The Military Utility of Nuclear Weapons
and the Case for Disarmament

25-27 March 2001

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Nuclear weapons, like any other military instrument, can have only three military uses: deterrence, defense, and compellence or coercion. Deterrence has been the primary rationale for the acquisition and retention of nuclear weapons capability. Defense and coercion are regarded as secondary and more problematic functions of nuclear weapons. This essay examines the case for the military utility of nuclear weapons in the light of historical experience and present and future circumstances. It concludes that while proponents of nuclear deterrence, defense, and compellence have credible arguments, their arguments are answerable and that, normative reasons apart, it is possible to show that nuclear weapons can and should be done away with. The five original nuclear powers, the new nuclear states (India, Pakistan, and Israel), and the nuclear aspirants (e.g. Iran, Iraq, and North Korea) can all give up nuclear weapons and be secure.

Deterrence

That nuclear weapons are primarily useful as deterrents against other nuclear weapons is the dominant rationale for their development and deployment. The US, the Soviet Union/Russia, the UK, France, and China have all justified their nuclear weapons programs on these grounds. The US and Soviet Union/Russia wanted to deter each other. The UK and France argued that the Soviet threat warranted individual national capabilities in Western Europe so as to strengthen deterrence in Europe. China developed nuclear weapons ostensibly to deter the US in the first instance. After 1958, and Beijing's break with Moscow, the Soviet Union/Russia became a potential nuclear threat to China as well.

The three newer nuclear states-India, Pakistan, and Israel-have also justified their nuclear weapons programs by citing nuclear threats to their security. India has at various times pointed at Pakistan, China, and even the US as nuclear threats. Pakistan's case is univocal and is rationalized exclusively in terms of the Indian nuclear threat. The Israeli argument is somewhat more ambiguous because none of its neighbors or putative adversaries has nuclear weapons. However, it would not be unreasonable for Israel to argue that it needs nuclear weapons against an Islamic bomb sometime in the future.

Amongst the nuclear aspirants, Iran, Iraq, and North Korea are the most likely to acquire nuclear weapons in the future. Iran could well argue that it needs nuclear weapons against the US which, in its view, is irrevocably hostile to its Islamic revolution. Iraqis, certainly after the Gulf war, could justify nuclear re-armament on the grounds that the US and other Western nuclear powers pose a nuclear threat. Iran and Iraq probably fear each other's nuclear programs as well: both undoubtedly worry about a nuclear "breakout" by the other. For North Korea, too, the US
appears as a powerful and implacable ideological foe that would like to overthrow its socialist revolution.

All these countries, and others who have the latent capacity to produce nuclear weapons, could also claim that they need nuclear weapons to deter other weapons of mass destruction, namely, biological and chemical weapons. India may be the only country that has stated that it does not envisage such a role for nuclear weapons, but even the Indian case is not unambiguous. The National Security Advisory Board's draft nuclear doctrine ruled out the utility of nuclear weapons against other weapons of mass destruction. However, the status of that document is unclear at this point in terms of the Indian government's acceptance of its various recommendations.

All these arguments are susceptible to critique and reassessment. Given the end of the Cold War conflict, the US and Russian arguments in respect of mutual deterrence have been dented. The hard, ideological quarrel between the two countries is over, and it is difficult to see what circumstances would lead up to a nuclear confrontation. In recognition of this reality, the two countries have significantly reduced strategic weapons. They have dismantled their intermediate nuclear forces in Europe. They have also drawn down their tactical nuclear weapons. The Bush Administration is seriously considering further reductions in strategic weapons, unilaterally if necessary. Russia may be forced to reduce its strategic forces in any case because of economic difficulties.

Despite the end of the Cold War quarrel, however, both countries cite each other as the reason for maintaining nuclear weapons. This is not altogether unreasonable. Until nuclear weapons are eliminated, they can always be used. Misperceptions could lead to a nuclear confrontation. Moreover, for technical reasons, it may not be possible to eliminate nuclear weapons completely for many years. In the meantime, deterrence appears inescapable, even if at much lower levels.

Having said that, as long as the US and Russia do not come into fundamental conflict, it is hard to see how and why nuclear confrontation would occur. Sooner or later, therefore, it should be possible to abolish nuclear weapons from their respective arsenals, to the satisfaction of both sides. The decision of the Bush administration to explore the possibility of deep unilateral cuts in strategic weapons shows that much can be done to reduce the nuclear threat in the coming years. President Bush's determination to go ahead with a limited missile defense and to re-negotiate or do away with the ABM Treaty in consultation with Moscow on the other has created a difficulty. However, the Russians have shown an interest in defense themselves, most recently with their proposal for a cooperative missile defense system. They may be persuaded in any case that a limited US system confined to defending against "states of concern" does not affect their deterrent.

The US also justifies nuclear weapons in terms of deterring "rogue states"/"states of concern". This is a relatively new role for the US arsenal. The question is: how serious is the threat of rogue states? There are two possibilities: first, that Washington is arrayed against such a state in a regional conflict (e.g., in defense of a US ally) in the course of which US forces or the US homeland is threatened with nuclear strikes; and second, that some irrational/fundamentalist regime seeks to challenge the US "out of the blue" as part of its ideological or religious crusade against the "evil imperialist". The first is a plausible scenario, but surely there are ways of
defending allies and of resolving regional conflicts without provoking a full-scale war that threatens the survival of the offending rogue state and causes it to lash out with nuclear weapons. The second possibility, that of a suicidal crusader attacking the US, is a rather remote one. Moreover, if a regime is so irrational as to contemplate a nuclear attack on the US homeland, that is, if it is intent on martyrdom, it is unlikely to be deterred by the threat of nuclear obliteration. President Bush's notion of missile defense is understandable in this context and may indeed be the way to reassure Americans while at the same time drawing down strategic nuclear forces, hopefully to zero. In short, the US case for nuclear weapons as a deterrent against rogue states is not a particularly strong one.

The British and French case for nuclear weapons to deter other nuclear weapons is much less tenable now that the Cold War is over. Given the problems of extended deterrence, there was an argument for a British and French deterrent. If the US was effectively "de-coupled" from its allies, then Western Europe would have been prone to nuclear blackmail by the Soviet Union. After the Cold War, it is hard to see the sense of this argument. In what circumstances would Russia want to confront either Britain or France or any other European state to the extent that nuclear weapons could come into play? Within Europe, there are no nuclear threats to either country. Germany, that perennial strategic concern in Europe over the past 125 years, is embedded in the European Union along with its former enemies and rivals and is no longer a militarized society threatening to dominate and conquer its neighbors.

China's case for nuclear deterrence appears stronger than that of the Europeans but is still susceptible to critique. There are contradictory trends in the relationship between China and Russia. On the one hand, the end of the Cold War has seemingly reconfigured the Russia-China relationship. The two countries have recently signed a border deal. In addition, in recognition of the fundamentally changed nature of the relationship, Moscow has resumed arms sales to Beijing. On the other hand, given the physical contiguity of the two countries along a massive border, conflict over the long term cannot be altogether ruled out. Both could argue that nuclear weapons are a hedge against the other's nuclear weapons in this condition and that they must retain nuclear weapons because the other cannot be trusted to give up its weapons. It seems clear enough, though, that there is no basic ideological, irredentist, or identity quarrel between Moscow and Beijing that could foster enduring, high-voltage conflict leading up to a massive confrontation. Not surprisingly, mutual trust levels have never been higher, at least not since the heyday of communist solidarity. It should therefore be possible to eliminate nuclear weapons verifiably between them, just as it is possible for the US and Russia to do so.

China's need for nuclear weapons against the US arises fundamentally out of its fear of Washington's support for Taiwan. The key issue though is how China and the US handle the situation. To the extent that China is prepared to live with the status quo (and it has indicated that
it is), there are no real grounds for a US-China confrontation. To the extent that the US also is
restrained in its support of Taiwan, the status quo becomes more acceptable to Beijing. US arms
sales to Taiwan is a key issue here, but it should be possible to arm Taipei to reasonable levels
without precipitating a crisis.

The other major issue between the US and China is missile defense. Beijing, rightly or wrongly,
is very suspicious of US missile defense plans, seeing in it an attempt to render its deterrent
useless. While Washington has sought to open up lines of communication with various allies,
friends, and former adversaries (most prominently, Russia) on this issue, it has not done enough
with Beijing. The April 2001 crisis over the downed US reconnaissance plane has made the two
capitals even more suspicious of each other. However, in time, a more pragmatic policy on both
sides is likely to dominate. The economic relationship between the US and China is now so vast
and ramifying that it would seem unlikely that either side can ignore the need to stabilize the
political relationship. If so, a dialogue on missile defense could occur. The US could get a very
limited defensive system without alienating China. If and when US numbers come down
substantially, China should be in a position to join a global disarmament plan.

The arguments of the new nuclear states as well the aspirants are open to objection as well, in
various ways. India bases its nuclearization on the existence of a two-front nuclear problem, with
Pakistan and China as possible threats. Some in India also see the US as a possible nuclear
threat. A nuclear confrontation with the US seems most unlikely, but the existence of Pakistani
and Chinese weapons in the context of unresolved territorial quarrels is a potential threat to
India. The problem with the Indian argument is that Pakistani weapons are a response to India's.
If India had not gone nuclear, Pakistan is unlikely to have done so. The two countries could give
up nuclear weapons together.

There remains the problem of China. Here it should be remembered that while India worried
about China's nuclearization, it quite sensibly refused to undertake a crash program to go nuclear
in response. Without nuclear weapons, it managed its relations with China rationally, and during
the 1965 and 1971 India-Pakistan wars, when Beijing might have been expected to intervene, it
did not do so. Also, while the border conflict has not been resolved, the two countries have been
at peace for 40 years. Beijing and Delhi are committed to a negotiated solution of the border
quarrel, have put in place a series of CBMs, increased bilateral trade tenfold in 7-8 years, and,
most recently, began a security dialogue. All these have built up a degree of trust and
cooperation that should allow them to contemplate a relationship shorn of the "comfort" of
nuclear weapons. In short, India's case for deterrence is no worse than that of the US, Russia, and
China; but it is also no better.

Pakistan's case for nuclear weapons as a deterrent against India is also not unreasonable at some
level. Given the unresolved differences with India and given Indian nuclear capability as well,
Islamabad has a case for nuclear weapons. The question that Pakistanis have to answer though is
why India did not use its nuclear capability against Pakistan between 1974 and 1987 when
Islamabad did not have nuclear weapons. India can argue that this is proof that it has never
contemplated a nuclear strike against Pakistan. Pakistanis-as well as Indians-should also ask
themselves how it was possible for the two countries to cooperate to great effect from 1947 to
1963, when virtually every bilateral quarrel was solved except Kashmir. Even in the case of
Kashmir, through UN and bilateral efforts, they came close to a solution. Indians and Pakistanis
can come to trust each other and work together for the common good. In principle, there is no reason they cannot do so again, in respect of the elimination of nuclear weapons.

Israel's case for nuclear weapons may be one of the strongest. Israelis can and do argue that their country is surrounded by unfriendly neighbors that could openly or clandestinely acquire nuclear weapons. In addition, several countries in the Islamic world, near or far, could make their own nuclear weapons and develop the requisite delivery vehicles. The hostility of these countries, in the region and outside, remains high. A nuclear breakout by some Islamic country that is opposed to the very existence of Israel is therefore not a fictive possibility. While this is correct, it is also the case that Israeli nuclearization is as much cause as effect. As things stand, in any case, there is no Muslim country that is particularly close to having a deliverable nuclear weapons capability. If Israel gave up the bomb, this would increase the pressure on others in the region and further afield to terminate their programs.

Our review suggests that the P-5 countries and the new nuclear states can each individually make a case for nuclear weapons as a means of deterring nuclear aggression. From various vantage points, it is at the same time possible to contest all their claims, as I have tried to show. While I have not analyzed the claims of the new aspirants-Iran, Iraq, and North Korea—a similar set of criticisms could be mounted against their arguments and views.

The fundamental problem with regard to disarmament is a lack of trust. Each country claims that it cannot trust the other to give up nuclear weapons and that the fear of a "break out" is so crippling that disarmament must be regarded as virtually impossible. If no one can trust the other, this sets up a continuous and interlocking chain of justifications about why each country needs the bomb. Jonathan Schell, years ago, taking account of this problem and of the problem that nuclear technology cannot be "disinvented," nevertheless argued that it is feasible to abolish nuclear weapons capability. Schell noted that for everyone to give up nuclear weapons, it would be necessary to have a system of comprehensive verification. Since no verification system can be one hundred percent effective, though, there is always the risk of a break out. However, he seminally argued, since every state could both cheat and calculate that others also could cheat, a form of existential deterrence would stay their hands and thus prevent a break out. This is the potential solution to the lack of trust and break out problem and merits very serious consideration in any disarmament calculus.

The utility of nuclear weapons for deterrence must be balanced against three additional, more generalized disutilities. First, as long as nuclear weapons exist they could be used, accidentally if not otherwise. Scott Sagan's work, amongst others, shows that there were enormous numbers of nuclear accidents, large and small, on the US side where the most extraordinary efforts at command and control were undertaken. Nuclear catastrophe from accidental or unauthorized launch must therefore be regarded as a constant, non-zero possibility. Second, nuclear deterrence has the unfortunate effect of producing instability at lower levels of conflict. The stability-instability paradox is not unique to nuclear weapons, to be sure, but it is particularly worrisome in the nuclear case. Sub-conventional hostilities in the shadow of nuclear weapons could escalate to outright conventional war and could therefore lead to a nuclear confrontation. Nuclear deterrence may cap the level of conventional conflict in such a situation, but it is always possible that conflict will spiral out of control. Third, nuclear deterrence is useless against nuclear terrorism. Nuclear weapons can deter other nuclear weapons when they are in the hands of state
authorities. On the other hand, in a confrontation with nuclear terrorists, nuclear weapons are worse than useless. Indeed, nuclear weapons could become an added liability—for example, if the terrorists manage to position their nuclear device near a nuclear weapons installation or if they are in a position to strike at nuclear weapons facilities from a remote location (e.g., by means of missile or air strikes). The "collateral" damage from a terrorist strike in such a situation could be massive.

**Defense**

Nuclear weapons can and have been justified in the name of military defense. If defense means the ability to stop and eventually turn back a conventional invasion by means of denial or punishment, then nuclear weapons might play a role. For instance, tactical nuclear weapons might be used to halt an enemy's military advance and thereby to deny it crucial military objectives. Strategic nuclear weapons might be used to punish the aggressor by bombing its cities and other high value targets and cause it to halt its advance in the battlefield.

Countries with an aversion to military casualties as well as those with serious conventional military asymmetries would be tempted to use nuclear weapons in this role. The US is the best example today of the former. It is quite conceivable that, in a regional conflict, the US might use tactical nuclear weapons in order to minimize American military casualties even when it is in a position to turn back aggression by conventional means. Other states might invest in nuclear weapons to blunt an attack because they fear that their conventional forces are inadequate to the task. For countries with very small populations, lack of strategic depth, and budgetary limitations, nuclear weapons may be a rational investment.

The US and Russia have indicated that they might use nuclear weapons first for defense. This is rather ironic. Given the size and sophistication of their conventional forces, they are capable of handling aggression at virtually any level of conflict, as no other powers can do. A declining Russia might have something of a case for nuclear weapons for defense, but an RMA-backed US military has the resources to manage any kind of aggression. The aversion to casualties is something of an artificial issue. While American political leaderships seem to set great store by it, public opinion may well differ. Evidence from the US suggests that public opinion is not quite so oppositional. If the military mission is vital and is explained clearly to the American people, the US public is not as risk averse as may appear.

Britain and France also could make a case for nuclear weapons in a defense role, although once again it is not clear in what circumstances this would be necessary except perhaps in defense of far-flung outposts or peacekeeping troops deployed in distant theatres. As the British showed in the Falklands, though, European armies are still capable of winning wars with well-equipped and well-trained conventional forces.

Chinese military strategists envisage the use of tactical nuclear weapons in local wars along China's peripheries. The PLA is not particularly averse to casualties as far as we know, and it is the largest military force in the world so that it is unlikely to be in a situation of asymmetry in terms of the sheer numbers it can field. But it is conceivable that given the size of the country and the remoteness of its borderlands, its forces would be outclassed in some areas and reinforcements might be late in coming. Given the strategic depth of China, however, Beijing
should be able to trade space against time and repel the invader as the aggressor's supply lines lengthen and PLA reinforcements arrive to join the fight.

With Pakistan, India is in no need of nuclear weapons to turn back a conventional attack. With China, matters may be different. Some in India have argued that tactical weapons might have to be used if China attacked in strength across the border. Alternatively, India could use nuclear weapons in a punitive mode against Chinese value targets if it is unable to repel an invasion. However, as things stand, it is generally acknowledged that Indian forces along the border are sufficiently well equipped to beat back a Chinese attack. Chinese forces in this sector are thought to be equipped with old equipment and their supply lines are long and difficult to maintain. The Indian Army, with air support, should be able to stop the Chinese and perhaps even launch counterattacks.

Pakistani theorists have argued that given their country's size relative to India and given also the constraints of their economy, nuclear weapons are essential for defense against superior Indian forces. Islamabad has repeated that it cannot be a party to a "no first use" policy and that it may indeed have to use nuclear weapons first. Whether it would use tactical devices on the battlefield or whether it would target Indian value targets is unclear; it could do both, preferring to begin with battlefield strikes and graduating to value targets. Prima facie the Pakistani argument for nuclear weapons against superior conventional forces has validity. However, it does not take account of the fact that Indian superiority is mitigated by the deployment of Indian men and equipment over two fronts and that the degree of advantage is therefore nowhere near as great as may appear. Tactical innovation and passive defenses (as the Pakistanis have deployed in great density in the plains of Punjab) could well compensate for any Indian advantage in numbers and quality. Ashley Tellis' RAND study of the India-Pakistan military balance shows rather rigorously that neither India nor Pakistan can achieve any kind of decisive victory in conventional war.4

Perhaps the strongest case for nuclear weapons for defense is the Israeli one. Israel is small in relation to its neighbors in population terms, surrounded by potential adversaries, and has little strategic depth. While it has beaten back a combined Arab attack in the past with conventional forces, this may not be possible in the future. In 1973, it was a near-run thing against Egypt. However, even here we should note a number of mitigating factors. First, Israel has a peerless protector in the US. Second, while the Israeli population is small, that population is capable of being mobilized for territorial defense as perhaps in no other society. Third, the Israelis are superbly equipped, brilliantly led, battle hardened and highly motivated and are therefore effective well beyond their numbers. In short, they remain a formidable foe, particularly in defense.

Compellence

Nuclear weapons might also be used in a compellence or coercive role to make an opponent do what it otherwise would not do or to undo what it had already begun to do. Compellence only appears possible against a non-nuclear opponent or in a situation of extreme nuclear asymmetry. While no government publicly talks about nuclear weapons in this role, nuclear weapons have been used to try and force others to do one's will. The US has used nuclear weapons in a compellent way on several occasions, the bombings of Hiroshima and Nagasaki being the only
case of actual nuclear use for coercive purposes. The US has also threatened to use nuclear weapons on several occasions, with mixed results. It has contemplated actual use on other occasions.\textsuperscript{5}

However, the use of nuclear weapons for coercive purposes has had a very mixed record. The bombing of Hiroshima and Nagasaki might be counted as successes but could well have been avoided, and conventional force might have brought about Japan's surrender. In other cases, successful coercion of an opponent may have resulted from compellent threats but they may also be attributable to quite different factors. In any case, it is quite conceivable that economic sanctions, other diplomatic instruments (e.g. international isolation), and conventional military strikes could achieve, singly or in combination, what nuclear weapons might achieve.

Fundamentally, the compellent use of nuclear weapons is limited by the incredibility of the threat. Few rational goals of policy would seem to be worth the catastrophe that is inflicted by nuclear explosions. The opprobrium that would be occasioned by the use of nuclear weapons is surely a profound discouragement to anyone contemplating their deployment for coercive purposes. Anyone who uses nuclear weapons in this way must also calculate that breaking the taboo could unleash a chain of similar decisions. Other nuclear powers might feel that they too are licensed to use nuclear weapons coercively. Non-nuclear powers that heretofore have renounced nuclear weapons might be persuaded to change their minds.

In sum, nuclear weapons used in a compellent role is both a rare occurrence, so far as we can see, as well as a bad strategic investment.

**Conclusion**

This essay has suggested that nuclear weapons have three military functions, theoretically: deterrence of other nuclear weapons, defense against possible conventional attack, and compellence or coercion. It has argued that the P-5 states as well as the new nuclear and aspirant states all have an equally good and, in the last analysis, equally bad case for nuclear weapons in respect of deterrence. It has also argued that the case for nuclear weapons as an instrument of military defense is not strong. All the countries considered here are in a position to manage conventional attacks against themselves or against their allies by means of the proper deployment and use of conventional forces. Finally, the paper has suggested that the use of nuclear weapons for compellence purposes is not terribly convincing and that nuclear weapons deployed in this role may cause more problems than it solves in the longer term. In addition, balanced against the disutilities of nuclear weapons, as noted earlier in the paper, the utilities of nuclear weapons appear diminished. Those who would rid the world of nuclear weapons must mount these kinds of perfectly hardheaded arguments to convince skeptics that disarmament is a credible, secure alternative to the present military and strategic order.

**FOOTNOTES**


