

The Nuclear Arms Race: Man vs. War Machines

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While reading Herbert Butterfield's *Christianity, Diplomacy and War* recently, I was struck as much by some marginal notations a previous reader had left behind as by the masterful text itself (published in 1953). One notation was the word "Vietnam" scribbled in the margin next to Butterfield's treatment of the Korean War. I remembered suddenly an experience I'd had during the Korean War period. I was helping then to care for an elderly gentleman, and we used to listen regularly to radio broadcasts from the battlefield. The old man, whose capacity to differentiate between past and present had failed him, would ask for further news on the war: "And how are the Central Powers doing?" World War I and Korea had for him collapsed into a single struggle.

Both the marginal update and an old man's failing memory make an obvious point, but one we frequently overlook: that war is an enduring reality. The moral issues raised by war endure too: the protection of civilians and the calculation of costs and benefits.* Nether war nor the effort to control it has passed away. Only its victims are gone—and a good many survivors too, who, in their own time and place, wondered what could be done to control the conflict. *Plus ça change....*

Something is new, though. The advent of atomic and nuclear weapons has changed both the pattern of recurring violence and that of efforts to limit war and the spread of weapons. War has changed at a much faster pace than the human understanding of it. War is winning its race against human efforts to control it. So uneven is the match between military technology and political efforts to utilize the newer weapons politically that humankind now runs the risk of accepting terms of war dictated by the military machinery itself, rather than by the traditional enemy—other human beings.

Hans Morgenthau pointed to this disturbing anomaly during a seminar session on ethics and nuclear weapons held at Georgetown University in 1974, when he re-

marked that, for the first time in history, the principal military antagonists enjoy a superfluity of weapons over targets.** For example, the U.S. will soon be able to deploy about 18,000 nuclear warheads. Yet in the Soviet Union there are only 219 cities with a population of more than 100,000 people. Even were there four times that many targets, the ratio of weapons to targets would be a staggering 16 to 1!

Reflecting on this unprecedented and unnerving development, Morgenthau warned that to go on using the words "weapon" and "war" for a possible nuclear confrontation is a dangerous exercise in semantic confusion: The reality of such violent conflict will bear no relation to any previous historical event.

The warning issued by Morgenthau was underscored last fall in a report published by the United States Arms Control and Disarmament Agency (ACDA) entitled "Worldwide Effects of Nuclear War...Some Perspectives" (No. 81). The alarming passage is this:

Another unexpected effect of high-altitude bursts was the blackout of high-frequency radio communications. Disruption of the ionosphere (which reflects radio signals back to the earth) by nuclear bursts over the Pacific has wiped out long-distance radio communications for hours at distances of up to 600 miles from the burst point.

Yet another surprise was the discovery that electromagnetic pulses can play havoc with electrical equipment itself, including some in command systems that control the nuclear arms themselves.

Much of our knowledge was thus gained by chance—a fact which should imbue us with humility as we contemplate the remaining uncertainties (as well as the certainties) about nuclear warfare....

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*For an able treatment of the principal issues, cf. Theodore R. Weber, *Modern War and the Pursuit of Peace* (New York: Council on Religion and International Affairs, 1968).

**Hans J. Morgenthau discusses this in "The Question of Détente," *Worldview* (March, 1976).

For the first time, I believe, we can read in an official United States Government document about the eerie possibility that these machines of war may escape the grasp of their designers and deployers and themselves begin to determine the course of the war. It is against these somber warnings that I would like to undertake a moral reassessment of warfare in the light of nuclear weapons developments.

The most disturbing transformation in the nature of warfare has occurred because of the unpredictability of the pattern of fighting that will ensue upon the commencement of nuclear hostilities. As Alain Enthoven and other analysts insist, literally no one knows what a nuclear war would be like. There is no reliable way to predict the damage that would be done in such a conflict.

From the fact of incalculable damage from nuclear war there results the most intractable obstacle to employing the traditional effort to limit war. That is, the unknowability of the potential damage precludes any effort to ask one of the essential moral questions about war: What is the proportion between loss and gain to be expected from the hostilities? If the losses are unpredictable, no calculation of their proportionality to political gains is feasible. Hence, policy planners and political leaders are unable to certify the preponderance of gain over loss.

The starting point of a contemporary moral reassessment of nuclear armaments must be an awareness that it is not the race for nuclear advantage that is the most dangerous aspect of the present military crisis. It is, rather, the race between men (Soviet and American) and their respective war machines. The ACDA report sounds a warning that the machines are currently ahead in that race for survival.

In the present technological-military situation, even the military commanders do not claim they can exercise "command and control" over the level of hostilities once a nuclear weapon has been used. This profound change in the nature of warfare appears to demand the abandonment of moral efforts to control the level of violence, efforts that have always sought to subordinate the military question of the use of force to the political question of the purpose of force. Since the nation's military professionals do not claim to guarantee their control over the instruments of violence in nuclear war, the political acceptance of such intrinsically uncontrollable weaponry is equivalent to abdication by the citizenry of any further efforts to set limits to nuclear warfare. One might then argue that it is futile to speak of moral limits on nuclear war.

From this premise—that morality and nuclear warfare are incompatible—one can draw directly contradictory conclusions. The first, embraced by a majority of analysts, says that we must forego the useless discussion of limiting nuclear war. Those in the minority—including the present author—reluctantly come to an opposite conclusion. Since one must apparently abandon either ethics or the intention to use nuclear weapons, and since life without ethics would be incomprehensible and intolerable, we believe it is necessary to abandon the

weapons that have proven to be incompatible with the tradition of civilized warfare.

This conclusion must be traumatic to an American moralist who rejects the pacifist approach to politics. But if the presupposition of an ethical endorsement of the use of violence is the capacity to compare the costs and benefits of war, it seems inescapable. When no such calculation is allowed the weapons themselves, no moral argument for the acceptability of such weapons is plausible. Until military professionals can offer a reasonable certitude of being able to control their weapons, the moralist is forced to reexamine nonnuclear options for defense policy.

To some (though not the just war theorist), this insistence on the importance of being able to calculate the effects of nuclear war may seem too theoretical a consideration to merit discussion or to form the basis for moral judgment about such wars. The just war theorist might suggest that even without accepting the significance of the capacity to make such a calculation, a morally sensitive person could still reject the option for nuclear war simply on an estimate of the predictable results of a thermonuclear exchange that escapes human control and ends only with the exhaustion of current projected weapons stockpiles.

What are the predictable results? In the reports published by ACDA it is estimated that an all-out nuclear war, in which 10,000 warheads or bombs were detonated, would result in more than 200 million fatalities. Furthermore, such a war would destroy between 30 and 70 per cent of the ozone layer in the entire Northern Hemisphere and between 20 and 40 per cent of the ozone in the Southern Hemisphere as well. The destruction of the ozone layer would have truly apocalyptic consequences, such as: a two-to-three-year destruction of agriculture (due to a change of average temperature of even one degree), disabling sunburn or snow blindness, and disruption of communications.*

Another relevant consideration for evaluating the results of a nuclear exchange has been submitted by Howard and Margaret Sprout in a chapter entitled "Geography and International Politics in an Era of Revolutionary Change," published in *The International Political System* (edited by Romano Romani, 1972). The Sprouts argue that the present industrial world economy has been built upon the exploitation of nonrenewable mineral and other resources. If the present industrial economic structure were to be destroyed through nuclear war, there would be insufficient physical resources remaining in the earth's crust to rebuild it. A post-holocaust world will be a preindustrial world inhabited by a postindustrial civilization.

If [Harrison] Brown's thesis is accepted [in *The Challenge of Man's Future*, 1954], the conclusion follows that our conquest of nature, of which twentieth-century man is so proud and boastful, is viable only in a universe from which total war fought

*See Alain Enthoven's essay, "1963 Nuclear Strategy Revisited," in the forthcoming volume (Orbis, 1977) *Ethics, Diplomacy and Defense*, edited by Francis X. Winters and Harold Ford.



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with nuclear weapons is permanently excluded. A further implication latent in Brown's thesis is that nuclear war would disable countries in proportion roughly to their level of industrialization and to the geographical concentration of their industrial concentrations. In plain English, a reasonable inference from Brown's thesis is that a future general war would wipe out the densely inhabited industrial countries of Western Europe, damage the United States and the Soviet Union probably beyond recovery....

Consequently, whether one argues from the uncontrollability of nuclear war or from the predictable results of an actually uncontrolled war, the moral conclusion is the same: No conceivable political goal could justify such a use of violence.

If, however, some future technological or diplomatic breakthrough were to enable the military to offer some reasonable assurance of control, then the traditional moral criteria governing the use of violence would once more be applicable to the political and military decisions concerning war. Let us now examine the acceptability of the threat and/or use of nuclear weapons in the (presently inconceivable) circumstance of their controllability.

The first question to be asked about the morality of using such weapons would concern the *purpose* of their use. The enormity of the potential damage to be expected from the (tactical or strategic) use of such weapons requires that the purpose be nothing less than the defense of the ultimate political values: life and/or sovereignty. Nuclear arsenals are only marginally capable of defending lives, by denying the enemy the use of some of his offensive weapons and thereby limiting the potential damage his weapons can do. Since this is so, their (hypothetically projected) *controlled* use would be justifiable only by a calculation that such use would protect more lives (not excluding the lives of the hostile populace) than would their nonuse. Such a calculation of saving lives by "damage-limiting" use of nuclear weapons in response to a nuclear threat seems highly inaccurate, for each of the superpowers has (presently) an invulnerable submarine fleet capable of responding against the enemy's cities following any conceivable counterattacks.

A tenuous case for a nuclear second-strike can be made on the basis of its political utility, even if it is determined that lives would not, on balance, be saved. That political purpose, in the case of the U.S., would be the vindication of the values of free institutions against the threat of totalitarian control of the world. In this view, the act of retaliation would be morally legitimated by arguing that the political value of democratic ideals and institutions would be enhanced by the resolute effort to defend them even to the death. Such an argument has an initial appeal perhaps. But it yields finally to the realization that such liberal institutions could never survive a nuclear holocaust or flourish in a post-apocalyptic world. The chaos and the political/military tyranny that would result from such events make this case for a nuclear second-strike indefensible. There is, then, no political purpose that could be defended by a nuclear second-strike.

In order to complete the argument against the moral acceptability of using nuclear weapons, let us for the moment bracket the conclusion that there are no moral legitimizing purposes for such a nuclear threat or use and ask the second set of traditional questions about the *means* of warfare. In other words, if there were some defensible political purpose for the use of such weapons, would nuclear weapons be a morally acceptable means of achieving this goal?

Here we turn to the questions about *discrimination* and *proportionality* in the use of military violence. Let us first examine such use according to the criterion of discrimination. The principle of discrimination in the use of military force forbids all intentional attacks on noncombatants.* The application of this principle immediately disallows the nuclear strategy called counter-

*Sidney Bailey points out in "Protecting Civilians in War," *Survival* (November/December, 1972) that the principle of discrimination is almost universally recognized as valid by scholars who maintain the Christian version of the just war doctrine. He notes that two American scholars dissent from this near unanimity, namely, William V. O'Brien and Richard S. Hartigan. An answer to the O'Brien-Hartigan arguments can be found in Weber's *Modern War and the Pursuit of Peace*.

value (the exclusive targeting of hostile cities and such societal structures as the economy). The same criterion also rules out the "counterforce" strategy articulated by former Secretary of Defense James Schlesinger. According to this strategy, the U.S. would, under certain circumstances, respond to a Soviet attack by a targeting of military objectives in the Soviet Union with an announced willingness to escalate the attack, after a suitable chronological firebreak, to an attack on non-military targets such as cities. Since "counterforce" strategy as proposed by the Department of Defense explicitly includes the intention merely to postpone, and not to eschew, the targeting of civilians, the strategy *as a whole* is morally unacceptable.

Could other plans for strategic response be deemed morally acceptable under the principle of discrimination? It seems that—exclusive of the effect of radioactive fallout—some countermilitary targeting might be in keeping with the principle of civilian immunity. For example, a counterstrategic defense* or a countercombatant attack as outlined by Burns, Russett, and Ramsey might be technologically feasible and morally acceptable if the principle of discrimination alone is applied.**

The moral unacceptability even of these strategies is seen, however, once the analyst applies the other indispensable criterion—*proportionality*—which requires that the political values to be obtained outweigh the evils to be inflicted, including even the collateral, or unintended, civilian damage.

A study commissioned by the Arms Control Subcommittee of the U.S. Senate Committee on Foreign Relations has detailed the proportions of the damage to be expected from even a counterforce attack by the USSR against U.S. military installations.*** It was undertaken to obtain an independent estimate of the levels of unintended or collateral civilian casualties that might be expected by U.S. citizens if the sort of "counterforce" exchange discussed by former Secretary Schlesinger were to occur. Its conclusions are disconcerting. For example, a comprehensive attack by the Soviets using two (550 kiloton) warheads against all of the 1,102 military sites in the United States (1,054 missile silos, 46 SAC bases and 2 nuclear submarine bases) on a typical March day would be likely to kill 6.7 million people despite every precaution to avoid civilian damage. If the attack were to target two 3-megaton warheads against each of the same targets, the resulting civilian fatalities are estimated at 16.3 million. Even if the Soviets were to single out one ICBM base near a populous area (for example, Whiteman Air Force Base in Missouri), and to employ two 3-megaton warheads against each of the 150 silos there, the probable cost in civilian lives would be 10.3 million. It seems unnecessary to belabor the conclusion that such "collateral" but unintended civilian damage is *out of all proportion* to any conceivable political goal. Hence, the (hypothetical) option of a controlled counterforce response is morally excluded by the criterion of proportionality.

These arguments lead ineluctably, I believe, to the conclusion that any serious threat or use of nuclear weapons is immoral. The most critical

reason for this is the weapons' intrinsic uncontrollability. Furthermore, because of the predictable consequences of their use, no political utility has yet been discovered for their use, at least by a free society. Even if they could somehow be brought under human control, and if some political utility could be demonstrated for their deployment, the use of nuclears would still be immoral because of the predicted damage to civilians from even a strictly countermilitary attack.

War has changed. Hans Morgenthau was right in insisting that we abandon the words "war" and "weapon" when speaking of nuclear conflict. The expressions "nuclear war" and "nuclear weapons" create the impression that such weapons systems and strategies are rational instruments to achieve political purposes. Whereas in previous wars we had to be concerned about the runaway momentum of violence, given the nature of human passion and vindictiveness, now we are faced with an era in which the weapons themselves, with their computers and communication networks, might escape direction even by militarist leaders bent on vengeance and might set their own mechanical terms for war.

Two passages from ACDA's "Worldwide Effects of Nuclear War...Some Perspectives" underline this dangerous situation:

New discoveries have been made, yet much uncertainty inevitably persists. Our knowledge of nuclear warfare rests largely on theory and hypothesis, fortunately untested by the usual processes of trial and error; the paramount goal of statesmanship is that we should never learn from the experience of nuclear war.

The uncertainties that remain are of such magnitude that of themselves they must serve as a further deterrent to the use of nuclear weapons....Uncer-

*"Counterstrategic" is used here to mean an attack (hypothetically) limited to the following targets: strategic forces, including ICBMs, submarine support facilities, ABM sites, air fields, fuel depots, missile depots, rail lines serving ICBMs, and whatever targets could be established to be contributing, or be about to contribute, to the strategic attack on the U.S.

**Arthur L. Burns, "Ethics and Deterrence: A Nuclear Balance Without Hostage Cities?" *Adelphi Papers*, No. 69 (London: The Institute for Strategic Studies, July, 1970). This strategy has been proposed independently by Burns in this paper and by Bruce Russett in "Assured Destruction of What? A Countercombatant Alternative to Nuclear MADness," *Public Policy* (Spring, 1974). See also Russett's exposition of the same theme in "Short of Nuclear Madness," *Worldview* (April, 1972), and Paul Ramsey's "The MAD Nuclear Policy," *Worldview* (November, 1972).

***"Analyses of Effects of Limited Nuclear Warfare" (Washington: 1975). The ACDA report, "Some Worldwide Effects of Nuclear War," includes these estimates for a countervalue (countercity) attack by the USSR on the U.S. Although parallel figures for the probable Soviet losses from a U.S. retaliatory strike are not publicly available, some general comparability can be assumed for the sake of a moral evaluation of the legitimacy of U.S. policies to execute such strategies.

tainty is one of the major conclusions in our studies, as the haphazard and unpredicted derivation of many of our discoveries emphasizes.

We have come to realize that nuclear weapons can be as unpredictable as they are deadly in their effects. Despite some 30 years of development and study, there is still much that we do not know. This is particularly true when we consider the global effects of a large-scale nuclear war.

In the sober pages of the recent U.S. Government reports we finally recognize the reality of a mechanical Prometheus that has stolen the fire of technology and now defies its human make. It is time to stop, time to heed the warning of Fred Iklé, Director of ACDA, who remarked shortly before his appointment as director:

The jargon of American strategic analysis works like a narcotic. It dulls our sense of moral outrage about the tragic confrontation of nuclear arsenals, primed and constantly perfected to unleash widespread genocide. It fosters the current smug complacency regarding the soundness and stability of mutual deterrence. It blinds us to the fact that our method for preventing nuclear war rests on a form of warfare universally condemned since the Dark Ages—the mass killing of hostages.

We must awaken from our hypnotic trance and realize that we live in a state of military emergency, vulnerable at any moment to military challenges to which we could respond only at the risk of terminating the human experiment.

It is not possible, and perhaps not even desirable, for the entire U.S. citizenry to awaken at once to the peril in which we live. Yet the security of the human race depends on the awakening of a few leaders to the imperative of finding an alternative to a nuclear defensive policy.

We need adequate military strength to defend the human, cultural, and political values that have been achieved thus far in the process of human development. Yet we cannot any longer afford the illusion that nuclear "weapons" provide such security. We need to develop a conventional—and credible—alternative to the present nuclear defense policies of the United States, a capacity to protect Western interests in a hostile international environment without relying on nuclear weapons. Is this conventional military posture feasible?

Even to ask the question requires an awakening, a snapping out of the hypnotic state described by Iklé. To break the deterrence slumber requires, however, only the work of imagination, the capacity to think through the foreseeable consequences of using our nuclear arsenal. Once the predictable dynamics of such a nuclear exchange are contemplated, the question of conventional military posture becomes thinkable once more. Once such a thought has been admitted, the monumental task of reconstruction—ethical, political, military, and economic—has begun. With an awakening to the need for reconstruction, the opportunity and burden of leadership in U.S. political affairs becomes comprehensible.

Such a fundamental task of reconstruction cannot even be adequately imagined at the present moment. Yet some of the challenges to be faced by the architects of such a global renewal are clear. They will have to ask some traditional political questions about military affairs. From these questions will emerge other questions, perhaps more precise and more penetrating. Eventually, to the right question an answer will perhaps be found. Then the task of reconstruction will be under way.

What are some of the traditional political questions that might initiate this process of reconstruction? Let me suggest that a constructive beginning has already been made by Arthur L. Burns in his *Adelphi Paper* entitled "Ethics and Deterrence: A Nuclear Balance Without Hostage Cities?" In this paper, which has appeared simultaneously with similar suggestions from other creative minds, such as Bruce Russett and Paul Ramsey, Burns asks the proper political question: What are the vital interests of the USSR that can be denied to them without resorting to a genocidal attack on Soviet cities? While Burns's own answer is not persuasive to many analysts (he recommends that the U.S. target the one million Soviet troops stationed on the Sino-Soviet border, thereby disrupting their capacity to deal simultaneously with the external security needs of the Western and Eastern frontiers and their internal security problems), his questions itself remains valid and illuminating.

Reflection on Burns's question (identical, I believe, with the traditional question posed by the just war tradition) may reveal the possibility that there are indeed some vital Soviet interests that could be denied without reliance on nuclear weapons at all. For example, in response to a Soviet nuclear strike on the U.S. it might be possible to threaten Soviet industry and transportation centers with conventional warheads delivered by ICBMs that have been made more precise through the technological advance called MaRV (Maneuverable Re-entry Vehicles). Despite severe political and military obstacles, it might be possible to oppose Soviet and Warsaw Pact aggression in Western Europe with greatly augmented conventional NATO forces, capable perhaps of threatening, if necessary, the security of some of Russia's Eastern European satellites. In response to attempts to deny Western nations access to needed supplies or markets, it might be possible to create similar problems for the Soviet economy.

These possible responses to potential Soviet acts of aggression may turn out to be for various reasons either impractical or unwise. Yet simply posing the question about which Soviet vital interests can be threatened in response to aggression without threatening or using nuclear weapons may eventually reveal a feasible political and military doctrine that is neither genocidal nor suicidal, as our present doctrine surely is.

I submit that we have no alternative to asking this question earnestly. Or rather, we have only the alternative of allowing technology to triumph over man. We now know that nuclear weapons might escape human control, but we don't yet know whether we can escape their control.