration of the tactical nuclear weapons that the existence of nuclear warheads capable of being used by traditionally conventional delivery vehicles is stabilizing in two ways:

- (1) Their existence dampens the temptation to initiate a conventional attack;
- opposed to that of the non-nuclear nations. Here again, the non-zero sum factors point to a retention of some tactical nuclear warheads. But the zero sum factors point toward a controlled situation in which effort is made to limit the numbers of such warheads, and/or the numbers of conventional delivery vehicles capable of firing them, and/or surprise offensive opportunities.

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b. Rules or Assumptions of Engagement and Escalation.

The assumptions as to the use of tactical nuclear warheads would vary with the numbers retained, and the deployment limitations, range limitations, etc. of the related delivery systems. Working backwards from the assumptions we would choose in seeking an intelligent SFSDA, the optimum controls would be developed. First, for the foreseeable future, it would seem unnecessary and unwise to plan to use nuclear weapons in an arms controlled world environment against the nations of Africa, Latin American and the Middle East. Second, both superpowers would undoubtedly want a reserve of tactical nuclear weapons for possible use against Communist China. Third, it would appear to be to the advantage of both superpowers to avoid the use of tactical nuclear weapons in any confrontation between their forces around the periphery, although, again, geography may make them essential to the West for defensive purposes in certain areas. Fourth, in Europe there is a special case in which it may be to the benefit of both superpowers to retain the capability to use short range tactical nuclear weapons. The West might have to do so in order to retain a credible NATO deterrent after opposing strategic forces have been brought into a condition of controlled mutual deterrence. The extent to which this would be necessary would depend on the extent to which a relaxation of international tensions, under the political settlements that would be necessary to achieve a SFSDA, had occurred. The assumptions as to the use of tactical nuclear weapons which both sides might accept, then, would be:

- (1) Neither would use tactical nuclear weapons against inferior non-nuclear nations;
- (2) Both would be prepared to use such weapons against major non-nuclear powers i.e., Communist China;

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Both would be prepared to escalate to the use of such weapons if attacked, especially in Europe, and perhaps in other areas, depending upon the political and military situation: obtaining.

Under these assumptions, the problem of control becomes one of working out ways to minimize the opportunity for the attacker to use tactical nuclear weapons in an initial surprise attack, while preserving for the defense the capability to use tactical nuclear weapons after the attack has begun.

Control Considerations - The complexities of this problem are the ones on which meaningful disarmement negotiations are most likely to founder.

a. Delivery Vehicles

The primary problem with regard to conventional delivery problem was mentioned above - i.e., the fungibility of delivery means. Yet, the need to retain some tactical nuclear weapons capability requires that there be a meaningful approach to the control of tactical delivery vehicles. Restated, the problem is to preserve conventional delivery means for the defense, to handicap their use as nuclear delivery vehicles in the offense, yet to retain the possibility of their use for delivery of tactical nuclear weapons in the defense.

As suggested above, each super power would need enough delivery vehicles to remain superior to non-nuclear rivals and to deter super power attack. For use against Communist China's land armies and other targets, aircraft would appear to be optimum delivery vehicles. Ideally both sides would retain sufficient tactical aircraft, configured for tactical nuclear weapons (say 500), deployed against China, range-limited to prevent surprise use against the opposing super power, to suit this need. Ideally the tactical

aircraft reserved for conventional air battle in Europe would be estopped, by configuration and inspection, from using tactical nuclear weapons. In keeping with the concept that Europe should be defense-oriented, in addition to a border ADM screen, each side might be authorized sufficient (say 500) very short range (say 10 to 50 km) tactical missiles in hardened, immobile positions to be used against an attacker, but located far enough behind the border that they could not serve as offensive tactical weapons. Both sides could be allowed to determine for themselves the accuracy and yield restraints they would place on such missiles since their warheads would, of course, explode in own territory.

This concept of immobile positions for tactical missiles would be optimized by an agreement to provide controls over the deployment of artillery of ranges larger than 30 miles. Roving inspectors could be used to assure that all artillery of greater range remained deployed behind lines several hundred miles either side of the Iron Curtain. This would provide maximum utility in the use of immobile tactical nuclear missiles against invasion and, beyond that, artillery for defense in depth or for reinforcement of the invaded area.

Another real problem with regard to delivery vehicles is the possibility of use of commercial vehicles with clandestine warheads for surprise attack. The extent of this threat is a direct function of the degree of inspection allowed.

b. Warheads

If the foregoing ideal situation with regard to delivery vehicles could be negotiated, constraints on warheads would be less of a problem.

Warhead controls, as a sole constraint, are infeasible. Both superpowers have

produced so much material from which such weapons may be fabricated and have stockpiled so many tactical nuclear warheads that it would be difficult to preclude clandestine assembly and use, without controls over delivery vehicles. This fact, in addition to those cited above, argues for the retention by both sides of a reserve of tactical nuclear weapons, to denigrate the importance of clandestine stockpiling by the other side. This reserve (of say 1000 tactical weapons, in addition to the 500 warheads retained for European fixed tactical missiles) would have to be deployed away from Europe, in the vicinity of the 500 aircraft deployed by each side for possible use against China.

If the ideal situation with regard to a fixed European tactical missile were not negotiable, then some form of physical separation of tactical nuclear weapons from tactical aircraft in Europe would have to be negotiated together with controls on the numbers, range, and yield of mobile tactical missiles in that theater. This is inherently less stable than the ideal situation.

c. Fissile Materials

A significant aspect of assurance against clandestine stockpiling of tactical nuclear weapons would be the negotiation of a cutoff of production of fissionable materials. This would have other non-zero sum factors. It would serve to inhibit the opportunity of other nations to acquire nuclear weapons, if they signed the agreement before they attained a nuclear capability and provided controls over peaceful uses of nuclear materials were carefully monitored. It would also slacken the strategic weapons race. This is an easily policed control although the great quantities of fissile material already

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produced would leave important loopholes for clandestine stockpiling of warheads. One might add that in situations where AEM is legitimate, a constraint
on fissile materials (mainly plutonium) would favor the US -- large numbers of
AEM warheads consuming substantial amounts of Pu would be necessary for an
"effective" AEM deployment, and here the asymmetry in stockpiles would favor us.

4. Possible Solutions

a. Low Inspection Case

This might be the case in which the only "arms control" information on the tactical nuclear delivery vehicles of the other side would be the declaration of inventories of tactical weapons (and therefore of the tactical aircraft which could serve as potential tactical nuclear delivery vehicles). To this published accounting, there might be added the occasional information as to the movement of potential nuclear delivery vehicles, received from fixed ground post observers.

With this limited control, very little change in the status quo regarding tactical nuclear weapons would be feasible - although the degree of risk acceptable in this area would depend on the strategic force relationship and other force relationships which had been negotiated.

b. Medium Inspection Case

This might be the case in which, in addition to the elements of the low inspection case, the following controls were achieved: inventories of all tactical delivery vehicles and warheads were declared; occasional random inspection of geographical areas (Europe and portions of the US and USSR) were allowed; resident inspection were permitted at factories producing authorized

replacement tactical nuclear missiles and aircraft.

In this case, some control over numbers and deployment, but not over yield, would be feasible. The uncertainties would be such as to require substantial permitted forces. Reduction in numbers might be on a percentage basis (of tactical aircraft plus tactical missiles) the extent of which (in the range of 10% to 50%) would depend on the controls on and the relationship of retained strategic and conventional forces. Deployment constraints would have to be such that NATO's preponderance of tactical aircraft in Europe was not destroyed. Removal of or reduction of numbers of tactical nuclear missiles from Europe could be feasible.

c. High Inspection Case

In this case, to the elements of the other two cases, we might add: cutoff of production of fissionable material (which in any event would have to have been negotiated for strategic weapons to create the kind of military relationship in which major constraints on tactical nuclear weapons would be feasible); controls on numbers of warheads in production and stockpiles; inspection of declared inventories; resident inspectors at nuclear reactors; on-site inspection of suspected clandestine production facilities; "USMIM-type" roving inspection, on a frequent basis, in all of Europe, and large parts of the US and USSR; and aerial inspection.

In this case, some more significant tactical nuclear arrangement might be feasible. This could constitute the deployment and number constraints discussed in III C3. To achieve the emplaced tactical missile situation in Europe in which tactical aircraft did not remain a nuclear threat in that area, inspectors would have to have sufficient access to tactical aircraft to insure

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that tactical nuclear weapons were not loaded and sufficient geographical access to insure that nuclear bombs were not stored nearby or brought in. In the mainlands of the USSR (east of a Leningrad, Smolensk, Odessa line) and of the US, tactical airctaft would be subject to different rules. Here, storage of tactical nuclear bombs in the areas nearby to tactical air bases should be permitted but subject to the control that observers would be able to note any deployment of the bombs to the aircraft. Here again, a possible transitional step might be to permit stockpiles of warheads sufficient to supply the permitted systems with a reserve plus continually inspected additional stockpiles in some state of remoteness from delivery systems or in some state of incomplete fabrication so that there would be a time delay in their availability sufficient to make them useless for surprise attack but short enough to make clandestine withholding or concealment of little value to the other side.

D. BEARING OF CONCURRENT POLITICAL DEVELOPMENTS

1. General. Remembering that the Communist bloc is essentially an offensive alliance while the Free World is a defensive one, the USG must insist on certain political conditions in conjunction with any major arms control agreement. Moreover, the USG would have to proceed on the basis that arms control agreements must not limit US capability to rebuild to and surpass present armament levels if limited political settlements are violated. Within this general parameter, the extent to which the US might reduce its arms through negotiation would be directly related to: the development of political depolarization of the satellites; the threat and extent of the Sino-Soviet rift; development of effective domestic pressures on the Soviet

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regime for improved standard of living and freedom from fear of war; the extent to which the offensive alliance limits its aggression to the sub-limited portion of the offensive spectrum; and the degree of success which the Free World experiences in containing that degree of aggression. Arms Control agreements should not be negotiated which would permit the US to be faced by superior power of a re-allied Sino-Soviet bloc or which made possible continuing communist victory in para-military confrontation. In the present time frame, there are 3 areas of the world in which the pressures of the Communist - Free World are so critical as to require special mention in connection with arms control agreements.

2. Southeast Asia

Political developments here, especially in Laos and South Vietnam, have an important relationship to the tactical nuclear and conventional portions of the arms control spectrum. It is conceivable that the U.S. and the USSR might achieve an understanding on controls of strategic weapons without a resolution of political problems in Southeast Asia. However, it is difficult to visualize controls at less than the present levels in tactical nuclear and conventional forces if the Chinese Communists are continuing their direct and indirect para-military efforts in these regions. One exception could be that reductions in tactical nuclear and conventional forces in the European area might result in a net overall reduction for both the U.S. and the USSR rather than resulting in redeployment against the Chinese Communist.

Even the achievement of strategic weapons agreements and certainly the achievement of agreements in the other two arms control categories would require satisfaction on the part of the U.S. that the USSR was not cooperating with the Chinese Communist in the latter's para-military effort in Southeast Asia. The

minimum political requirement upon which the US should insist as a prerequisite to major arms control agreements with the USSR in my of the three categories, then, would have to be the practical assurance that the USSR had accepted the status quo in Southeast Asia.

If the day should come when the Chinese Communist were willing to curtail such para-military efforts, conventional forces and tactical nuclear forces cuts on a broader basis could be considered.

3. Cuba

Agreements with the USSR in the strategic weapons category would have to incorporate a prohibition against the deployment of such weapons by the USSR in Cuba, in order to have any possibility of domestic US acceptance. More important, the achievement of any major arms control reductions in any category of forces, would certainly require greater disengagement from Cuba by Soviet forces than has taken place to date. This is not to say that Castro would have had to be deposed or that the regime returned to the Western Hemisphere orbit but merely that USSR forces with the exception of a few scores of military advisers had been removed. On the other hand, greater likelihood of significant arms control arrangements would exist if the first major Soviet penetration of the Western Hemisphere had been repulsed by the elimination of the Castro regime and severance of the Cuban ties to the USSR. Therefore, US political efforts to bring this situation about, provided they are conducted with sophistication, are not inconsistent with the arms control negotiations.

4. Berlin and Europe

This pressure point is the most significant of all. Without the agreement between the two super powers as to the future of Berlin, and indeed, of Germany, no major political detente is foreseeable and therefore significant arms control

reductions would be unlikely. The interrelationship of political settlement and arms control agreements is more readily apparent in this area than any other. It is particularly important to continue to explore fully with our NATO allies and the USSR all combinations of political and arms control agreements which could reduce the dangers of confrontation in Europe. The achievement of a non zero sum settlement, however, in this area is more difficult to foresee than in any other aspect of US-USSR relations. This means that the breakthrough in the European area may quite likely require a longer waiting period than in any other aspect. It is the long term reorientation of political relationships -- e.g., closer integration in Western Europe and closer cooperation within the Atlantic Community; greater dis-affiliation within the Communist satellites; etc. -- which offers the best hope for a zero sum settlement which the USSR would accept. That is, it will require a certain sense of the inevitability of the development of such political trends in Europe to penetrate to the Soviet leadership before there will be a willingness to accept a European settlement also acceptable to the West. Conversely, for the US to proceed too rapidly with arms control negotiations could have a disintegrative effect within the Atlantic community and this in turn could lead the USSR to exploit arms control negotiations primarily for their disruptive effect rather than for stabilization and detente.

5. Reflections

The arms control considerations that have been summarized in this entire discussion may be considered to be "reduction -- control" at the strategic end of the forces spectrum, with primarily "deployment -- use" controls of one kind or another at the middle and lower ends of the spectrum -- all

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pending the time when political tensions have been resolved enough to make fuller disarmament possible.

But in a larger perspective the very fact of being able to negotiate and agree on the rather elaborate arrangements covered in this paper (on the strategic "reduction" level, and/or the tactical nuclear conventional force "deployment -- use" level) would imply the achievement of a stage where political problems were in fact being resolved, as registered by the arms control agreements. Whether great power rivalry is yet quite this susceptible to amelioration and sublimation -- even though the impulse for common interest (non zero sum settlements) is certainly increasing in the kind of world we live in -- remains moot.

This paper attempts to raise the issues, decision on which is necessary for the conduct of those negotiations required to determine whether that rivalry can be circumvented. Nothing in this paper should give great optimism. But the problems delineated should not be a cause for undue pessimism or abatement of our efforts. The 17 years of apparently meaningless propaganda exchanges in the arms control field finally gave birth to two arms control agreements. The fact that these agreements came about at a time when political detente suited the needs of the Soviet leadership should not obscure the fact that a great body of common language and dogma in the arms control field made it possible for relatively quick agreement when the political circumstances were appropriate. A future struggle to succeed Khrushchev could well result in the seizure of arms control issues by one of the aspiring lieutenants as a tool for the winning of possible support necessary to achieve power. Or increasing problems in the allocation of economic

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resources or with the Chinese Communist could drive the Soviet leadership toward the acceptance of such packages. The detailed, painstaking, years - long spelling out of the details of a mutually acceptable first stage agreement with the USSR, to which this document attempts to make a contribution, should continue.

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