

ON ESCALATION AND DETERRENCE

by

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Introduction:

In current discussions of deterrence and arms control it is often assumed that given the cataclysmic character of thermo-nuclear weapons both sides share a common interest in stabilizing the world. Under such circumstances of a shared desire for stability, danger of war may still exist regardless of anyone's desires due to the unstable character of extant weapons systems. In writings which present that as the view of the present world, the soft first-strike weapons are the villains of the piece for they tempt the other side to pre-emptive attack. Nuclear war is seen as essentially an undesired defensive measure on both sides, and the path to stability is seen to be the removal of those threats to the security of both nations which each might otherwise seek to answer by military action.

We do not reject these assumptions. They are partially true. But they are too simple. They treat nuclear war as a special case of conflict separate and apart from all other forms and aspects of international conflict. They treat, therefore, only one source of possible nuclear war, namely a self-conscious strategic strike either for pre-emption or to destroy the main enemy. To this main cause of nuclear war, which must be deterred, is sometimes added,

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as afterthoughts accidental war and catalytic war. Also sometimes thrown in as an afterthought is strategic warfare by escalation from limited conflict.

It is the thesis of this paper that war by escalation is, by all odds, the most important case. For exactly the reasons above specified the probability of either side deliberately launching a nuclear strike on the other any time in the next ten years seems reasonably small. Until some major changes in technology upset the present balance a kind of nuclear stalemate exists. Given present weapons and weapons plans neither side can hope to prevent unacceptable second strike damage from the other. Resort to strategic nuclear weapons is likely only under a sense of overwhelmingly critical impending danger. Such dangers may arise, but only in the context of more limited struggles. We must therefore look at these and the circumstances arising in them to reach sound conclusions about strategic deterrence too. We must look above all at the conditions under which wars escalate or do not escalate. Both sides in the world struggle have keenly felt positive aims beside security from attack. It is true that war in its more violent forms has become so destructive to both sides that avoiding it may sometimes become more important than achieving those positive aims, but as long as the risk of all out war does not seem too great, these positive aims will be fought for hard. Going to war in any given fashion - nuclear, conventional, cold - is a matter of calculation in which nuclear pre-emption and the fear of such pre-emption is but one element. How far a struggle may be escalated

before the two sides stop, is determined in ways which it is the purpose of this paper to examine.

The broad conclusion turns out to be that stability depends indeed on avoiding first-strike-only weapons, but it also depends upon maintaining strength across a balanced spectrum of weapons systems, conventional and nuclear. A nuclear deterrent strategy accompanied by conventional weakness invites escalation of limited wars.

Escalation:

Wars have never been total. In every war there has been some limit to horrors. There have been weapons unused, tactics untried. Among the restraints have been moral ones. Men have been chastened by revulsion at germ warfare, or at gas, or at extermination of prisoners and civilian populations. But moral considerations have been neither the sole nor even the major block barring wars from becoming worse and worse without limit. The most powerful barrier to escalation has been that going the next step seems likely not to pay.

There can be many reasons why one more weapon's system or one more piece of terror does not pay. If one is winning anyhow it may be unnecessary; if retaliation is possible it may be unwise; if the step is novel uncertainty may becloud its consequences. It is these limits of escalation which are the subject of the present paper.

Barriers to escalation are of interest in strategic planning because they determine what a combatant can afford to win. Any

combat plan which may be proposed must be judged by him not only for what its profit would be in the conflict for which it is intended, but also by the consequences which would ensue if the enemy, pressed by the success of the plan, were to raise the level of conflict one notch higher. Simple examples are numerous. Unlimited submarine warfare in World War I could have severely hurt England if America had stayed out of the war, but just because the submarine campaign was effective we did enter. Submarine warfare thus in the end was counter-productive for Germany. Hot pursuit of the North Koreans toward the Yalu might have successfully destroyed North Korean power had the Chinese kept hands off, but the very fact of Western potential triumph across the Yalu motivated the Chinese to come in. Destruction of Red airfields in Manchuria might have turned the tide of war in Western favor if the Russians could have been counted on not to retaliate; but the very advantage we would have gained is why they would have retaliated and so why we could not bomb the Red sanctuary. We were restrained because we believed that the Russians rather than accepting defeat of their allies, would escalate the war.

In journalistic writings this mutual restraint is often reduced to psychological terms. We act with restraint to avoid "provoking" them or making them angry. Let us emphasize that our fear of the Soviet reaction had we violated the sanctuary across the Yalu was not that. It was not the fear of an irrational Soviet reflex of tit for tat, nor a fear of setting a legal precedent which could turn against us, nor fear of an emotional reaction of anger

to the symbol of a frontier violation. The Soviet reaction which we feared would have been a soberly rational military one. They would have been pressed to take such actions as bombing our Japanese bases because our bombing of Chinese airfields and supply lines would have been an effective military measure. If not countered, it could have given us victory. If the American potential actions in question - the violation of the sanctuary - were just acts of pique without military consequence, then the Russians might have met them by protesting propaganda and symbolic gestures only. But precisely because violating the sanctuary promised us real advantages, it had to be forsworn, for the enemy had the potential and the will not to accept defeat in the limited arena of Korea. The enemy could expand the war to a broader one if need be. The reaction we feared was one of military calculation, not one of irrational tension.

In treatises on military theory the concepts we have been presenting appear in a quite different form. They appear in discussions of committed forces and reserves. To win tactical successes with committed forces may not be the road to victory. Ultimate triumph is apt to go to the side which has reserves at the end which it could, if need be, throw into battle. Having the potential to escalate a war is, in a sense, having a reserve.

In this epoch of mass destruction weapons, uncommitted weapons systems more powerful than those yet used are a kind of reserve to which classical military reasoning may be applied. The weapons in reserve rather than the battles with tactically committed weapons

may be what determines the outcome. Whole weapons systems as reserves do not appear in classical military theory for classical theory dealt with a situation in which each weapon was carried by a man. Commitment of weapons meant commitment of men. Since weapons were so close to a linear function of manpower, analysts could talk about the reserves as men. Classical theory dealt with a technology which was niggardly of weapons of destruction. There existed few options in ways of killing people; science has now provided many. Men in the past went into battle with whatever effective weapons they could. But with modern technology the choice of which to use among the many effective weapons systems has become an all important strategic decision.

There are also decisions about the arena of warfare. The Russians have overwhelming superiority around Berlin, but if we chose to respond to an attempted seizure of Berlin by conflict throughout Eastern Europe their advantage would be less great. The Chinese could probably seize Quemoy and Matsu, but they are deterred because our response would presumably not be that of a localized defense of the islands. We could extend the war to a larger theatre where we have advantages. Once again, the outcome in a small conflict depends upon what would happen in a larger war into which one side could transform it at will.

Those transformations are each a form of escalation. Escalation comes in many dimensions and infinite forms. There is no single set of steps on the path of escalation. Wars can be extended in space or time. Dollars, equipment, and manpower can be increased

by infinite gradations. Weapons can be made more horrible in many ways. But for purposes of exposition in the present paper, we shall consider a few rather arbitrary gradations of violence. The first or mildest level is diplomatic struggle or cold war. A grade higher is limited conventional war; then limited nuclear war; and finally all-out central warfare. We may in our first cut at the problem disregard the infinite combinations or forms of struggle in the interstices of these types.

With these comments as background we turn to consider kinds of escalation.

First Order Escalation:

The Theory:-- Wars have a tendency to escalate up to that level of intensity at which the losing side would find itself still worse off if it intensified the struggle one step further. Efforts by the momentary loser to redress the balance by drastic action are the primary source of escalation. Its limit is reached when he no longer has the capability or will thus to improve his position. As in chess at the end of the game, a war is won when nothing that the loser is capable of doing by way of added attack to violence will make his situation better but only worse.

Wars may also under some circumstances be escalated by the winning side. A circumstance where the winner will change the game is one where he can win even more cheaply and completely by applying more violence. That is most apt to be true when the loser is so weak that the latter can inflict no added penalties on

the winner to make him pay for escalating the war. Under those circumstances added troops, weapons, or tactics may serve to bring the struggle to a final conclusion.

We illustrate circumstances where the winner has escalated war:

1) The United States, when it had almost won World War II introduced the atomic bomb for the sake of ending the war without a costly landing on the beaches. The loser, Japan, was no longer capable of effective retaliation to deter the U.S. from such escalation.

2) The Nazis in part adjusted the level of their brutality to the retaliatory capabilities of their enemies. Western Allied forces were treated in general according to the laws of war. The Jews were burned in furnaces in what was as close to a total war of unlimited extermination as mankind has ever known. There was no retaliation of which the Jews were capable. War under such imbalance of forces is sheer sadism. Except where a pathological ideology such as that of the Nazis makes men inflict death and destruction for their own sake, a complete imbalance of forces such as that between Nazis and Jews normally leads to the end of violence by surrender, a privilege denied to the Jews.

Surrender is seldom unconditional. Paul Kecskemeti in his remarkable study of Strategic Surrender,¹ has illustrated how under

¹Paul Kecskemeti, Strategic Surrender, Stanford: Stanford University Press, 1958.

almost all circumstances at the end of a struggle the loser retains enough power to punish the winner, even if only in a dying gesture of defiance, and thus to make it worthwhile for the winner to grant some marginal favors to the loser. The loser trades his residual power for better terms of surrender. The loser's residual power may include a capability for escalating the war or a capability to penalize and thus limit escalation by the winner.

How do these observations bear on the conditions of escalation? They require us to slightly modify and generalize our first statement about when escalation occurs. Our first formulation was that wars are escalated by the side which is losing, and are escalated up to the point where that side would be still worse off in an intensified struggle. But then we noted that escalation may sometimes be undertaken by the winner. The more general statement would be: A war is escalated by the side which finds itself disadvantaged by the current limitations on modes of struggle. And as long as one side feels thus disadvantaged, it will escalate or threaten to escalate the conflict unless there is no way for it to do so without suffering even worse consequences than the current disadvantage. To be losing is the most common and obvious kind of disadvantage. But the winning side may also feel at a disadvantage as the United States did when faced with the prospect of landing troops on heavily defended beaches. The "disadvantaged" side will look for a way to change the terms of combat. If the disadvantaged side has in reserve a way to overcome its handicaps by escalating the struggle it may do so. Or it may be able to compel the advantaged

side to foreswear using its advantage by merely threatening to escalate the war (assuming its power to carry out the threat is credible.) The advantaged side may feel obliged to foreswear winning what it is capable of winning if the price is the escalation of the war.

That is our point in its most general form. From here on, whether we use the jargon of "advantage" and "disadvantage" or the clearer, though more narrowly applicable language of "win" and "lose", the carefully defined phenomenon is what we are referring to.

When the side which feels itself hampered by the prevailing level of force commitments, chooses to improve its situation by escalating the struggle, it is clearly (in the absence of mistakes) taking an action to the disadvantage of the other side. Both sides do not gain by escalation for the increased destructiveness of the struggle can, at best, benefit one side only. It may, indeed, benefit neither side. It follows that if the disadvantaged side refrains from escalation because it would find itself still worse off under more violent modes of struggle, then this choice may be to the advantage of the winning side too. War is not a zero-sum game. It can be to the advantage of both sides to avoid more violence. That is why arms controls can sometimes be agreed to. That is why the players can reach tacitly agreed to limitations which both sides respect.

The choice whether a limitation shall be kept lies, however, essentially with the potential loser under the status quo, for it is he who sees a conflict between advantages of a new mode of struggle and disadvantages of added loss and destruction. The side that is benefiting anyhow has no reason to change the rules of the game; but it must suffer with the decision to change the rules made by the side it is beating unless it can offer generous incentives to the loser to accept the status quo. In summary, a limited war (and we have said earlier that in some sense all wars have been limited) is stable at its particular level of violence when either one of two conditions prevails. Either a more violent mode of struggle is more painful to both sides or it is more painful for one side, and that one is the side suffering most from the present situation.

Some Applications:-- Let us apply some of these considerations to the current balance of power between the United States and the Soviet Union. Under present circumstances a condition of stable deterrence probably exists which would prevent either power from escalating any war, even a limited nuclear war, into an all-out nuclear war. That statement is, of course, controversial. The Russians among others deny it. And since the reader may question it too, perhaps we need carefully to underline what we are asserting and what not. We are not asserting that all-out nuclear warfare is impossible or inconceivable. In the next section of this paper we will discuss how such a holocaust which no-one wants might occur

by miscalculation or out of a sense of necessity, though both sides wished to avoid it. We are also not asserting that the low-probability eventuality, nuclear central war, is less important than the high-probability eventuality, no such war. It is like the case of the prisoner sentenced to die some time in the next week, but not told which day. The one-seventh chance that he may die to-day will certainly dominate what he does -writing his will, saying his prayers, etc. It still remains true that the strongly probable --6 to 1-- outcome is that he will survive to-day. We are in something like that situation concerning nuclear war. And it is its probabilities only, not its importance, that we are here discussing. We are asserting that even if a limited war with nuclear weapons were to take place in Asia, or Western Europe, or Eastern Europe, that both Russia and the United States would probably find it to their interest to avoid, if possible, salvos of thermo-nuclear weapons against each other's homelands.

In thus asserting that strategic nuclear strikes will probably be avoided even with to-day's largely soft and vulnerable weapons, we are certainly not minimizing the urgency of achieving greater mobility and hardness to assure a slow reacting second strike capability and thus to make the deterrence of nuclear salvos even more probable. Any rational national leader would probably be deterred from launching a nuclear strike even today by the prospective residual capability which the other side would retain after his attack. But moderate probabilities in such matters are not good

enough. Efforts toward increasing the effectiveness of our deterrent capability by adding to its mobility and survivability may serve to discourage erroneous gambles by an enemy in desperate circumstances. They also add to our security against possible Soviet offensive scientific break-throughs. They also are desirable insurance against the chance that our own analysis is too optimistic. Thus the case for measures like the Polaris increase in the Kennedy 1961 budget revision is overwhelming.

The reason for not expecting escalation of limited wars to total ones is that it would probably be to the disadvantage of both sides to raise the violence of even a limited nuclear war to that of an all-out central war. The losing side in a Soviet-American limited nuclear war, fought outside American or Soviet territory would probably in the last analysis feel that it stood to lose less by losing the war than by bringing thermonuclear bombs upon itself. European doubts that America would invite nuclear destruction on herself in order to prevent invasion in Western Europe are not ridiculous; it is not clear what American behavior would be, and it might well depend upon circumstances. In parallel ways the Russian reaction to loss of Eastern Europe is unpredictable. They might not resort to a nuclear attack upon the U.S. even if our troops should somehow occupy Warsaw or Budapest. Though neither side can count on such self-restraint by the other and must recognize that major provocations might lead to massive nuclear retaliations, a great probability exists that either side would cut its losses and swallow its pride.

If our argument thus far is correct, then the worst war that is likely under present circumstances would be a limited nuclear war. But is there even a high probability of that? What if a conventional limited war were raging; would that war be likely to escalate into a limited nuclear war?

We cannot give a confident answer. One might argue that a limited nuclear war, too, is so much worse even than losing a conventional war that it is in neither side's interest to escalate up to it. But it is not fully clear that that is the case; and it is an issue we will not try to settle here. Suffice it that a plausible suspicion exists that escalation might occur. Suppose one side were far superior to the other in the tactical nuclear weapons available to it. Let us assume for example that under a test ban, side "A" and side "A" only, had successfully cheated; had built highly effective small, light, and mobile nuclear weapons in large numbers; equipped their troops with them and had confidence, as the result of testing, that these weapons would work. Let us assume further that that side was losing a conventional war. It could do one of three things. It could initiate use of its tactical nuclear weapons in large numbers, compelling the formerly winning side "B" to recognize that its advantage was gone and that it should end the war on terms relatively favorable to "A", though "B" might prevent too unfavorable a set of terms by threatening mischief with its own inferior but still destructive tactical nuclear weapons. Secondly, side "A" might launch a few sample tactical nuclear weapons and

compel results much like those in the first instance, though more by a process of bargaining and less by destruction. Finally, "A" might not use its tactical nuclear weapons at all but simply demonstrate that it had them, and thereby compel side "B" to settle on terms quite favorable to "A", the conventional loser.

All three of these alternatives, though the last in purest form, illustrate that the side on the weak end of a nuclear imbalance could not decisively win a conventional war fought under the shadow of potential nuclearization, regardless of its conventional strength. The importance of one side gaining a decided advantage in tactical nuclear weapons is not only its impact if tactical nuclear warfare actually occurs but also the impact of the shadow of nuclearization on the kind of warfare one step down the ladder of intensity, i.e. on conventional war.¹

This conclusion has implications for current discussions of the nuclear test ban. Tests of very small weapons intended for use in limited warfare can easily be conducted surreptitiously. Since predominance in such weapons turns out by our analysis to be of much value even in the normal course of non-nuclear controversy in a divided world, undetectable cheating against a test-ban would pay.

¹Some readers may argue that our analysis is unrealistic, that if, for example the Russians by cheating on a test ban gained a decisive tactical nuclear weapon advantage over us, but we were beating them in a conventional war, they would not be able to use their tactical nuclear weapons because we in turn would then escalate to war to strategic nuclear warfare. This is possible, but far from invalidating the analysis, only shows that escalation goes through the stages we have outlined until whatever point is reached where it is not to the loser's advantage to raise the level of the war one step more in intensity. It thus remains important to have decisive strength at a level of violence higher than that of the actual conflict.

Small tests must therefore be prevented by inspection. It has been estimated that surreptitious cheating with small explosions only, might improve the tactical nuclear weapon capability by the cheating side by a factor of two to five.¹ That is not predominance enough to justify that side in launching limited nuclear war; the power of the nuclear weapons on the less efficient side would still be enough to make such warfare generally a fool's game. But a potential margin of this size would be significantly adverse to the non-cheating side, not in tactical nuclear warfare itself, but in what the honest side could dare to win in conventional warfare, faced by such a tactical nuclear threat from its enemy.

The same analysis can be carried one step further. For the United States to have a marked advantage over the Soviet Union in conventional weapons is important not so much for the case of limited war as for its influence upon diplomatic negotiations, or as they are popularly called, the cold war. The dire danger of escalation created by any war between the Soviets and the United States is such that any war, even a limited one, involving direct confrontation of their forces is extremely unlikely. Note that all wars which have occurred since World War II have been limited not only in the weapons used but in the forces committed; they have not involved forces of both great powers simultaneously. The Russians have kept the Red Army from coming to gun point with American or even Western troops. Our forces and Soviet forces

¹See Donald G. Brennan and Morton H. Halperin, Considerations of a Weapon Test Ban in Arms Control and National Security, New York: Harcourt Brace, 1961.

have been the backdrop against which a diplomatic struggle has been conducted.

It could be argued from that fact that the United States does not need superiority over the Russians in conventional forces but needs only such conventional forces as can handle brushfire and Korea-type operations. Our strategic forces in the background would continue to make it unwise for the Russians to use their strong conventional forces directly against ours. The argument is that even though our conventional forces are weaker than the Russians', the Russians are unlikely to throw their superior forces into a situation where they would crush our troops for that would invite escalation. This argument concerning conventional troops is the exact analogue of the strategic deterrence argument. It says that one does not need to have forces enough to win provided one can punish aggression beyond what is acceptable. To a limited degree the argument is valid.

It is valid, however, only so long as we confine our attention to the conventional war situation viewed in isolation. It breaks down as soon as one considers the consequence of such conventional weakness on the cold war. We can inflict peaceful political defeat upon the Soviet bloc through the processes of diplomacy only to the extent that our conventional forces are adequate to deter the Soviets from taking military action to redress defeats which politics may inflict upon them. If the free world had had available an effective military answer to localized Soviet troop movements, the Hungarian revolution might well have succeeded rather than failed, for the

Russians would then have hesitated to escalate the civil conflict by an open military invasion. So too, were our military capabilities concerning Berlin sufficient to make a showing there, our diplomatic prospects would obviously be vastly improved.

Laos is perhaps a star case in point. Success in the political arena has reflected almost mathematically the balance of consequences that could be anticipated if the war were escalated. Each side has reserves it could use, but not without suffering unwanted consequences. Despite unfavorable terrain and logistics, the United States could provide such military forces as would turn the tide against the rebels, but only if the war remained a Laotian one. That would not happen. American intervention would presumably lead to Chinese intervention with military and political consequences even worse than now. On the other hand such events are also feared by the Laotians, North Vietnamese, and Russians. Ho Chi Min is undoubtedly terrified of Chinese troops establishing themselves in his land en route to Laos. Khrushchev has good reason to share that fear, but to a lesser degree. He would hardly enjoy an expansion of Chinese power even if in this situation it would not be at great cost to him. Thus a certain restraint has been shown by Viet Minh and by the Russians. The Americans pose a very real threat to them when they suggest that they might escalate the war even though the communist side has a strong military answer. The American threat is a threat, however, whose credibility is limited by our prospect of losses if we carried through. Thus each side would be worse off if the war expanded though in the last analysis the

Western position is weaker than Russia's (probably not than Viet Minh's.) It is weaker not as forces stand now, but as they would stand at the end of a general escalation of the war. The consequence is a settlement wanted by both sides in preference to expanded warfare, but one in which the communists have the edge.

The point we have been making is a simple one but one more often neglected than noted in practice.¹ The point is that the less violent forms of struggle are much more frequent than the more violent forms and so the most common advantage gained by having strength at each level of violence is not the advantage of use but the edge gained in the more usual though less intense forms of struggle that occur in its shadow.

Second Order Escalation:

For purposes of clarity we greatly oversimplified the above presentation. As one simplification we assumed that the facts which each side perceived were the real facts. Clearly this is often not the case. One combatant or both may see the facts in

¹Planners usually neglect the danger of escalation because they are usually given an isolated problem to solve, as the be-all and end-all of their activity. They are supposed to figure out how to win a particular war. They come up with solutions, but ones often accompanied by a caveat that if the whole character of the war changes, then, of course, all bets are off. Consideration of such major eventualities are asserted to be someone else's business not that of the specialized planner. It may be possible for him to figure out how to win a limited war on the assumption that no nuclear weapons are introduced or equally to figure out how to win a limited nuclear war on that assumption that massive retaliation is kept out of the picture. But to make plans without reference to the control of such escalation is clearly but a pedantic exercise.

error, and it is the facts as perceived, not the real facts, which count in the short run. (In the long run the test of experience may make perceptions approach to reality.) Everything we have so far said about escalation should for accuracy be restated in subjective terms. It is the side that believes it is losing not the side which is losing which may escalate a war. It may fail to do so not if the results will be even worse for it, but if it believes the results will be even worse for it. Both sides may think themselves to be the weaker and thus think escalation to their advantage, in which case both may simultaneously raise the tempo of the war. Or, as in the present world situation, both sides may feel that history is on their side and that they are winning the struggle. This is a stabilizing set of beliefs which at least on one side is presumably erroneous.

It goes without saying that the probability of erroneous or divergent perceptions of the situation are greater the finer the calculations of advantage on the two sides. There may be situations where the facts are so unambiguous and the advantages so clear that both sides will perceive them in the same way and will assume that the other side also so perceives them. But as the advantages become less clear, calculations enter an area of indeterminacy. In this area there may be divergent perceptions or there may be a commonly shared perception that neither side knows for sure to be true. And finally each side, though it believes it knows the facts, wonders whether the other side perchance sees the facts differently and intends to act accordingly. This leads us to a new and further

set of conditions which may lead to escalation.

Third Order Escalation:

At the most sophisticated level of analysis we must say that it is not even the perceived facts themselves which may lead to escalation but rather certain perceptions of the possibilities of perceptions and misperceptions by others. In these perceptions timing also is a factor. If for example, both sides recognize that the disadvantaged side is about to escalate a struggle in order to regain the advantage, then the side that was winning before (and for that reason does not itself wish any escalation) may choose to jump the gun and take the first step of an escalation which it believes that its adversary's interests makes inevitable in any case. Third order escalation, in short, is not an intensification of the struggle because one sees escalation as in one's own advantage but because one sees a necessity to gain the first draw over the side in whose advantage it is. It is an attempt to preempt a blow likely to come from the side which is presumed to see an advantage in escalation.

These more intricate considerations add greatly to the dangers of escalation, for if a weapon system gives considerable advantage to the first blow, then not only must each side, "A", be alert to a situation in which the other side, "B", may see an advantage to itself in escalation, but each, "A", must also be alert and ready to strike first in a situation in which the other, "B", may rightly

or wrongly see an advantage to the other, "A", in escalation which it, "B", would therefore try to pre-empt. There is an infinite regress in such calculations. The important point is that in a weapon situation in which pre-emption gives advantages, one must anticipate every possible calculation or miscalculation by the other side which might lead them to pre-empt, assuming all the while that they are doing the same. And having made the calculations, one must act first. It is to reduce the danger of third order escalation that hardened and mobile slow-reacting weapons systems are to be preferred over soft fixed ones.

Some Implications:

Our analysis of escalation leads to a number of conclusions about current American defense policy some of which have already been foreshadowed.

It suggests, for example, that we can risk an uninspected test ban only if no vital national interest of the Soviet Union is likely to be affected by the outcome of limited conventional warfare, actual or potential. Suppose that by clandestine testing the Soviet Union acquired a substantial advantage in tactical nuclear weapons. She would then have a strong incentive to escalate any sort of non-nuclear struggle that was going very badly for her up to that level at which her advantage could be used. Anticipating such an eventuality would make her prone to engage in tests. If the Soviets believe their vital interests are likely to be at stake in any future conventional limited war

situation then their temptation to engage in tactical nuclear weapon tests would be enormous for they will realize that conventional wars are fought under the shadow of potential escalation to nuclear ones. The argument is the same by a two-step process for the effects of clandestine testing on merely potential conventional warfare, i.e., cold war. The threat of using tactical nuclear weapons would have disastrous weight in a diplomatic situation. Thus our analysis lends weight to what has been the American position on the importance of inspection, a position which some Americans are now beginning to question.

Our analysis also suggests that building up of our conventional forces may be a helpful step toward both stabilization and nuclear disarmament. Grave dangers are created by current American weakness in conventional weapons. We have been building substantial nuclear striking power while letting our conventional forces lag. This combination of strategic strength and tactical weakness not only creates a situation in which we might find ourselves losing a conventional war and tempted to escalate it. (1st order escalation.) It also creates a situation in which our enemies might recognize the temptation we were under. They might anticipate that we could not respond to their provocations in any conventional way. They might therefore justifiably fear that we might resort to nuclear retaliation. This creates an incentive for them to pre-empt our nuclear capability. (3rd order escalation.)

In contrast to such a situation it would be highly stabilizing for the Soviets to feel that we have strong forces of a conventional kind and that we have confidence in their value and capabilities. If we had such forces we would encourage a Soviet expectation that we would respond to future crises by conventional rather than by nuclear means. By creating such an expectation we would place less pressure on the Soviets to themselves engage in nuclear pre-emption.

The lesson is that it is not by any means always stabilizing for one's enemies to be too weak. It is so, of course, if they are weak across the board, but nothing can be more terrifying than an enemy which is weak unless he chooses to go the whole way into apocalyptic forms of struggle. As long as the Soviets have a substantial long range missile striking force and substantial nuclear tactical forces, it is not to our advantage to see them too decisively reduced in the diplomatic struggle for position in the world. We should seek to have them retain the hope, though not the reality, of gain through the normal processes of the cold war or of bargaining.

The Soviets are in a similar position regarding us. At the present time, and it was even more so before the Soviets gained a nuclear capability, it would not be in the Soviet interest to press us to despair of peaceful means. During the period of the early 1950's when we were weak in limited forces but had the undeterred power of massive retaliation, the Soviet Union was fully aware of

these considerations. Faced with our nuclear and only nuclear supremacy, they refrained from using their manpower to break out of their perimeter. They knew that further spread of communism had to be held in check lest we react with the weapons we had, i.e., SAC. That situation no longer exists. Now that SAC is deterred by Soviet missiles, the Soviets can safely provoke us much further. But there still are limits and these limits are more confined because our conventional forces are weak. From the Soviet point of view that increases the chance that we might be driven to nuclear retaliation.

If the goal of each side was simply stability then neither side should wish the other to suffer any unacceptable defeats. But each side in reality also has other and positive aims as well as stability. It is none the less important to peace that neither side think the other may gain a decisive advantage unless prevented by all out means. For if no admissible forms of struggle are available to defend one's interests then there is created the danger of resort to inadmissible forms. (1st order escalation.) Awareness of these possibilities and the urge to pre-empt them makes more dangerous still the operation of the whole system. (3rd order escalation.)

Let us take the metaphor of escalation literally and think of weapons⁹ systems as being on a ladder, or rather a pair of ladders, each representing the forces of a major power. Any given rung on either ladder may be defective or missing. Now looking at this pair of ladders from the Olympian view of a third party

concerned only with world stability and prevention of escalation, what can we say of the consequences of weak or missing rungs? From that detached perspective we would say that any rungs weak or missing at the top of either or both ladders are a good thing. Escalation will stop at a lower level if there is nothing effective available to move up to. And if the two ladders are uneven in how many top rungs have been knocked out, that is too bad for the side whose maximum available violence is lower, but from an uncommitted third party view it does not matter. Escalation need go no higher than one rung above the top of the shorter ladder. Once the side with most force in reserve has trumped the other side it has normally no need to go further. So reducing arms at the top of the violence scale is stabilizing.¹

But rungs missing in the middle of either ladder may be de-stabilizing. They provide, as we have seen, an incentive to more rapid escalation. The side possessing forces at a level of violence where their foes lack them is tempted to escalate the struggle to that level where it will have an advantage. The side with a rung missing is tempted to raise the struggle one more rung to regain some chance of success. If the missing rungs are symmetrical on the two ladders the consequence is indeterminate.

¹Note that this is not an argument against stable deterrent forces in preference to disarming down to zero. The argument against a treaty abolishing all missiles, for example, is that one side might actually secrete a few and gain a decisive advantage. That is to say, the failure to assure disarmament at the top of the scale is what is de-stabilizing, not real disarmament at the top.

It discourages escalation by making the steps bigger and more terrifying, but speeds it up if it does take place, by eliminating the possibility of small increments of force.¹ So, from an Olympian point of view we can make a case that disarmament should start with the most dangerous, i.e., strategic thermo-nuclear weapons and move down from those only when they have been brought under control or abolished.

From the viewpoint of a partisan in the struggle interested both in limiting violence and in maintaining an edge in the bipolar struggle while doing so, these considerations lead to some obvious and less obvious conclusions. The obvious conclusion is that one would like if possible to be stronger than one's potential foes in each type of warfare. Since that is clearly impossible - we cannot hope to have a conventional superiority around Berlin, for example - one should at least aim at superiority at several critical levels of conflict, not just in the most powerful strategic weapons. Each arm in which one has superiority throws its shadow over struggles where it is not used but might be, permitting less violent means to be effectively used in support of policy. Each arm in which the foe has superiority throws its shadow too, posing us with the dilemma of accepting failure in those situations or

¹There is a good argument against the use of any nuclear weapons, even the most diminutive, in limited war. The argument is that one wishes to make the gap between nuclear and non-nuclear weapons use as wide as possible, thus making escalation harder. What one wishes to avoid is an unbroken series of small steps all the way from limited to strategic warfare so one would never know where the limits were. This argument, however, depends upon the gaps being symmetrical to the two sides, and furthermore, it disregards the fact that resort to tactical nuclear weapons may be an alternative to resort to strategic ones. For a well thought through and judicious resolution of this dilemma see Henry Kissinger's second thoughts on tactical nuclear warfare in

of escalating the struggle to fearful proportions.

Specifically, the conduct of successful diplomacy on behalf of democratic development probably requires that the free world have several capabilities:

1. Highly mobile conventional forces capable of establishing order in any part of the world not directly accessible to hostile big power conventional forces. An ability to conduct a Lebanon type of pacification may be the condition for getting the local parties to engage in responsible non-violent settlement of their differences. Forces for this purpose need to be strong enough so that the only way a mischievous great power can frustrate pacification is by playing with the risky step of escalating the war into a major one.

2. Conventional forces capable of defending perimeter countries (all the way from Korea to Western Europe) against great power conventional forces. This is a controversial item, for there are many who argue that the West cannot possibly have conventional forces capable of fighting a World War II kind of campaign in Western and Eastern Europe or for that matter in Asia. It is, therefore, argued that the Western strategy would be to escalate any such war into a nuclear one. Such reasoning assumes quite wrongly that it is easier for the West to maintain a decisive nuclear superiority than it is for it to maintain substantial equality in conventional forces. The strategic alternatives, either of which would work, are decisive superiority in The Necessity for Choice, New York: Harper Bros, 1960, or in Arms Control, Disarmament and National Security, ed. by Donald Brennan, New York: Braziller, 1961.

nuclear weapons as a shield for weak conventional forces, or relative equality with the foe in both nuclear and conventional forces. If we had nuclear superiority we could, as noted above, operate with conventional forces weaker than the enemy's, for the foe would not dare really defeat our conventional forces. But it is doubtful if the option of real nuclear superiority is open to the West. It is hard to conceive of a situation where we would with equanimity face the prospect of two-sided, even tactical, nuclear warfare. Barring that prospect, we should not put ourselves in the dilemma of fighting a mutually catastrophic nuclear war or of losing the conventional struggle. On the other hand the West does have manpower and production adequate to maintain conventional forces at least substantially equal to those it may have to face. If it maintains such forces it will not need to use them and it will be able to protect the free world by means short of such war.

3. Tactical nuclear weapons. While these are weapons we do not wish to use, we would wish to be able to use them with as much of a margin in our favor as an active effort will permit. At best we would like a superiority which we would not use, except for its shadow effect. At worst we should not allow others that superiority.

4. Strategic nuclear weapons. The issue of whether an invulnerable counterforce system (i.e., a decisive advantage) is technically possible lies beyond the scope of this paper. If it were possible clearly we should want it. The West had something like that advantage a decade ago when Churchill could rightly say

that the peace and freedom of Europe rested on the American monopoly of the atom bomb. Any American statesman would have seemed highly irresponsible if he had then advocated disarmament. Very likely, however such superiority can never be captured again and the best that either side can hope for is a nuclear stalemate, i.e., not letting the other side gain a decisive advantage. If that is the best available alternative then a finite deterrence policy follows as sensible. From a stalemate there follows a mutual interest in the control of those arms which can benefit neither side but can hurt both. Given mutual nuclear deterrence, it is in the interest of both sides to start disarming those weapons that neither side wishes to see used.

How far down the scale can this disarming go? The possibility that one side may cheat on a disarmament agreement and the associated problem of third order escalation require the maintenance of some deterrent forces. Beyond such forces, disarmament in a stalemate can be carried down the scale of violence to that point where, if it were carried one step further a stalemate would no longer exist, for one side would have a great advantage. Clearly the Soviets see themselves as having such an advantage in a world where nuclear arms are abolished. Witness their campaign for disarmament. For the same reason America, fearful as it is of the horrifying consequences of nuclear weapons, has approached disarmament with reluctance.

Looked at this way it is clear that the weakness of the United

States, except in nuclear weapons, is a major barrier to disarmament, a major incentive to Soviet provocations, and a fact that is apt to accelerate escalation. To build American conventional strength is to facilitate nuclear disarmament and international stability.