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THE OBSOLESCENCE OF STRATEGIC BOMBERS AND SUBMARINES

by

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Despite recent trends toward dictatorship and repression within the Soviet Union, few yet fear that we will soon know again the tensions that have so often characterized Soviet-American relations since 1945. At the same time, even when the United States' enthusiasm about the permanence of changes in the Soviet Union was at its peak, no one would have been seriously heard to argue that we could immediately cease to maintain a nuclear arsenal sufficient to deter the Soviet Union from using its own formidable nuclear arsenal. Indeed, the very alacrity with which the cold war evaporated illustrated that profound geopolitical changes can occur (and reoccur) overnight. Recent events fortify the voice of caution.

So, while it would be absurd not to dramatically reduce the resources devoted to developing and maintaining strategic nuclear weapons, we must continue to think about weapons issues with an eye upon the potential reemergence of the same Soviet threat we faced in the past. There are few strategic weapons issues framed in the context of that threat on which there has been such agreement as the vulnerability of silo-based missiles to preemptive attack. Practically everyone accepts that the vulnerability of such weapons is very great. Many also question the wisdom of silo-based missiles because, since their accuracy and throw-weight particularly suit them for use in a first strike, they invite a preemptive first strike from the other side. Such considerations have led strategists to argue for deemphasizing the role of silo-based missiles and placing greater reliance on bombers, submarines, and, more recently, land-based missiles mounted on rail cars and trucks.

But this is exactly the opposite of the direction in which we should be heading. The reason that the movement away from silo-based missiles is misguided lies in a rarely discussed, but fundamental, flaw in the deterrence strategy that has been the foundation of our security. Should deterrence fail completely, and the Soviets unleash a massive nuclear strike upon the United States, it would no longer make sense to carry out a threatened retaliation the only purpose of which is to deter. In short, the Soviets would have destroyed one half of the world, and there would be no point in destroying the other half, save a mindless vengeance carried out almost entirely

against innocents. And, since nothing can be gained by carrying out a threatened retaliation, there can be no true threat in the first place.

Presumably, most people who have thought seriously about deterrence have to some degree appreciated this problem. Some appear to find a solution in the idea of "resolve." That is, knowing that our security rests on our willingness to act irrationally after deterrence has failed, we simply make up our minds to do so. This is an alluring approach to the problem and not an unsatisfactory one so long as we succeed in concealing from ourselves that it makes no sense. But, clearly, it makes no sense. If when the time comes to act, doing the irrational will not do us any good, we cannot actually make up our minds to do it. Ultimately, we must recognize this.

Others avoid the problem by contriving scenarios that would leave us reason to strike the Soviet Union with nuclear weapons after deterrence has failed. Some would argue that the use of our weapons would serve to reduce the Soviet capability to inflict further damage. Others, envisioning a protracted war, would argue that destroying Soviet industry and communications would enhance our chance of ultimately prevailing. Still others would argue that it is necessary to retaliate to legitimize deterrence for the future. Since our ability to deter depends on the persuasiveness of such arguments, the desire to believe in them is understandable. Their validity, however, is inversely related to the severity

of the Soviet first strike. And Soviet weapons are powerful enough to make these arguments entirely fatuous at the time when they must stand on their own. This, too, we must one day recognize.

This does not mean that deterrence as presently envisioned cannot work. Throughout the cold war the Soviets had little confidence in the inherent rationality of our leaders, particularly regarding decisions to be made in circumstances that would be singularly unsuited for sage reflection. And given the scope of the devastation that would be wrought by the retaliation we say we would carry out, even a small chance that we would actually retaliate is a powerful deterrent. Moreover, the same weaknesses in our command and control structure that cause many to question whether we would actually be able to retaliate raise as many questions about our ability to decline to retaliate. So the present scheme of things provides us some measure of security.

Nevertheless, the fact that only an utterly irrational leader would retaliate could prove significant in precisely those circumstances where deterrence is most fragile. In most circumstances, even a minuscule probability of massive retaliation is a satisfactory deterrent. Indeed, in most circumstances, the possible environmental consequences of the detonation of a nation's own weapons may be sufficient to deter it from striking first. Probably the only time either side will seriously contemplate a first strike is when it fears that the other side intends to strike first. In a crisis the

Soviets may fear that the United States will strike first, if only because they fear that we fear that they will strike first, and so on.

(The reasoning that says it makes no sense to retaliate says nothing about whether it makes sense to strike first. On the contrary, that there exists a possibility that we would not retaliate, and hence are less able to deter, gives us but greater reason to consider preemption, and the Soviets but greater reason to fear it. And, the fact that for the first time we may envision the Soviet Union as a nation that would act as rationally as we would merely increases the danger, since the Soviet Union's inability to deter similarly gives us greater reason to fear it.)

Thus, at a time of greater tension than exists today, when, for example, an important sensor satellite of one side appears to have been sabotaged by the other, or there occurs some other, perhaps undreamed-of event that leaves terrified leaders on either side not knowing what to do, save that they better do it first, doubts about the United States' willingness to retaliate could be the decisive factor leading the Soviets to attempt a first strike. Similarly, should the United States verge on the deployment of technologies that may render successful preemption viable, a belief that though the United States may well strike first, it will not strike second, could weigh heavily in the Soviet Union's consideration of its bitter options.

We must also face the fact that in a society where candidates and leaders are required to debate issues so openly, in the long term some will find it difficult to maintain that they are committed to the irrational while they are at the same time striving to demonstrate their wisdom.

There are thus sound reasons for correcting, if possible, the inherent weakness of the existing system of deterrence. The single way of doing so is, through a system of automatic retaliation, to deny ourselves the option of declining to retaliate.

Few people will readily accept such an idea. Yet, thoughtful readers should at least be troubled that underlying a seemingly absurd suggestion there may be an undeniable logic. And once one glimpses that logic, one must recognize the possibility that such logic eventually will prevail. It therefore would be wise to prepare for the possibility of that eventual recognition, and in particular to do so as we plan our weapons systems of the future.

It seems clear enough that the only types of weapons that can be used in a system of automatic retaliation are land-based missiles installed in silos or similar relatively permanent structures. These are the only weapons that, given existing technological limitations, can be configured to respond to a Soviet attack without post-attack human action to activate them and without any means whereby post-attack human action can quickly deactivate them. This is unfortunate, since silo-based missiles are the most vulnerable part of our strategic arsenal.

But the vulnerability that has been so often noted ought to be far less serious a problem in a system of automatic retaliation, since a principal cause of that vulnerability--the time required for somebody to decide what to do--would not be present. The danger that because of their accuracy and power silo-based missiles will invite preemption can also be addressed; we can simply make them less accurate and powerful.

Because bombers and submarines require the actions of human crews, however, such weapons can have no place in a system of automatic retaliation. Nor, for that matter, is there a role for MX and Midgetman missiles on rail cars and trucks, since they too will require the actions of crews; and our leaders, if they are rational, must instruct the crews not to take those actions.

It is not, however, solely in anticipation of the recognition on the part of our leaders that it makes no sense to retaliate voluntarily that we should question the continued development of systems that require human involvement in the delivery of nuclear warheads. The irrationality of retaliating after deterrence has failed detracts from the deterrent value of these systems even today.

Consider the penetrating bomber. Its modern incarnations have been expensive. The B-1, not yet perfected, is now expected to cost \$280 million per plane, a manifold increase from estimates when it was originally conceived. The B-2, or Stealth, still in an early stage of development, is expected to cost over a half billion dollars per plane, although there is

no reason to expect these estimates to be any more accurate than the early estimates of the B-1. Enough has been written about whether these planes will actually be able to reach their targets, no matter how sophisticated we make them, and about their doubtful value even if they do. Let us here merely consider what would possess the crews of the planes, presumably comprised of rational men, actually to drop their bombs after they have flown a quarter way round the world thinking about it.

Even if the targets are entirely military, the use of a bomber's payload may result in the loss of tens or hundreds of thousands of lives and the contamination of hundreds of square miles of land in a world where uncontaminated land will be growing dangerously scarce. The saving of American lives may be a compelling enough justification for wreaking such devastation. Yet, by the time that these planes arrive at their targets, the likelihood that by dropping their bombs they will save American lives will have grown exceedingly slim, the threat of dropping those bombs having already failed in its mission.

Ironically, one of the reasons offered in support of the continuing value of manned bombers is that we can put them aloft and have time to think about what to do with them. Yet the time to think, whether the thinking is by the nation's leaders or by crew members of individual planes, merely increases the likelihood of reaching the only rational conclusion: to do nothing that will cause any further loss of life and environmental degradation.

The situation of the submarine is somewhat different from that of the bomber. Being farther removed from the consequences of their actions, submarine crews would seem more likely than bomber crews to carry out their orders. On the other hand, those submarines each carry 168 nuclear warheads, enough to destroy every major city in the Soviet Union, and possibly enough to cause worldwide environmental harm. Again, the saving of a great many American lives might justify firing those weapons. But there is so little chance that a retaliatory strike would save a substantial number of American lives that it is hard to believe that many submarine officers would find the question of whether to fire their missiles even to be a close one.

Submarines contrast with bombers in another important respect. If bombers provide us little deterrence, at least they do not pose a serious threat of accidentally precipitating a calamitous nuclear exchange. Submarines, each with their scores of warheads that can be fired solely through the actions of the crew, are another matter. If it is difficult to envision a likely chain of circumstances whereby a submarine crew may be misled to believing it has received orders to fire, certainly there are possible ones. And if I have just argued that few submarine officers would obey orders to retaliate, those arguments do not apply to orders to fire as part of a first strike, where it is the failure to fire that, by dooming a potentially successful preemptive strike, may invite catastrophe. And, of course, in an age where fanatical nations

employ terrorism as an instrument of policy, hijacking is an increasing danger. Thus, as remote as we may think are the dangers of nuclear war at a time each side thinks it would surely be destroyed and the parties have little to fight about anyway, while vessels of such destructive power prowl unfettered beneath the seas, nuclear cataclysm is never out of the question.

The same reasons that we cannot depend on bombers and submarines to carry out retaliatory strikes apply in various ways to the MX and Midgetman missiles that many favor placing on railroad cars and trucks. The individuals manning such weapons may be a little more likely to fire them than bombers crews (because the missile crews are further removed from the results and have less time to reflect on their actions) and submarine crews (because land-based missiles operated by each crew will cause less devastation). But many surely will choose not to fire. And certainly the proliferation of relatively independent mobile launchers that can strike the Soviet Union in minutes raises many of the same dangers as submarines with respect to precipitating a conflict through unauthorized use.

More to the point here, we must also question the wisdom of an expensive program to add a new element to our deterrence scheme, when that element will not fit in with what we may come to realize is the only form of rational deterrence--that founded on automatic retaliation. That should be our principal focus.

The fact that rational crews of manned nuclear weapons systems will not fire them is, to be sure, a genuine problem, since the Soviet recognition that many crews will act rationally detracts from deterrence; and the varying likelihoods that crews of particular weapons systems will fire those weapons cannot be ignored in calculating their cost-effectiveness. But the potential rationality of individual crews is but an intimation of the larger problem--that our leaders, whom we expect to be eminently rational, also must eventually reach the conclusion that it makes no sense to retaliate, and with it the understanding that a system of automatic retaliation is the only certain deterrent.

In anticipation of that realization we should see that we do not come unduly to rely on expensive weapons that are unsuited for such a system. Certainly some part of those resources would be better spent in the development of a system of silo-based missiles that will respond automatically to an attack and will respond only to a true attack.

The very idea of such a system is, of course, immensely terrifying. But a rational system of deterrence cannot be more terrifying than an irrational system of deterrence, and it is upon an irrational system of deterrence that we, and the Soviets, have for so long relied.

Some will argued that a period of reduced tensions such as we enjoy today is hardly a time to consider placing the world's survival in the hands of doomsday machines. Yet, it is

precisely at a time when both sides have recognized that they have no interest in the other's destruction that they can also openly recognize that neither side actually has a means of deterring the other. With that recognition, both sides can cooperatively seek a rational solution to that shared predicament.