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by

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Henry Kissinger has suggested that "the traditional mode of military analysis which saw in war a continuation of politics but with its own appropriate means is no longer applicable."[1] Kissinger's statement was doubtless predicated on recognition of the unprecedented destruction and suffering that would attend a nuclear exchange. But can we be certain that the Soviets likewise regard nuclear war as unthinkable? Richard Pipes reminds us that the Soviets experienced 60 million fatalities, half of them self-inflicted, during Stalin's reign, and he suggests that Soviet leaders might not cringe from a nuclear war that they feel they can win if they can limit their fatalities to the low tens of millions.[2] This conjecture about current Soviet thinking could be especially true if the Soviet civil defense system is capable of protecting all but a small percentage of the Soviet populace[3] and of allowing economic recovery from a US retaliatory strike within four years.[4]

Major General George Keegan, retired chief of Air Force intelligence, is one of a number of authorities convinced that the Soviet Union is preparing for a nuclear strike at the United States with the belief that it can emerge with some margin of advantage.[5] Others voicing this view include Pipes[6] and Leon Goure, who has cited the following from a Soviet editorial: "There is profound erroneousness and harm in the disorienting claims of bourgeois ideologies that there will be no victor in a thermonuclear world war."[7]

The Soviets' victory would be achieved through their attainment of nuclear superiority, through a first strike against US counterforce targets, and in large measure through their civil defense program, on which they spend more than $2 billion annually.[8] This program is designed to protect the political infrastructure, economic and industrial facilities, and cadres of skilled technicians who would enable the USSR to recuperate faster than the United States from a nuclear exchange.

The Soviet Union's civil defense program is more than 30 years old and is an important aspect of Soviet military planning. The strengths and weaknesses of the program have been the topic of extensive debate by many analysts.[9] The specific structure, capabilities, and plans of Soviet civil defense bear some close examination. First, however, let us consider the possible dangerous impact that an effective Soviet program might have on the Soviet-American strategic nuclear balance and on deterrence.

THE CONCEPT OF DETERRENCE

The superpowers have long relied on nuclear deterrence to prevent the outbreak of nuclear war. The concept of deterrence rests on the assured ability of each superpower to survive an attack by the other with enough weapons to inflict such unacceptable damage on the aggressor that "the living would envy the dead," as Khrushchev once observed. Although analysts may disagree among themselves as to how much destruction is "unacceptable," the criteria for population and industry specified by Secretary of Defense Robert McNamara in his 1967 testimony before the Senate Armed Services

Committee seem to be appropriate. McNamara speculated that a US retaliatory strike against the Soviet Union that killed 20 to 25 percent of the population and destroyed one third to two thirds of Soviet industry "would certainly represent intolerable punishment to any industrial nation and would thus serve as an effective deterrent."[10]

Mutual assured destruction (known by its acronym MAD) relies on the condition that each side's offensive capabilities surpass the defensive capabilities of its adversary. In other words, deterrence is stable as long as each side's population and industry remain vulnerable to the destructive force of the other side. Consistent with this formulation, the United States and the USSR concentrated, during the last two decades, on the development of relatively invulnerable destructive offensive weapons and weapon systems such as ICBMs in hardened silos, SLBMs, and MIRVed warheads. Each side spent relatively less effort and funds on defensive capabilities, lest the balance of mutual vulnerability of the respective populations be upset. The United States dismantled its air defenses (interceptors and surface-to-air missiles) in light of their inability to defend us against Soviet missiles. In 1972, when the Soviet Union joined the United States in signing the ABM treaty, which limited the deployment and testing of the antiballistic missile, there was much joy in the West. This action by the Soviets was interpreted by many to mean that they subscribed to the concept of deterrence as the most rational means of maintaining peace and insuring survival.

As has been noted, however, such an interpretation has been called into question by many analysts who point to the Soviets' continued expansion of their offensive capabilities and their strides in civil defense. Since the USSR is currently at a level of parity with the United States and the Soviets show no sign of moderating their offensive or defensive programs, these analysts have concluded that the Soviets no longer subscribe to the concept of deterrence. Rather, the Soviets are seen as seeking nuclear superiority with the aim of either launching a strike at the United States[11] or forcing the United States to make costly political concessions[12] in order to avoid suffering as many as 80 to 140 million fatalities.[13]

The Soviet civil defense program threatens deterrence by upsetting the balance of mutual population vulnerability in that, under certain conditions, Soviet civil defense measures might limit Soviet fatalities from a retaliatory strike to the low "tens of millions."[14] According to projections by the congressional Office of Technology Assessment, significant asymmetries exist in the number of fatalities that would be suffered by the United States and by the USSR in several warfighting scenarios.[15] Furthermore, Soviet civil defense capabilities threaten deterrence to the degree that they protect that country's economic power and recovery prospects relative to those of the United States. Such projected asymmetries destabilize the US-USSR strategic balance because they suggest that the Soviets might emerge from a nuclear war in a better position than the United States.

With regard to the comparative lack of US civil defense measures, John Collins has identified several important implications that would stem from the inability of the United States to protect its citizens or production base from nuclear assaults.[16] First, America's allies would naturally have less confidence in the US nuclear umbrella if they could envision a situation in which the United States were facing a choice of either sacrificing New

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York or assenting to Soviet occupation of Paris or Bonn. Second, tactical nuclear weapons would "no longer substitute for conventional strength as credibly as they did in the past."[17] The resulting almost certain disintegration of NATO and other US alliance systems would be a major blow to the security of the United States and realize one of the Soviet Union's principal postwar objectives. Another implication identified by Collins would be increased danger to the United States from small powers, terrorists, and other special interest groups who might benefit from the proliferation of nuclear technology and weapons and employ nuclear blackmail. Finally, defensive inferiority might subject the United States to Soviet coercion with few alternatives to acquiescence, irrespective of our raw destructive power.

Such commentary has not fallen upon deaf ears in the executive branch. In 1974, Secretary of Defense James Schlesinger argued that the United States should have a counterpart to the Soviet civil defense program: We might protect ourselves from any attempted Soviet intimidation by evacuating our urban populations during a crisis and accordingly reducing American fatalities if deterrence should fail.[18] In congressional testimony on 18 April 1978, Brigadier General James M. Thompson of the Office of the Assistant Secretary of Defense for International Security Affairs stated:

> We recognize that an increasingly effective Soviet civil defense program, in conjunction with other Soviet strategic military programs, could in time cast doubts upon our ability to meet our strategic objectives. Moreover, whatever the actual or potential effectiveness of the Soviet program, we must be concerned about perceptions of Soviet superiority based on marked asymmetries in civil defense efforts . . . .
>
> In sum, although civil defense in the past has not played a major role in national strategic policy, it certainly does deserve our attention. Civil defense policies need to be considered in the context of their peacetime effect on perceptions, possible deterrent effect, real dollar costs, and, of course, possible effect on reducing casualties and enhancing recovery in the event that deterrence should fail. Civil defense programs thus cannot be considered as independent of the rest of our strategic nuclear programs.[19]

More recently, Secretary of Defense Harold Brown noted:

> The Soviets have shown great interest and considerable activity in this [civil defense] field. While I do not believe that the effort significantly enhances the prospects for Soviet society as a whole following any full-scale nuclear exchange, it has obviously had an effect on international perceptions, particularly in contrast to our small and static civil defense programs. For that reason alone I believe at least modest efforts on our part could have a high pay-off.[20]

The recent promulgations of Presidental Directives 41 and 58, which streamlined the organizational structure of America's civil defense and committed the country to crisis relocation planning, provide additional evidence that the subject is being taken more seriously in the United States.[21]

Before the United States subscribes to the warnings of Keegan, Pipes, and Collins and accepts the recommendations of US civil defense advocates, however, more critical analyses of the effectiveness of the Soviet civil defense program, Soviet views of deterrence, and strategic vulnerabilities are in order.

To be sure, the claims of an effective Soviet civil defense and its destabilizing effects on deterrence have not gone unchallenged. Numerous people and organizations have taken strong exception to such findings.[22] These counterarguments focus on the limited effectiveness of the Soviet civil defense program; the continued ability of the United States to deter the Soviets; and the misunderstanding of Soviet intentions, interpretations of deterrence, and political

realities. Let us review each of these areas in turn.

THE LIMITED EFFECTIVENESS OF SOVIET CIVIL DEFENSE

The protection of all citizens is considered of paramount importance to Soviet civil defense planners.[23] The CIA notes that there is sufficient blast-resistant shelter space for the Soviet leadership at all levels.[24] These shelters, however, designed to protect approximately 110,000 government and party leaders, are vulnerable to direct attack. The shelters built to protect workers at key economic installations are also vulnerable to direct attack. Furthermore, for the Soviets to protect the 12 to 24 percent of the total work force (24 to 48 percent of the essential work force) that would be left behind in the event of crisis evacuation, the space available for each person in a shelter would be only one-half to one square meter. This space allotment is inadequate according to most analyses of survival requirements.[25] In addition, the Oak Ridge Laboratories maintain that the shelters' ventilation systems are the most vulnerable aspect of the shelter program and that, even if a shelter were not destroyed by a nuclear blast, its inhabitants would suffocate or die of heat exposure.[26] Starvation would also become a severe problem if shelter were required for more than a few days. Chronic Soviet food shortages, food distribution snarls, and the fact that Soviet citizens buy their food from day to day would prevent many from bringing the requisite two-week supply of food and water to the shelter. Even T. K. Jones, an analyst very much in awe of Soviet civil defense capabilities, concedes that urban shelters "could not help much against a US attack designed to destroy populations."[27] Those Soviet citizens who would be forced to build expedient shelters using "handy" materials and tools such as bricks, timber, boards, and shovels[28] would face even more serious problems in the face of a nuclear retaliatory strike.

Goure describes elaborate Soviet evacuation plans that are to be carried out within 72 hours after an evacuation order is issued.[29] The Soviets' confidence in the effectiveness of these evacuation plans, however, must be limited by the prospect that on detection of a Soviet evacuation, the United States might seize upon so ominous a warning and strike the population in transit, thereby maximizing the number of fatalities.[30] In the event of a Soviet evacuation, the United States would undoubtedly undertake a variety of measures (e.g., disperse our bombers and put them on airborne alert, send our subs in port to sea, and order a launch on verification) that would lessen the destructiveness of a Soviet first strike and increase the destructiveness of a US retaliatory strike. Furthermore, the Soviets have never practiced a full-scale evacuation of a major city, used more than one mode of transportation in their limited practices, conducted a drill without a long period of preparation, or carried out several evacuation exercises simultaneously.[31]

The decision to proceed with an evacuation would result in gigantic transportation problems. The Soviet Union

> lacks a developed highway system to connect the outlying regions to its industrial hub. Less than 250,000 miles of paved roads exist in the entire nation. No two Soviet cities are connected by a divided highway . . . . In addition, Soviet severe weather conditions hamper what possible road travel exists. During the winter, spring thaw periods, and autumn rainy seasons, Soviet roads are virtually impassable. The Soviets describe their situation as *rasputitsa*, or roadlessness, during those months.[32]

The Soviet road network, then, has been constructed to accommodate travel *within* that country's cities and would be hard pressed to support mass exoduses *from* those cities.

In addition to motor transport, Soviet evacuation plans depend heavily on railroads and pedestrian traffic. Most railroads in the Soviet Union are single track. To evacuate large cities with rail transportation, the Soviets would have to be sure that the trains were in their assigned evacuation locations and that they were not loaded with freight or

needed to carry troops or supplies to Eastern Europe. That so many logistical problems could be handled by a country whose transportation system is inefficient at best during calm and peaceful times is highly unlikely.

Soviet evacuation plans call for 17 million urban residents to walk 30 miles (1.5 mph for 20 hours) and then build expedient protection.[33] How the very young, the very old, and the sick are to make such formidable progress (while carrying two weeks' worth of food, water, and supplies) is not clear. It is also important to note that the Soviet urban population, largely an apartment society, is more highly concentrated than the American urban population. A heavy concentration of urban citizens results in certain obstacles to successful evacuation. For instance, Moscow is surrounded on all sides by satellite industrial centers, and Leningrad is similarly bordered on three sides and by water on the fourth. Citizens from these population centers would face major problems evacuating to rural reception centers or areas suitable for the construction of expedient shelters. Finally, how evacuees in expedient shelters would survive the higher levels of radioactive fallout that would result if the US retaliatory strike included ground bursts is unclear and is seldom addressed by those who assert the effectiveness of Soviet civil defense.

A decision to evacuate their urban areas might have effects exactly opposite those desired by the Soviet leaders. Furthermore, such a decision would involve incredible costs, even if the United States were not to strike. It has been estimated that one week of lost production in the United States due to an evacuation would cost approximately $90 billion.[34] The costs to the highly centralized and labor intensive Soviet economy might be higher still.

In spite of Soviet efforts to harden industrial sites and disperse industry,[35] the CIA and the Arms Control and Disarmament Agency have concluded that the Soviets would be unable to prevent massive industrial devastation, especially in cases where industrial installations are targeted directly.[36] The CIA reports that the Soviet Union's program for geographical dispersal of industry is not being implemented to a significant extent, observing that

> new plants have often been built adjacent to major existing plants; existing plants and complexes have been expanded in place; no effort has been made to expand the distance between buildings or to locate additions in such a way as to minimize fire and other hazards in the event of a nuclear attack; [and] previously open spaces at fuel storage sites have been filled in with new storage tanks and processing units.[37]

In fact, because of economic exigencies, the value of productive capacity added to existing areas is increasing more rapidly than in new areas. This trend heightens the vulnerability of Soviet industry.

The CIA also notes that "little evidence exists that would suggest a comprehensive program for hardening economic installations, due to the high costs and inability of such installations to survive the blasts of direct attacks or the damage that would result thereafter from fire."[38] The Arms Control and Disarmament Agency concurs with this evaluation, noting that "any attempt to harden can be easily overcome by detonating weapons at lower altitudes with only a minor reduction in the 10 p.s.i. destruction capability." That agency has also stated that future US weapons would offset up to a threefold increase in hardness, even if such an increase could be accomplished, and concluded:

> Attempts to harden above-ground facilities [are] futile, [and] even buried facilities which are hardened cannot survive. Selected pieces of equipment could be expediently hardened to improve survival in peripheral areas; however, hardening machinery in targeted facilities would be of little use.[39]

The Soviets themselves point out:

> It is impossible to make buildings less vulnerable to a shock wave without radical structural changes that involve considerable difficulty and cost . . . . It is impossible to

guarantee building survival in a damage area even by somewhat increasing the strength of individual structures and their components.[40]

Many crucial economic and industrial facilities cannot be protected at all. These include oil refineries; power plants; chemical storage plants; steel mills; pharmaceutical laboratories; component assembly factories; major truck, tractor, and rolling-stock plants; railheads and marshaling yards; major surface transshipment points and highway intersections; and pipelines.[41] Because these targets cannot be hardened, they remain vulnerable to a US retaliatory strike. The loss of such facilities would be an indescribable blow to any country hoping to survive a war as a superpower.[42]

T. K. Jones laments that after absorbing a first strike, the United States would be able to hit *only* a "few thousand aim points" and not be able to inflict unacceptable damage on the Soviet Union.[43] Soviet industry, however, is so concentrated (the key industries in the Soviet Union have more than half of their production in less than 200 plants[44]) that the United States would not need many weapons to devastate completely the Soviet industrial structure.[45] Both Geoffrey Kemp and Richard Garwin maintain that as few as seven Poseidon subs (one-third the number normally on station at sea) could destroy 62 percent of the Soviet Union's industrial base, and the 10 percent of our ICBMs surviving a first strike could, by retargeting, deliver unacceptable damage to the Soviet Union.[46] An ACDA estimate that recognizes the need for 1300 warheads to destroy 70 percent of Soviet industry is consistent with these Kemp and Garwin estimates.[47]

In view of the significant concentration of Soviet industry, T. K. Jones' prediction that the Soviet Union could recover "within no more than 2 to 4 years from a US nuclear retaliatory attack"[48] appears optimistic at best and downright naive and silly at worst.

Recovery from a nuclear attack depends heavily on the capability to rescue, feed, and care for the survivors and on the capability to provide repair parts and energy for capital reconstruction. Soviet recovery efforts would be hampered severely by numerous obstacles. Massive urban areas would be too "hot"—too radioactive—to enter for several months. Radiation sickness would be widespread, with 80 percent of the Soviet population, including the evacuees, having been exposed to at least 100 roentgens of radioactivity. Food would be in short supply. Half of the country's grazing livestock would be dead and, if the attack occurred during the growing season, 30 percent of all crops would be destroyed. Distribution delays of at least two months could be expected. The ozone layer could be so depleted that outdoor activity beyond 30 minutes in duration would be hazardous for several years. Eighty percent of all medical personnel, supplies, and hospitals would be destroyed. And, of course, a host of social and psychological problems would ensue.[49] Additional problems would result from the low horsepower and disrepair of Soviet heavy equipment[50] and from destruction of the chemical industry, upon which an already woefully deficient Soviet agriculture is heavily dependent.

Such gloomy prospects support the conclusions of the 1978 CIA study that stated:

> Present evidence does not suggest that in the foreseeable future there will be any significant change in the Soviet leaders' . . . uncertainties about [the] effectiveness [of civil defense]. Thus we have no reason to believe that the Soviet leaders' perception of the contribution of civil defense to their capabilities for strategic nuclear conflict will change significantly.[51]

Some might counter this conclusion by pointing to the projections of significantly greater US population and industrial destruction and by linking the disparity to the absence of a civil defense program in this country and the existence of one in the Soviet Union. But such an argument confuses correlation with causation. It must be pointed out that these projections are affected only to

a minor extent by the Soviet civil defense program. Rather, they are based upon the predication of a Soviet first strike that would leave the United States with fewer weapons with which to retaliate against the Soviet Union and the fact that the Soviet Union's warheads have larger yields than American warheads.[52] If the United States were to strike first, especially before or during the initiation of Soviet civil defense measures, Soviet casualties and destruction would be much higher than otherwise projected,[53] perhaps as high as 100 million prompt fatalities.[54] Consequently, the Arms Control and Disarmament Agency maintains that the Soviet Union and the United States are equally vulnerable.

THE CONTINUED CREDIBILITY OF THE US DETERRENT

The ACDA and CIA studies cited both come to the conclusion that the United States could absorb a nuclear strike by the Soviet Union and still retaliate with savage and unacceptable destruction. The ACDA predicts that the US retaliation would destroy 65 to 70 percent of the Soviet Union's industry if the United States were on a normal day-to-day alert at the time of the Soviet first strike. On the other hand, if the United States were to respond from a generated alert posture, the Soviets would lose 85 to 90 percent of the industrial installations that the United States had targeted directly and absorb 80 percent collateral damage to untargeted installations.[55] Similarly, the CIA identifies numerous measures (e.g., stretching the attack over a longer period of time using submarine-launched ballistic missiles, targeting the Soviet population directly, and increasing fallout by detonations at ground level) that would increase the destructiveness of the US retaliation.[56] Various analysts suggest still other possibilities, uncertainties, and considerations that reinforce each other and add to the credibility of the American deterrent.[57] Indeed, the credibility of the US deterrent is so strong that Soviet confidence in their civil defense must be called into question.

Nevertheless, Richard Pipes contends that the United States is mistaken to assume that what deters the United States would also deter the Soviet Union. He argues that the terrible carnage and physical destruction of the revolution, civil war, two world wars, and numerous purges within the last 65 years are impressed indelibly upon the memories of the Soviet leaders and have hardened them so that losses in the "low tens of millions" in a nuclear war might seem acceptable.[58] Robert Kennedy notes perceptively, however, that it is not reasonable to expect Soviet leaders to initiate a conflict that would kill a minimum of 10 million Soviet citizens, even though the Soviets suffered more deaths at the hands of the Germans in World War II. It is one thing to have war thrust upon you and suffer so many deaths over five years, but it is something quite different to initiate such a devastating war and absorb the same number of deaths in a few hours.[59] Furthermore, the economic, political, and psychological disruption of nuclear war would be greater than that experienced during World War II, and this fact has been consistently pointed out by Soviet political and military leaders.[60]

An additional variable of considerable significance to the matter of deterrence is the multinational nature of Soviet society. Many analysts have described the polyglot composition of the Soviet Union, the declining percentage of Great Russians and ethnic Slavs in the population, and the ominous economic and political consequences of these developments for the Soviet polity.[61] Nevertheless, few recognize the Soviet state as multinational when the discussion turns to the matter of strategic deterrence. Desmond Ball and Gary Guertner, however, contend that this consideration is of paramount importance in Soviet strategic calculations.[62] Recognizing the geographical coincidence of most ICBM fields, key industrial installations, and Great Russian concentrations, Guertner observes that an American counterforce strike against the Soviet Union would affect most seriously the Great Russians, who now make up 52 percent of the total population, and who would perish in disproportionately large numbers.

Whether they would be able to maintain control of the Communist Party and the Soviet Union's vast governmental, political, educational, and military hierarchies is highly questionable. Nuclear war might well trigger the decline of the Soviet Empire as a result of the destruction of the infrastructures of political and ethnic control, communication, and transportation. Adam Ulam recognized this possibility even as the result of a "small" nuclear war:

> As to the possibility of a 'small' nuclear war, the USSR had to think in political terms: against a small nuclear power she would undoubtedly emerge victorious; but could a Communist regime survive such a war? What would be the consequences of even one nuclear missile falling on Moscow and destroying the top leadership of the Party and state?[63]

As has been noted, the economic recovery period of two to four years hypothesized by Jones has been criticized as being overly optimistic. Four years is not much time for economic recovery when one considers the physical destruction that the United States could bring to bear upon the Soviet Union. Two to four years may be an eternity, however, in the political dimension. Can the Soviets be confident that they could maintain the integrity of the Soviet Union during even this brief a period of incapacitation? Might not the Chinese seize vast segments of the Eastern Empire? Might not the Soviet Moslem population reaffirm religious and territorial ties to a Pan-Moslem movement? Is secession by the Ukrainians or the Baltic republics possible? Would the East Europeans be inclined to maintain their political and economic ties to the Soviet Union? If the Russian leaders entertain uncertainties such as these, nuclear war would necessarily be viewed as counterproductive to their most basic national interest: the survival of the Soviet state. If they entertain such uncertainties, the Soviets may be effectively deterred.

SOVIET VIEWS OF DETERRENCE

Why do the Soviets devote so much attention to a costly civil defense program if, in the final analysis, their efforts are futile or only marginally effective? Continued high Soviet expenditures in this area while their economy is in serious trouble may lead one to ominous speculations about Soviet intentions. Is it possible that the Soviets are preparing for a first strike against the United States or planning to combine their growing offensive strength with their civil defense capability to coerce the United States into making humiliating and injurious concessions at the brink of nuclear war?[64] Such questions imply that the Soviets reject the concepts of deterrence and crisis stability.[65] Richard Pipes holds that Soviet strategic doctrine is based upon the rejection of deterrence, a Leninist view of the inevitability of war between capitalism and communism, weapons superiority rather than sufficiency, offensive action rather than retaliation, and the belief in and pursuit of victory in strategic war.[66] Whether one attributes these tenets to Soviet malevolent intentions, ideological fanaticism, or a perception of American weakness, the policy implications for the United States are clear: arms control is viewed suspiciously, and our only source of aid and comfort from the enemy lies in nuclear superiority and the willingness to stand eyeball to eyeball with the Soviets to demonstrate our resolve.

The advent of nuclear weapons, however, has resulted in a significant departure from the traditional Leninist views that war is inevitable between capitalism and communism, that war is a feasible policy instrument, and that the socialist states' victory is foreordained. By the mid-1950s, Malenkov and Khrushchev were speaking of peaceful coexistence and the need to avoid war inasmuch as it would result in the utter destruction of both the Soviet and US societies.[67] Since then, the theme of avoiding nuclear war has been reiterated by numerous Soviet political and military leaders.[68]

The Soviets do not reject the necessity of achieving a stable deterrence to prevent war between the Soviet Union and the United States. Nor do they fail to recognize the existence of mutual deterrence.[69] What they do reject is the American belief that nuclear warfare is controllable. Sophisticated concepts for limited war, in the Soviet view, destabilize the strategic balance and raise the likelihood of nuclear conflagration.[70]

Another significant divergence between the US and Soviet views of deterrence stems from the means employed by each side. Dennis Ross and John Collins note that American nuclear deterrence is based on severely punishing an aggressor should deterrence fail. The Soviets do not take such a fatal and passive view. Their view of deterrence is based on denying the enemy any possibility of military success rather than restricting military retaliation to punitive reprisals.[71] Ross maintains:

> The fact that there is a general distinctiveness between Soviet strategic nuclear doctrine and American deterrence perspectives . . . should not be taken to mean that deterrence is not the Soviet military's primary mission.[72]

While noting that current Soviet strategic doctrine is not unlike US doctrine during the 1950s and early 1960s, Robert Kennedy also develops the same point:

> The Soviet elites have rejected specific American conceptualizations of deterrence. Instead they have concluded that deterrence of nuclear conflict is best served by strategic doctrines and carefully prepared strategic forces which promise to deny a potential aggressor any hope of success . . . . Such a deterrent demands not only an active capacity to attack the enemy's warfighting capability, but *also to limit the damage inflicted on oneself through home defense measures.*[73]

This difference in US and Soviet strategic doctrines—punishment versus denial of victory—accounts in part for differences in the superpowers' force structures. The punishment orientation of American deterrence is finite in that the United States need only identify specific Soviet targets whose loss would constitute unacceptable destruction and then deploy some calculable number of weapons with an acceptable probability of success. While one may take issue with the number of targets that must be destroyed to achieve unacceptable destruction or the number of warheads to be aimed at each target, the estimates of American weapons requirements (and the continued credibility of the US deterrent) exhibit remarkable stability over time.[74]

On the other hand, the Soviet Union's victory-denial strategy is much less explicit and delimited. Hence, there is no consensus regarding the question "How much is enough?" Furthermore, the Soviet Union's history of having suffered numerous invasions and terrible destruction at the hands of its enemies explains much of that country's preoccupation with defense and its predisposition to embrace nuclear overkill and superfluidity in answer to that question. Marshal Malinovsky affirmed this attitude in 1961 when he said, "We do not want to find ourselves in the position in which we were in 1941. This time we shall not allow the imperialists to catch us unaware."[75]

Some indication of the Soviet fear of invasion is provided in Leonid Brezhnev's comment that "Marxist-Leninists have no illusions about the antipopular essence of imperialism and its aggressive intentions,"[76] and in a statement made by Marshal Grechko: "Not wishing to reckon with the lessons of history, imperialist reaction seeks a way out in various kinds of adventurism and provocations, and in direct use of military force."[77] The role of civil defense is addressed in the following statement in *Red Star* by the head of the Soviet civil defense program, General A. Altunin:

> The main purpose of our civil defense is, together with the armed forces, to ensure the population's defense against mass destruction weapons and other means of

attack from a likely opponent. By implementing defensive measures and thoroughly training the population, civil defense seeks to weaken as much as possible the destructive effects of modern weapons . . . .

We state unequivocally . . . the USSR's civil defense has never threatened anybody and threatens nobody, poses no danger for Western countries and moreover does not and cannot upset the Soviet-American balance of forces.[78]

Apart from the Soviet views that damage limitation is integral to deterrence and that capitalism might seek to "reverse the course of history" through armed conflict, there are other explanations for the Kremlin's attention to civil defense that do not presuppose Soviet first-strike intentions. One explanation concerns the image of the Red Army in the Soviet consciousness. The Red Army has been glorified in Soviet history, and it plays an important role in maintaining civilian morale and confidence. As Robert Kennedy has pointed out:

> A deterrent posture that calls for war-winning and damage-limiting capabilities is consistent with traditional views of the military missions of ensuring success in warfare and protecting populations and government structures.[79]

In this light, civil defense can be viewed as a concession to a prevalent and powerful domestic political force.

Ideological and other domestic considerations also affect the Soviet preoccupation with civil defense. An active civil defense program helps to maintain order at home. It bolsters faith that the Communist Party and government watch over and protect the citizenry; it is consistent with the Leninist principle that the vanguard of the proletariat leads people and shapes destiny rather than accepting passively the vicissitudes of the future; and it reinforces the garrison-state mentality. This last function recognizes that people are more willing to make sacrifices for the state when they perceive an external threat. The importance of generating faith in the government, party, and army, and a willingness on the part of citizens to make sacrifices for the state has been proclaimed by Marshal V. D. Sokolovskiy:

> The people must be deeply convinced of the indestructible unity of the countries of the socialist camp, of the wise leadership of the Communist and Workers' Parties, [and] of the economic might of the Soviet Union. It is necessary to instill in the people a belief in the might of our Armed Forces and love for them.[80]

A final political consideration, already discussed, pertains to the Great Russians and the Communist Party's worries about continued control, which could be tenuous if a nuclear strike were to destroy the government's centralized leadership structure.

It has been noted that the Soviet Union does not place much confidence in the limited nuclear war scenarios of the United States. Nevertheless, the Soviet Union must consider the possibility of strikes of a more limited nature from China, England, or France.[81] The ACDA and CIA studies referred to earlier maintain that civil defense would not allow the Soviet Union to escape massive destruction from a major strategic exchange with the United States; however, Soviet civil defense preparations might offer a degree of protection from a more limited Chinese or European strike.[82] To the extent that civil defense is viewed as appropriate only against a limited exchange, the US limited nuclear war scenarios may indeed contribute to the Soviets' perceptions of civil defense as efficacious!

WHERE DO WE GO FROM HERE?

Four major points have been advanced in this presentation. The first is that the Soviet Union's force structure and strategic doctrine do not eschew deterrence. Second, the Soviets are likely to continue to subscribe to the goal of a stable deterrence in the future, even if they pursue this goal through

means different from those employed by the United States.[83] Third, the Soviet Union's civil defense program cannot make a significant contribution to that country's warfighting or war-survival capabilities, and it therefore does not have a destabilizing effect on the strategic balance nor a distorting effect on the Soviet Union's perception of the strategic balance, as Goure, Jones, and others have argued. Finally, America's deterrent remains potent and adequate to deter the Soviet Union. Several conclusions are suggested by these four points.

First, while we recognize the Soviet Union as a powerful country whose national interests and behavior may be at dangerous variance with our own, we should not allow something as relatively inconsequential as the Soviet civil defense program to color our thinking with regard to Soviet intentions. Because the program does not materially enhance Soviet warfighting capabilities, we must not permit it to become yet another spur to an elusive, expensive, dangerous, and ultimately futile quest for nuclear strategic superiority. Rather, it is in the best interests of the United States to continue to pursue an equitable strategic arms control agreement with the Soviet Union.

Second, the United States should not attempt to duplicate the Soviet civil defense program. Most of the problems that bedevil the Soviets would also haunt the United States,[84] although the United States would enjoy certain advantages by virtue of its superior rural infrastructure, decentralization, and highly developed transportation and communications networks.[85] Nevertheless, the fact remains that each superpower is equally vulnerable to the strategic nuclear forces of the other, its civil defense efforts notwithstanding.[86]

Apart from questions of technical and economic feasibility, one must also address the point that a shelter-centered society would constitute a wholly new departure from the patterns of US history and the American psyche. Arthur Washow, in a perceptive essay which continues to hold valuable insights two decades after its publication, identified numerous obstacles that would make an extensive civil defense program infeasible and unattractive to a democratic society. A partial inventory of Washow's arguments includes these points:[87]

- A successful civil defense program would require a gigantic bureaucracy and a number of trained cadres. These cadres would demand unquestioning obedience. The Orwellian implications are unprecedented and probably unacceptable to American society.
- A large proportion of the civilian population would have to be maintained in a high state of readiness. This could only be accomplished by virtue of a continuing emphasis of the Soviet threat. Such an emphasis might exacerbate superpower tensions while imposing inflexibility on the President in superpower negotiations.
- A civil defense program might generate societal divisiveness in that the program would result in unequal protection to a population facing unprecedented disaster. Ethnic groups would compete for urban shelter spaces, and urban evacuees would be viewed as depletors of farmers' stocks.
- A US civil defense program could damage relations with our allies, who might interpret the program as an inward turn that abandons non-Americans to die in the nuclear holocaust. It might also convince our allies that we see war as survivable and more likely. Such developments could set up a self-reinforcing action-reaction process that would see increasing American isolation from the world resulting in increased isolation of other nations from the United States.[88]
- The adoption of a US civil defense program might imply the demise of prospects for negotiations with the Soviets.
- Even a modest American civil defense program could not remain modest. It would necessarily grow into a major program, heightening many of the social and political problems mentioned above and necessitating the expenditure of huge sums of money. It is doubtful that Americans would be favorably disposed to support such an expensive program over a long period of time.[89]

Third, and finally, the United States should continue to modernize its strategic nuclear—and conventional—forces in order to maintain the credibility of our deterrent in a dynamic technological and political environment. As long as the United States can threaten the continued superpower status and political integrity of the Soviet Union, that state will be deterred.

NOTES

1. Henry Kissinger, cited in Michael Howard, ed., *The Theory and Practice of War* (London: International Institute for Strategic Studies, 1965), p. 291.
2. Richard Pipes, "The Soviet Strategy for Nuclear Victory," *Commentary*, 64 (July 1977), 21-34.
3. Leon Goure, *War Survival in Soviet Strategy* (Coral Gables: Center for Advanced International Studies, Univ. of Miami, 1976).
4. T. K. Jones, *Industrial Survival and Recovery After a Nuclear Attack: A Report to the Joint Committee on Defense Production, US Congress* (Seattle: The Boeing Aerospace Co., November 1976), p. 84.
5. See David Bender, "New CIA Estimate Finds Soviet Seeks Superiority in Arms," *The New York Times*, 26 December 1976, p. 1.
6. Pipes.
7. Leon Goure, F. D. Kohler, and M. L. Harvey, eds., *The Role of Nuclear Forces in Current Soviet Strategy* (Coral Gables: Univ. of Miami, 1974), p. 60.
8. Goure, *War Survival*, p. 2. This figure is almost 20 times greater than America's 1976 federal allocations to civil defense.
9. For studies citing the effectiveness of Soviet civil defense programs, see Leon Goure, "Another Interpretation," *Bulletin of the Atomic Scientists*, 34 (April 1978), 48-51; *Shelter and Soviet War Survival Strategy* (Coral Gables: Univ. of Miami, 1978); and numerous other studies cited herein. Leon Goure is the most prolific of those writing about the effectiveness of Soviet civil defense. See also T. K. Jones, *Effect of Evacuation and Sheltering on Potential Fatalities from a Nuclear Exchange* (Seattle: The Boeing Aerospace Co., 1977); and *Defense Industrial Base: Industrial Preparedness and Nuclear War Survival*, testimony before Joint Committee on Defense Production, Part 1, 17 November 1976; G. R. Denny, "The Implications of Soviet Civil Defense," technical report distributed by Defense Technical Information Center, Alexandria, Va., May 1979; William O. Staudenmaier, "Implications of Civil Defense for the US-USSR Strategic Nuclear Balance," Strategic Issues Research Memorandum (Carlisle, Pa: US Army War College, Strategic Studies Institute, 30 April 1978); and Harriet Fast Scott, "Civil Defense in the Soviet Union," *Air Force Magazine*, 59 (August 1976), 73. Studies and essays that are skeptical of the effectiveness of the Soviet civil defense program include US Arms Control and Disarmament Agency, *An Analysis of Civil Defense in Nuclear War* (Washington: ACDA, December 1978) [hereinafter referred to as ACDA study]; Central Intelligence Agency, *Soviet Civil Defense* (NI-78-1000 3), July 1978 [hereinafter referred to as CIA study]; Oak Ridge National Laboratory, trans. *Grazhdanskaya Oborona* (Civil Defense), 1974; Fred Kaplan "The Soviet Civil Defense Myth," [in two parts], *Bulletin of the Atomic Scientists* 34 (March 1978), 14-20 and (April 1978) 41-48; Robert Kennedy, "The Strategic Balance in Transition," in *Soviet Armed Forces Review Annual*, ed. David Jones (Gulf Breeze, Fla.: Academic International Press, 1980); Les Aspin, "Review of 'Soviet Civil Defense' " (CIA study), *Bulletin of the Atomic Scientists*, 35 (February 1979), 44-45; and Ed Zuckerman, "Hiding From the Bomb Again," *Harper's*, 259 (August 1979), 33-40, 90.
10. Cited in Eugene Wigner, ed., *Who Speaks for Civil Defense?* (New York: Charles Scribner and Sons, 1968), p. 52.
11. See Bender; Goure, *War Survival*; Pipes; and Paul Nitze, "Assuring Strategic Equality in an Era of Detente," *Foreign Affairs*, 54 (January 1976), 207-32. See also, R. J. Rummel, "Will the Soviet Union Soon Have a First Strike Capability?" *Orbis*, 20 (Fall 1976), 579-94, and "Is Strategic Deterrence Collapsing?" unpublished manuscript, Univ. of Hawaii, 10 June 1979.
12. For scenarios that might lead to US concessions, see Jones, *Effect of Evacuation*, p. 126; Donald Rumsfeld, *Annual Report to Congress, Fiscal Year 1978* [Department of Defense], p. 107; and Kaplan (part one), p. 15.
13. See US Congress, Office of Technology Assessment, *The Effects of Nuclear War* (Washington: GPO, 1979); and Harry Yoshpe, *Our Missing Shield: The US Civil Defense Program in Historical Perspective*, prepared for the Federal Emergency Management Agency, Contract No. 01-79-C-0294, April 1981.
14. CIA study, p. 4.
15. *The Effects of Nuclear War*, p. 140.
16. John Collins, *US-Soviet Military Balance* (New York: McGraw-Hill, 1980), pp. 174-75.
17. Ibid., p. 175.
18. James Schlesinger, *Annual Defense Department Report, Fiscal Year 1975*, p. 54.
19. Cited in Yoshpe, pp. 458-59.
20. Harold Brown, "Civil Defense—The New Debate," *Worldview*, 22 (January 1979), 46.
21. PD 41 was issued on 29 September 1978 with the goal of improving deterrence by means of increasing the number of Americans who would survive a nuclear attack (through crisis relocation planning) and ensuring greater continuity of government in the event that deterrence fails. PD 58, issued August 1980, addresses the issue of continuity of government by outlining evacuation plans and procedures for the leading 16 federal officials during times of heightened tensions. Furthermore, President Reagan has doubled the federal allocation for civil defense in the FY 1983 budget.
22. In addition to the sources cited in note 9, other individuals who challenge the effectiveness of Soviet civil defense and deal with its effects on deterrence include S. Drell and F. Von Hippel, "Limited Nuclear War," *Scientific American*, 235 (November 1976), 27-37; Gary Guertner, "Strategic Vulnerability of a Multinational State: Deterring the Soviet Union," *Political Science Quarterly*, 96 (Summer 1981), 209-23; and William Kincade, "Repeating History: The Civil Defense Debate Renewed," *International Security*, 2 (Winter 1978), 99-120. See also, besides the ACDA and CIA studies, National Academy of Sciences, *Long-Term Worldwide Effects of Multiple Nuclear Weapons Detonations* (Washington: National Academy of Sciences, 1975). Finally, see A. Broyles, E. Wigner (pro) and S. Drell (con), "Civil Defense in Limited War: A Debate," *Physics Today* (April 1976), 44-57.
23. The Soviets have repeatedly argued that the protection of all Soviet citizens is the primary responsibility of its civil defense program. See A. Altunin, "The Main Direction," *Voyennye Znaniia* [Moscow], October 1976.
24. CIA study.
25. Ibid. See also ACDA study, Kaplan, and *Grazhdanskaya Oborona*.

26. *Grazhdanskaya Oborona*, p. vii.
27. Jones, *Industrial Survival and Recovery*, pp. 7, 10.
28. Goure, *War Survival*, pp. 3, 125, 177.
29. Ibid., pp. 3, 11, 77-119.
30. Kincade, Kennedy, CIA study, and ACDA study.
31. Kaplan, and Goure, *War Survival*, pp. 114, 118.
32. Keith A. Dunn, "Soviet Military Weaknesses and Vulnerabilities: A Critique of the Short War Advocates," Strategic Issues Research Memorandum (Carlisle, Pa.: US Army War College, Strategic Studies Institute, 31 July 1978), p. 12.
33. Jones, *Industrial Survival and Recovery*.
34. See "Can Billions Buy Survival in an Atomic War?" *US News and World Report*, 8 October 1979, pp. 51-52.
35. See Altunin, and Goure, *War Survival*, pp. 129-60.
36. CIA study, pp. 3, 10; and ACDA study.
37. CIA study, p. 10.
38. Ibid.
39. ACDA study, p. 11.
40. *Grazhdanskaya Oborona*, pp. 50-54.
41. US Joint Committee on Defense Production, *Civil Preparedness Review, Part II: Industrial Defense and Nuclear Attack*, April 1977, pp. 20, 68.
42. Kincade.
43. Jones, *Industrial Survival and Recovery*, p. 7.
44. ACDA study, p. 5.
45. See Kincade, Kaplan, and Guertner.
46. See Geoffrey Kemp, "Nuclear Forces for Medium Powers," Part II, Adelphi Paper, No. 107 (London: International Institute for Strategic Studies, 1974), pp. 5, 9; Richard Garwin, Testimony Before Joint Committee on Defense Production, *Civil Preparedness and Limited War*, 28 April 1976, p. 55.
47. ACDA study, p. 5.
48. Jones, *Industrial Survival and Recovery*, p. 84.
49. See ACDA study and *Long-Term Worldwide Effects of Multiple Nuclear Weapons Detonations*.
50. Earl Rubenking, "The Soviet Tractor Industry: Progress and Problems," in US Congress, Joint Economic Committee, *Soviet Economy in a New Perspective*, Joint Committee Print, (Washington: GPO, 1976), p. 55.
51. CIA study, p. 13.
52. ACDA study, pp. 1, 2.
53. CIA study, p. 12.
54. ACDA study.
55. Ibid., pp. 1, 2.
56. CIA study, p. 4.
57. See Kennedy, Guertner, and Kincade.
58. Pipes.
59. Kennedy, pp. 367-68.
60. See Kennedy, pp. 356-57. Also, see Fritz Ermarth, "Contrasts in American and Soviet Strategic Thought," *International Security*, 3 (Fall 1978), 138-55; Robert Levgold, "Strategic 'Doctrine' and SALT: Soviet and American Views," *Survival*, 21 (January-February 1979), 8-13; and Raymond Garthoff, "Mutual Deterrence and Strategic Arms Limitations in Soviet Policy," *International Security*, 3 (Summer 1978), 113-25.
61. See Paul Cook, *The Soviet Conglomerate*, Special Report No. 67 (Washington: State Department, Bureau of Public Affairs, 11 September 1979); Murray Feshbach, "Population and Manpower Trends in the USSR," in *The USSR and the Sources of Soviet Policy* (Washington: The Council on Foreign Relations and the Kennan Institute, 1978); and Hugh Seton-Watson, "The Last of the Empires," *The Washington Quarterly*, 3 (Spring 1980), 41-46.
62. Desmond Ball, "Soviet ICBM Deployment," *Survival*, 22 (July-August 1980), 167-70; and Guertner.
63. Adam Ulam, *Expansion and Coexistence: Soviet Foreign Policy 1917-1973*, 2d. ed. (New York: Praeger, 1974), pp. 663-64.
64. See Keegan, Bender, Rummel, Pipes, Jones, and Denny.
65. See Colin Gray, "Force Postures, Arms Races, and the Future of SALT," address before the University of Southern California/US Army Russian Institute Symposium, Garmisch, West Germany, December 1978.
66. Pipes, pp. 30-31.
67. For example, see *Pravda*, 13 March 1954.
68. See Henry Trofimenko, "The 'Theology' of Strategy," *Orbis*, 21 (Fall 1977), 498-500, 510; also, see Kennedy, p. 356; Levgold, pp. 8-13; Collins, p. 116; William Lee, "Soviet Military Policy, Objectives, and Capabilities," *Air Force Magazine*, 62 (March 1979), 56, 59; and Ermarth.
69. Collins, p. 116; and Ben Lambeth, *How to Think About Soviet Military Doctrine* (Santa Monica: RAND, February 1978), pp. 4, 6-8.
70. See Kennedy, pp. 356-57; Lambeth; Lee; Collins, p. 118; and Trofimenko.
71. Dennis Ross, "Rethinking Soviet Strategic Policy: Inputs and Implications," *The Journal of Strategic Studies*, 1 (May 1978), 9; see also, Collins, pp. 115-20. Daniel Papp, "Soviet Perceptions of the Strategic Balance," *Air University Review*, 32 (January-February 1981), 2-17 for an evaluation of Soviet attitudes toward deterrence which draws different conclusions than Ross, Kennedy, and Garthoff.
72. Ross, p. 6.
73. Kennedy, p. 357. Italics added.
74. See Guertner; Kincade; ACDA study, p. 5; Garwin, p. 55; and Kemp, pp. 5-9.
75. Cited in Arnold Horelich and Myron Rush, *Strategic Power and Soviet Foreign Policy* (Chicago: Univ. of Chicago Press, 1962), p. 92.
76. Cited in Goure, *War Survival*, p. 33.
77. Ibid, p. 32.
78. Cited in William Chipman, *Civil Defense for the 1980's—Current Issues* (Washington: Defense Civil Preparedness Agency, 13 July 1979), pp. 61-62. Italics added.
79. Kennedy, p. 357.
80. V. D. Sokolovskiy, *Soviet Military Strategy*, ed., Harriet Fast Scott, 3d. ed. (New York: Crane, Russak, 1975), p. 329.
81. For a discussion of the different levels of threat faced by the United States and the Soviet Union, see Robert Kennedy, "SALT: The Problems of Arms Control," (unpublished manuscript, US Army War College, Strategic Studies Institute, 1981), pp. 4-6; see *Pravda*, 19 January and 23 February 1977 and 26 April 1978 for discussions of the Soviets' desire for "equal security."
82. It is questionable to treat nuclear attacks by England, France, and China against the Soviet Union as "limited" since their composite capabilities are sufficient to destroy every Soviet city with a population of greater than 100,000. See Kennedy, "SALT: The Problems of Arms Control," p. 6.
83. Lee.
84. See Yoshpe; Zuckerman; CIA study; *Long-Term Worldwide Effects of Multiple Nuclear Weapons Detonations*; and Ken Englade, "Surviving the Bomb," *Atlanta Weekly Magazine*, 16 August 1981.
85. ACDA study, p. 13.
86. Nevertheless, much attention in the United States is beginning to focus upon active defenses (e.g., interview with retired General George Keegan on National Public Radio "All Things Considered" 3 November 1981) and the inadequacy of a deterrent policy based on mutual vulnerability. See, for

example, Keith Payne and Neil Pickett, "Vulnerability Is Not An Adequate Strategy," *Military Review*, 61 (October 1981), 66-72; and S. Rossen, "Nuclear Arms Strategic Defense," *The Washington Quarterly*, 4 (Spring 1981), 82-99.

87. Arthur Washow, "The Shelter-Centered Society," *Scientific American*, 206 (May 1962), 46-51.

88. The credibility of America's commitment to risk annihilation in the defense of Europe has long been a matter of concern and debate. De Gaulle questioned it two decades ago. European fears were not lessened by the Nixon Administration's continued postponement of the "Year of Europe" or former Secretary of State Kissinger's acknowledgment of certain scenario-dependent divergences between European and American security interests. In Henry Kissinger's "The Future of NATO," *The Washington Quarterly*, 2 (Autumn 1979), 6-7, Kissinger shocked NATO members when he noted:

> It is absurd to base the strategy of the West on the credibility of the threat of mutual suicide. [NATO should not rely too strongly on] strategic assurances that [America] cannot possibly mean, or if we do mean, we shouldn't want to execute, because if we do execute them we risk the destruction of our civilization.

The Europeans currently perceive a dangerous willingness of the United States to fight a war in Europe. See, for instance, "Europe's Fear of Frying," *The New York Times*, 25 October 1981, p. 18E; and Walter Lacquer, "America's Fissuring Alliance," *The New York Times*, 25 October 1981, p. 19E.

89. See Kennedy, "SALT: The Problems of Arms Control"; and George Kennan, "Two Views on the Soviet Problem," *The New Yorker*, 2 November 1981, pp. 54-62.