The US Army War College Quarterly: Parameters

Volume 25
Number 1 *Parameters* 1995

Article 22

7-4-1995

The Next Nuclear Questions

Patrick J. Garrity

Follow this and additional works at: <https://press.armywarcollege.edu/parameters>

Recommended Citation

Patrick J. Garrity, "The Next Nuclear Questions," *Parameters* 25, no. 1 (1995), doi:10.55540/0031-1723.1743.

This Article is brought to you for free and open access by USAWC Press. It has been accepted for inclusion in The US Army War College Quarterly: Parameters by an authorized editor of USAWC Press.

The Next Nuclear Questions

PATRICK J. GARRITY

From *Parameters*, Winter 1995, pp. 92-111.

With the agreement in May 1995 to extend the Nuclear Nonproliferation Treaty (NPT) indefinitely, it might appear that the international ground rules for a new nuclear order are in place.[1] There remain the recognized nuclear problems associated with safely reducing and controlling the nuclear arsenal of the former Soviet Union, and dealing with a few rogue states like North Korea and Iran. But there are certainly no indications that rapid or widespread proliferation is imminent. The number of aggrieved or ambitious states that might seek security or gain through nuclear capabilities is fairly limited. The barriers, domestic and international, for most states to go nuclear remain very high, although not insurmountable.

The actual situation is in fact more complex, if more subtle, than this sketch would suggest. We are likely to see attempts to regulate the conflicting patterns of proliferation and denuclearization, and especially attempts to establish new relationships among the nuclear weapon states (actual and declared), and between those states and nonnuclear powers. The development of new relationships began to take place globally in the context of the NPT Renewal and Extension Conference, but this mechanism is by no means the sole or most important location for working out the boundaries of nuclear cooperation and competition. Much will also occur at the regional level, often through unilateral actions and bilateral negotiations on topics in which nuclear weapons are addressed indirectly, if at all, but where the implications for nuclear security could nonetheless be highly significant. Military doctrine and force structure will then alter over time accordingly. Finally, states will undoubtedly hedge against uncertainty--especially the rapid nuclearization of international or regional affairs or, less likely, the collapse of nuclear legitimacy.

The United States needs to recognize and plan for the emergence of this new nuclear order--to understand what is at stake, to be ahead of the political, military, and technical curve wherever possible, and to avoid overreacting to unexpected developments. This article explores the types of issues that might emerge in the near and medium term, and suggests how policymakers might want to think about those issues.

The presentation may at first glance appear pessimistic, in that it seems to focus on what might go wrong in nuclear matters, and not on the positive trends and possibilities, such as the enormous and beneficial change in the US-Russian nuclear relationship. I would certainly not deny these trends, but instead would point out that there are many different and perhaps less desirable prospects in play as well. To move events in a more advantageous direction, we must understand the pitfalls as well as the promise.

Nuclear Weapons and the Great Powers

During the Cold War, nuclear weapons conferred some sense of distinction in the international hierarchy--obviously on the part of the so-called superpowers, the United States and the Soviet Union, but also with respect to Britain, France, and the Peoples' Republic of China, each of which sought nuclear weapons, to a greater or lesser degree, because of the special status they conferred. The fact that after 1971 these five declared nuclear powers were also the only permanent members of the UN Security Council reinforced this sense of status. With the end of the bipolar order, the relationship between the possession of nuclear weapons and international status has come very much into question. This issue is likely to play itself out in a complicated fashion, as various states with great power aspirations seek to define the future role of nuclear weapons in such a way as to provide maximum support for their interests and ambitions.

In the case of Russia, nuclear weapons are now seen across the political spectrum as Moscow's principal ticket to the great power club, given Russia's economic difficulties and its inability to pose a conventional military threat to

Western Europe.[2] To maintain the pretense of political parity with the United States, any regime in Russia will insist upon appearing equal in the nuclear arena to the Americans and superior to China, France, and the United Kingdom. But for the moment, Russia must play its nuclear card in an odd way, as part of an overall strategy of seeking "independence through weakness." That is, the Russian government plays upon Western fears about the nuclear-related consequences of Russia's political turmoil to gain outside support for Moscow's efforts to hold the federation together and to maintain the semblance of Russian great power status.

For example, in the case of Chechnya, Clinton Administration spokesmen have justified their conditional support for Russian actions on the grounds that the breakup of Russia would lead to serious new questions about the possession and control of nuclear weapons, materials, and expertise. The Yeltsin government has generally become adept at playing on Western fears of the nightmare of a much larger Yugoslavia with tens of thousands of nuclear weapons. At the same time, Yeltsin has insisted on defending Russian interests with respect to such issues as NATO expansion and Bosnia. He has done so in part by using the threat that failure to accommodate Russia will lead to a nationalist backlash and to even greater dangers that a future leader (e.g., Vladimir Zhirinovskiy) would brandish nuclear weapons in a much more dangerous fashion. The Russians act as if this nuclear card will allow them substantially to determine the conditions for Western financial assistance, and otherwise to limit intrusions on Russian sovereignty.

This is not to predict that Russian cooperation with the West will break down (Yeltsin's threatened "cold peace"), or that a resumption of the East-West conflict is in order.[3] But the Russian strategy is already starting to wear thin in the United States, and especially with the Republican Congress, which is particularly skeptical of the cooperative activities designed to use US funds to support the dismantlement of the former Soviet nuclear establishment.[4] The Clinton Administration has acknowledged that the Russians have been much slower than the United States in implementing START I, and that Russia continues to possess a very large advantage in tactical nuclear weapons (which are not covered by formal arms control agreements). Although these asymmetries are not now regarded as strategically significant, they point to very different values being placed by Washington and Moscow on nuclear weapons, and not just to the physical difficulties of disarmament. Along these lines, the ratification and implementation of START II is by no means assured, as many Russians believe that they received much the worst of this deal. Future American-Russian nuclear relations thus may be marked as much by friction as cooperation, even if START II comes into effect and if there is no resumption of an overt nuclear competition--which thankfully seems unlikely at present.

China's great power ambitions may also raise a series of nuclear questions for the United States and the nations of East Asia. The current leadership in Beijing expects that its growing military power, undergirded by a modestly sized but increasingly capable nuclear arsenal, will be an essential element in China's rise to greater international status. One certainly should not exaggerate the magnitude or urgency of this military buildup. And in any case, future Chinese leaders will be forced to make tradeoffs at some level between the security and influence that might be provided by traditional military instruments, and the need to develop peaceful economic relations, which presumably would be harmed by what seemed to be an excessive Chinese military capability. That said, the Chinese do not believe that nuclear weapons have lost their utility, and they will accordingly maintain and modernize those capabilities, within limits. This apparently involves the development of a mobile land-based ICBM, a more effective SSBN/SLBM combination, and possibly multiple independently targeted re-entry vehicles (MIRVs). Such modernization is apparently at the root of China's ongoing nuclear test program, despite international political pressures for a moratorium prior to the completion of a comprehensive test ban treaty.[5]

Nuclear weapons are still viewed by the current leadership in Beijing as providing "soft power," or international prestige and status.[6] Chinese leaders have consistently seen nuclear weapons as a ticket into the great power club. This is not just the prestige associated with becoming a nuclear state: after all, India, Israel, and Pakistan are also nuclear states and Beijing does not consider them to be on the same status level. Major power status also requires commensurate nuclear capabilities, and here China seems informally to have used France and Britain as the best available metric. The Chinese also have seen nuclear weapons as representing "hard power," in the sense of possessing military utility. In the future, a more flexible and capable nuclear posture will be intended to support China's emerging military posture. This posture is focused mainly on improved conventional forces, so as to develop the capability for limited warfare along China's periphery, while deterring or being able to respond to intervention by outside powers.[7] This latter deterrent requirement is served in part by the PRC's nuclear capability.

The ongoing drawdown of Russian and American nuclear forces increases the relative strength of the Chinese in this arena, and it raises the question whether China will ultimately be satisfied with using Britain and France as its nuclear metric. China may decide to acknowledge START II levels as the bottom line for Russian and American nuclear forces, but Beijing could press the nuclear superpowers to accept a position of rough parity with China (1000 nuclear weapons, perhaps as low as several hundred), as yet another mark of the PRC's increased international standing. Alternatively, China could begin to build its nuclear forces toward Russian and American levels.

The fact that Russia and China are likely to maintain nuclear forces as an element of their claim to great power status raises the issue of whether Germany or Japan might try to level the playing field for themselves by acquiring an independent nuclear capability. This prospect is highly unlikely. There are considerable barriers to a German or Japanese decision to go nuclear, which would be overcome only if there are major adverse changes in the regional security environment, probably coupled with direct military threats to their territory, a significant loss of confidence in the US security guarantee, and domestic political changes leading to a "cure" for their respective "nuclear allergies." Elites in both countries understand fully the adverse domestic and international implications of their acquisition of a nuclear capability. Any signs that they were even considering such a step could provoke dangerous reactions from their neighbors.[8]

Although Germany and Japan will not want to become members of the nuclear club, we can expect that they will seek an increasing say in policy decisions related to nuclear issues that affect their immediate interests. Influence, rather than possession, has long been Germany's route to nuclear security, and we can expect this to manifest itself for the Japanese as well, although perhaps in a less direct fashion. For example, a common Japanese complaint about US policy during the North Korean nuclear crisis was the lack of effective consultation. American officials dispute this point and insist that Tokyo was kept apprised, but Japanese leaders will undoubtedly want to develop better decisionmaking mechanisms in the future--without necessarily taking on themselves the public burden of assuming responsibility for those decisions. Surely, the Japanese will not want the United States to commit Japan's financial resources in future nuclear deals without full and prior consideration. By the same token, Germany will want some considerable say in the process by which its alliances (whether NATO or the European Union) engage in military operations in nuclear-armed regions, as well as in any nuclear arrangements that might be made if NATO expands to the east. In short, Germany and Japan will seek to prevent "taxation without representation" that supports what they see as questionable American political bargains with would-be proliferants. Germany and Japan also will seek to avoid being drawn into nuclear crises or conflicts triggered by American assertiveness (or equally by American weakness or vacillation).

Berlin and Tokyo will likewise expect assurances that their nuclear self-denial will not be the grounds for political discrimination. French-German and Chinese-Japanese relations, in particular, could be adversely affected if Paris and Beijing should overtly oppose German or Japanese membership on the UN Security Council by playing upon their own nuclear credentials.

If the security environment deteriorates and the Americans are thought to be unreliable, Germany could explore nuclear protection through a European security and defense identity (Japan has no such obvious alternative). And if such alternatives by outside powers cannot offer completely satisfactory security assurances, Germany and Japan still have other options short of nuclearization. Appeasement of nuclear-related threats is one. Another would involve becoming "virtual" nuclear powers--that is, make it clear to the world that Japan (or Germany) is easily within reach of deploying nuclear weapons and that only political will restrains such a deployment. Outside powers making long-term calculations about the military balance would conservatively have to plan for a Japanese (or German) nuclear force. This would provide a "virtual" deterrent, but neither Tokyo nor Bonn would have to face the immediate consequences of having made a decision in this direction. In Japan, for example, government officials occasionally observe that Japan considered, and then rejected, a nuclear option in the 1960s--effectively pointing out that Japan could reconsider this decision in the future.[9]

New Nuclear Relationships

As various powers and actors seek their place in the emerging international order, we can expect to see ongoing efforts to reconfirm or develop new nuclear relationships among states to assure their respective interests and security.

Indefinite extension of the NPT provides a framework for this process, but it is only a beginning. The process of developing a new nuclear order will involve, inter alia, agreements to extend and accept nuclear deterrence, offer nuclear reassurance, and promote denuclearization. The United States has taken the lead in this process, but a number of parties have a decided interest in its course and outcome.

The development of these new nuclear relationships is unlikely to be straightforward--it will be difficult to satisfy everyone, and to ensure that parties to various nuclear bargains have the same understanding of the terms. For instance, the United States and the international community will be faced with the possibility of bidding wars over the price of denuclearization, especially given the financial and political package that North Korea was able to exact. This will be combined with ongoing concern whether the proliferant will try to renegotiate the agreement, whether other supportive parties might seek to back out of their end of the bargain, and whether unwelcome third parties might attempt to participate in or benefit from the denuclearization agreement. In the North Korean case, this is illustrated by Pyongyang's continued reluctance to accept parts of the Framework Agreement (e.g., South Korean reactor technology); by the possibility that Seoul or Tokyo might later balk at meeting their financial commitments; and by Russia's efforts to become a political and economic partner in the bargain.

In a different context, the extension of NATO membership to the east-central European states will be complicated by the issue of whether and how the alliance should extend a nuclear guarantee.[10] Nuclear-related aspects of NATO expansion, if not handled properly, could anger the Russians, frighten the West Europeans, and disillusion or divide the candidate members. Also, disagreements might develop over the extent and character of offers of positive security assurances to states such as Ukraine and Kazakhstan. Even with good faith on all sides, during a future crisis with a hostile third party (e.g., Russia), Kiev or Almaty could be more "assured" than is warranted in Washington's or Moscow's eyes, leading to miscalculations, recriminations, and potential escalation.[11]

The United States will not necessarily be at the center of all new nuclear relationships.[12] If Washington cannot or does not step forward to broker or guarantee such arrangements, will other nuclear powers step in, especially to extend nuclear deterrence? In the past, with very limited exceptions, no other power has been willing to do so. With the end of the Cold War, it is widely assumed that the nuclear weapon states will contract their definition of vital interests precisely to avoid making such commitments.[13] But if states like Russia or China--or even some regional powers with nuclear weapons--are serious about their status, they may feel compelled to offer some sort of nuclear protection to nonnuclear states. Alternatively, they may try to discourage other nuclear powers from offering such assurances.

Thus, efforts to define such new nuclear relationships may be *competitive*, in the sense of one nonnuclear party trying to outbid another for the favor of a relationship with a nuclear weapon state; or various nuclear "haves" could try to outbid each other for preferred relations with "have nots." The competition might conceivably manifest itself in *conflicting* nuclear relationships, such as between a Russia-Iraqi combination, on the one hand, and an Iran-PRC combination, on the other. New nuclear bargains also could include possible informal nuclear arrangements in various regions. For example, it is not impossible to imagine a tacit understanding between some elements in North and South Korea regarding the maintenance of a viable nuclear weapons capability in the context of reunification.

To the extent that such a stable relationship among the five regional powers in East Asia cannot be realized, China's nuclear potential will assume increasing strategic importance, and Beijing may be inclined to seek favorable bargains with neighboring nonnuclear states. For example, China could offer nuclear protection to a united but nonnuclear Korea as a hedge against Russian or Japanese pressure, or to certain ASEAN states as a hedge against growing Japanese or Indian assertiveness. Moscow is another regional nuclear player that could, in a highly militarized strategic environment, seek nuclear bargains with the Koreans or the Japanese.

The nuclear relationship between Russia and the other former Soviet republics, especially a denuclearized Ukraine and Kazakhstan, will be of similar long-term interest to Moscow. Russia is clearly seeking to recentralize security responsibilities through the agency of the Commonwealth of Independent States (CIS), as well as through bilateral agreements. If Russian national security policy and military doctrine becomes relatively dependent on nuclear weapons to deal with "external" threats, this must perforce affect Kiev and Almaty, situated as they are along the Russian strategic periphery. Will future Russian ballistic missile defenses, oriented toward the theater ballistic missile threat to the south, protect other former Soviet republics? Is Moscow prepared to extend nuclear deterrence to cover these

republics from such threats? Will Russia be required to build or maintain ballistic missile defenses or strategic nuclear facilities outside Russian territory (e.g., radars, missile interceptors)? Will Russia seek to reintroduce tactical nuclear weapons into some of the former Soviet republics after having withdrawn those weapons during the breakup of the USSR? Although some of these questions could be answered unilaterally by Moscow, others might necessitate formal bargains or informal understandings with former Soviet republics.

If confidence in the American security guarantee declines in Europe, while nuclear-related threats to European security rise to the east or south, some sort of new nuclear bargain could be sought among the major European powers. The obvious solution here would be a deterrent force under the auspices of the European Union, or arrangements reached bilaterally or multilaterally by nonnuclear states with the British or French, separately or together. Most observers now see any sort of a European deterrent force as highly unlikely, given the long-standing reluctance of London and Paris to make such commitments.[14] But the alternative to a European-wide deterrent would be a national approach to nuclear security, with the Germans (and conceivably the Italians) either seeking independent nuclear capabilities or attempting to propitiate the source of the trouble. Under such circumstances, Britain and France would have strong incentives to try to develop a common nuclear policy. Although analysts may doubt that such a crisis point would ever be reached, there is enough uncertainty in Europe over the long-term staying power of the Americans that such questions are inevitable, and hence some political and even military hedging among the West Europeans will probably be in order.

Different types of nuclear bargains could emerge in the Middle East. A nuclear-armed Iran or Iraq might seek to use that capability for political and economic leverage over neighboring states, especially those in the Persian Gulf. For instance, Iraq might attempt to employ its nuclear capability to help develop a "protection racket," guaranteeing the security of some Gulf states at the expense of others (e.g., Kuwait) and to the exclusion of outside powers. Iran might try to persuade other Middle East oil producers to cut production and increase prices. On another front, it seems improbable at present that Israel would seek to extend direct nuclear guarantees to other states. But if proliferation in the region continues, the Israelis might find themselves informally supporting moderate Arab or Islamic states against radical, nuclear-armed opponents, which could not help but bring Israel's deterrent force into play, at least indirectly. Under some circumstances, the Israelis might be interested in covertly providing nuclear capabilities or assistance to friendly states somewhat removed, such as Turkey.

As power in the international system becomes more diffuse, and as candidates for great and regional power status begin to assert distinct interests and ambitions, nuclear relations among states could take on more of a multipolar character. To be sure, not all poles are created equal, and true nuclear multipolarity is unlikely to emerge for some time, if ever. Still, as the old nuclear order and relationships decay, new relationships are bound to emerge, and these may be more complex and interrelated than we have previously experienced. Multipolarity could develop globally (e.g., China-Russia-US), regionally (Russia-China-US-Korea), or trans-regionally (Israel-Iraq-Iran-Pakistan-India-China-Korea-Russia-United States). As these examples imply, some states could be involved in more than one set of relationships, and smaller nuclear powers could play some role in the game. Such multipolar relationships could be even more complicated as the nuclear dimension interacts with weapons of high leverage, such as zero-CEP cruise missiles, and with other weapons of mass destruction.[15]

Regional Crises and Conflicts

In almost any future major regional crisis or conflict in the Middle East, South Asia, or Northeast Asia, the "shadow" of nuclear weapons will influence the course and possibly the outcome of events--even if those weapons are never actually used. At the very least, the conduct of conventional war will be affected by the possession of nuclear weapons, actual or feared, by one or both sides. This could involve limiting or expanding political objectives and could produce altered operational and tactical deployments and military objectives. One or both sides could seek to promote and take advantage of the horizontal escalation of the conflict, by making nuclear threats that draw in outside powers, or attempt to employ nuclear deterrence to keep outside powers from intervening. There also will be the constant danger of inadvertent escalation through attacks on command and control systems. The future status of the nuclear weapon programs in the region may become an important factor in any peace negotiations.[16]

Even if they are not immediately involved in such regional crises or conflicts, those nations that claim great power

status cannot be indifferent to nuclear-related instabilities. Although it is possible that the nuclear danger would serve to discourage great power involvement, it is equally conceivable that such powers, especially the United States, could insist upon the necessity of intervening despite--indeed, because of--the associated nuclear danger. Few developments would affect national, regional, or global security more than a series of nuclear detonations, or even just one. This could lead to a more expansive definition of great power interests, for it is hard to be indifferent to circumstances in which there is a high risk of nuclear use or nuclear accident (e.g., the experience of Chernobyl).[17] Great power intervention, whether political or military, could have the purpose either of preventing the emergence of new nuclear powers, or of managing and terminating violence before the regional conflict began to acquire a nuclear dimension. The ability to do this could become a critical determinant of what it means to be a great power. Great power status might be enhanced through regional or global institutions that legitimize the use of force and help build international coalitions. Or the great powers could disagree fundamentally or in specific instances about whether, how, and against whom to intervene.

To the extent that interstate relations involving large or small nuclear powers become less cooperative, changes in nuclear relationships probably will manifest themselves first through an arms competition rather than through overt crises, tests of strength and resolve, or war. The essential elements of such arms competitions are being put into place by a growing number of states which seek to establish legitimate industrial competencies that could also be exploited for military purposes. Such a competition would be complex and would not necessarily be limited to increases in the quantity or improved quality of nuclear weapons, delivery systems, and command and control. The competition might involve, and even be characterized principally by, nonnuclear programs designed to counter or otherwise offset the competitor's nuclear capabilities. Syria provides the case of a nation that has sought to develop and improve an asymmetric military capability--chemical weapons and ballistic missiles--to serve as the functional equivalent of a nuclear deterrent, without the attendant costs and political risks. Japan might rely on a combination of tactical ballistic missile defenses and advanced conventional weapons to deter North Korean nuclear use against the home islands, either as a replacement for or as a complement to the American nuclear guarantee.

Any new military competition involving nuclear powers initially might be bilateral in character and thus be relatively limited. But if it becomes truly multipolar, where the members of the system feel threatened by more than one opponent, the arms competition would be much larger, more dynamic, more unpredictable, and more likely to break out into political and military crises.

The possibility of nuclear crises involving great powers certainly cannot be dismissed. Although the great nuclear game between the United States and the Soviet Union has thankfully been relegated to history, future Russian-American difficulties are always possible. Russian contingency planning is concerned primarily with the need to conduct limited military operations within and along the periphery of the federation.[18] This includes deterring, or defending against, intervention by outside powers in conflicts in and near the Russian Federation (especially among the "near abroad"). Deterrence against outside intervention relies heavily on posing general nuclear risks to an outside power. In particular, the Russians have stressed the fact that conventional attacks on their command and control system--similar to those which the US-led coalition employed against Iraq in the first phase of Operation Desert Storm--could lead to strategic nuclear retaliation against the aggressor. If a more nationalistic Russian regime were to become involved militarily along its periphery, and if the United States or other Western powers indicate diplomatic disapproval of such actions, Moscow might interpret this as a precursor to intervention, and make nuclear threats (or go on nuclear alert) accordingly.[19] Such a scenario might today appear far-fetched, but the consequences of such a crisis are so serious that they should not be ignored.

Similarly, unexpected nuclear-oriented crises between the United States and China could emerge, especially in the event of Chinese pressure or military action against efforts to establish an independent Taiwan. A future war on the Korean peninsula, or Chinese military action against American allies resulting from territorial disputes in the South China Sea, are also possible triggers. Although American officials have given some thought to the possibility of such crises, they may not fully appreciate their nuclear dimension, especially if the PRC should threaten nuclear use as a way of deterring or limiting American actions. Even if the crisis is resolved, the fact that one or both sides made or implied nuclear threats could strongly harden an "enemy image" in the Sino-American relationship. The shock to the American public would be particularly acute, once it was driven home that the PRC has a capability, however limited, to strike the United States. From Washington's perspective, a China bent on destabilizing the international environment

to the disadvantage of the United States could also do so by actively promoting nuclear proliferation, and by offering overt political and diplomatic support to emerging nuclear weapon states hostile to Washington, such as North Korea or Iran.

Nuclear Surprises and Shocks

During the Cold War, especially after the Cuban missile crisis, the political and intellectual landscape surrounding nuclear weapons became familiar and, in retrospect, quite stable and predictable. This situation has obviously now changed, and it opens up the possibility of a "nuclear surprise"--for example, the sudden, as opposed to gradual or generally anticipated, appearance of a real or feared nuclear capability, or a major change in the expectations and policies surrounding nuclear weapons.

With respect to the emergence of new nuclear powers, there has been a standard assumption that it would take ten years for a proliferant to develop a nuclear capability, and that there will be certain obvious signs that the proliferant was moving in this direction. But we now face so-called horizontal or unconventional proliferation, where states or even non-state actors could develop nuclear capabilities through paths other than the traditional ones of diverting materials from ostensibly civilian capabilities or developing hidden programs over time. Most notably, a nation or actor considering proliferation could conceivably now enjoy immediate access to nuclear materials, technology, and knowledge from the former Soviet Union, and potentially from other sources. But in addition, there may be "no signature" paths to nuclear weapons--programs designed deliberately to avoid the traditional trip wires that alert the international community that proliferation is taking place. For advanced industrial states, there may also be high-technology paths to provide relatively quick and sophisticated nuclear capabilities.[20]

The possibility of a nuclear surprise is generally understood. American officials have publicly judged that it would take the Iranians at least eight to ten years to develop their own nuclear capability, but they acknowledge that this time could be shortened considerably if there is substantial assistance from external powers. Despite this recognition, there is a good chance that revelations about new or suspected nuclear capabilities by a nation such as Iran, especially during a crisis, could prove to be a "shock" rather than a "surprise." The US government was well aware that the Soviet Union had the potential to place a satellite in orbit in 1957, but it did not fathom the domestic and international political effects that the launch of Sputnik would produce. By the same token, the sudden assertion of an Iranian nuclear capability during, for example, a future crisis over shipping access to the Strait of Hormuz, could gravely affect the direction and resolution of that crisis.

A nuclear surprise could occur in a variety of ways. It could involve planted or inadvertent leaks of information about a nuclear program, claims of nuclear capabilities or intentions by the suspected proliferant or by a third party, a nuclear demonstration, or the actual use of the weapon. A further complication is that claims or suspicions about a nuclear surprise may well be viewed as credible despite the lack of hard evidence. Previously, this possibility might have been dismissed on the grounds that it was technically impossible. In late 1990, for example, when rumors of an Iraqi nuclear capability surfaced, they were not given any real credence. In a future crisis, given what is now known about Iraqi progress toward such a capability, these rumors are likely to be taken far more seriously by at least some of the interested parties--in this example, by Saudi Arabia, Israel, and Iran, as well as the United States.

On the opposite side of the equation, the danger of a nuclear surprise may cause other states in the region, or outside powers, to assume the worst even when that judgment actually is not warranted. Although this assumption may induce greater caution, it also could provoke diplomatic and military actions to preempt the emergence of a new nuclear power. In the regional context, a state like Iran (against Iraq), or China (against Taiwan), might decide to strike on the suspicion or pretext that a nuclear surprise is imminent. At the global level, the United States and other advanced industrial powers might broaden their definition of nuclear contraband and expand intrusive means of inspection and intervention in order to get a better handle on nontraditional paths to proliferation. Such a policy could trigger even greater resentment in parts of the developing world, on the grounds that this was actually part of a broader Western scheme to keep unfavored countries down--to deny access to the advanced technology and capital that they need to develop modern, and independent, economies.[21]

For the most part, concern over a nuclear surprise has been limited to the usual suspects, or what the Clinton

Administration calls "rogue states": e.g., Iran, Libya, Iraq, and North Korea. In all these cases, the domestic and international imperative to develop a clandestine nuclear capability remains strong. Iraq and North Korea may still be pursuing nuclear weapons through channels not covered by the formal denuclearization process, while the international community looks for the key under the lamp post. However low a probability one might assign to a sudden nuclear breakout by Baghdad or Pyongyang, this will remain a nagging uncertainty that could affect the diplomatic process over time--and such concern would rapidly come to the surface during a major crisis.[22] One also cannot rule out the possibility that rumors may surface concerning the nuclear capabilities of an "unusual suspect"--e.g., Serbia, Syria, or Cuba.

There is also the category of what might be called "friendly surprises": regional powers with whom the United States has good or correct relations, but whose strategic character puts them in a position where a nuclear capability might seem attractive or necessary at some point. Taiwan, South Korea, Turkey, Indonesia, Egypt, Saudi Arabia, and Poland might fall into this category. (Relatedly, there is the special case of potential nuclear recidivists: South Africa, Ukraine, and Kazakhstan.) Most of these states are in unstable regions where other nuclear powers exist or could emerge, but whose confidence in the American nuclear guarantee or international support might come into question at some point. A friendly surprise is not now an imminent prospect; the barriers and disincentives, domestic and international, to pursuing a nuclear capability remain strong. Perhaps stated more precisely, leaders in these countries have evidently given little thought to this possibility. Whether these barriers remain in place over the longer term will depend largely on how the overall strategic environment evolves. But the shock of one of these countries unexpectedly going nuclear might have even greater effects than an "unfriendly surprise"; it might signal the breakdown of US-sponsored regional security orders, and have a cascading effect among similar powers.

Finally, we cannot rule out the possibility that new nuclear powers, or established nuclear powers facing a hostile security environment, might depart from expected or traditional paths with respect to nuclear weapons. At the low end of the scale, we might see the emergence of unexpected capabilities from small nuclear powers--e.g., more modern fission designs involving more efficient use of nuclear materials; the development of smaller, lighter-weight warheads that could be delivered by a wider variety of delivery systems; higher-yield weapons, including two-stage designs; and weapons that employ tailored effects. Israel and India already have reportedly made, or pursued, improvements along these lines. Others may follow, especially if expertise concerning advanced nuclear weapon technology should flow out of the former Soviet Union.

But there are even more serious discontinuities to consider. For example, a regional power with ambitions far beyond its ordinary means--or a great power led by someone like Vladimir Zhirinovksy--might provoke a series of nuclear crises to destabilize the security environment and open up major diplomatic opportunities for itself. (Many in the West were concerned that the Soviets might resort to such an approach during the Cold War; the fact that the Kremlin ultimately proved to be relatively cautious is in itself no assurance that other powers might not try this strategy.) Nuclear brinkmanship would be particularly attractive to those espousing a revolutionary doctrine that was fundamentally at odds with global or regional order, and who were willing to run high risks in order to destroy that order. Such an attitude might especially prevail in the early stages of a political revolution. There is also the prospect of a "nuclear Napoleon"--a political or military genius who might seek to devise ways to use nuclear weapons in unexpected fashion for strategic purposes. For instance, a regional power might use nuclear weapons not against cities or military targets in the region, but for demonstration purposes. This would be designed to deter outside (principally American) military intervention and convince other regional states that they cannot rely on US security guarantees, so that the aggressor can achieve its foreign policy objectives without going to war.

Finally, events over the past five years in the former Soviet Union serve as a reminder that future nuclear surprises may not stem from the actions of unified, coherent states, but as the result of circumstances in which there is a question about political control of nuclear weapons, materials, and facilities; civil war or unrest involving or proximate to things nuclear; or the emergence of new nuclear entities as a consequence of the breakup of a nuclear weapon state.[23] The Russian Federation and Ukraine for some time will remain problematic in this respect, and it is not inconceivable that China or India could fall into this category. But one must also include problems with such nuclear or near-nuclear states as North Korea, Iran, Pakistan, and Iraq, should there be a coup attempt or significant domestic unrest.

In the event of fragmentation or civil war in a nuclear weapon state, there will be obvious concerns about accidental or

deliberate use, and the leakage of nuclear material. But nuclear materials or facilities could conceivably be used as bargaining chips in a struggle for internal power, or as negotiating leverage with external powers. If there were two rival claimants to the government in China, for example, the international community would be far more inclined to treat with the side that could plausibly claim to control that country's nuclear forces. Civil unrest involving the control of nuclear weapons and materials might also draw in outside powers with divergent agendas--e.g., China, Japan, and the United States in a fragmenting Russia; the United States, Germany, and Russia in a fragmenting Ukraine.

Denuclearization

Although the nuclear surprises described above would represent a dramatic move toward the (re)nuclearization of regional or global politics, the opposite course is also possible. That is, the secular trend toward denuclearization among the great powers since the end of the Cold War could be accelerated by a sudden change in international attitudes about the legitimacy of nuclear weapons in any form. A major unilateral or bilateral initiative toward complete nuclear disarmament on the part of one of the nuclear weapon states--particularly by the United States and Russia together--would not necessarily result in the immediate abolition of nuclear weapons, but it might well change fundamentally the ground rules that govern relations among nuclear and nonnuclear weapon states.

The most probable path to general, if not complete, disarmament would unfortunately be caused by a catastrophic nuclear accident, or the use of nuclear weapons in a regional conflict. Such an event could precipitate widespread revulsion against things nuclear, and extensive international demands that the possession of nuclear weapons effectively be criminalized. But as desirable as this end state might be in principle, the transition period might be highly chaotic and dangerous. Difficulties would naturally result simply from the mechanics of disarmament efforts, even with the good will of all parties, but the pressure of international and domestic opinion would not act evenly on all affected states. A major accident involving the North Korean nuclear program that spread high levels of radiation across the region would not necessarily have the same political effects in Pyongyang that it might in Tokyo, Washington, Seoul, or Beijing.

The pressures for rapid disarmament on powers for whom nuclear weapons play a crucial psychological as well as political-military dimension--e.g., France, Russia, and Israel--could be enormous and divisive. The political and military demands on powers potentially called on to enforce the ban--particularly the United States--would be extensive, and could lead to disagreements with other nations (over issues such as burdensharing and sovereign rights). This raises the prospect of an asymmetrical and highly destabilizing situation, in which some states are rapidly denuclearizing while others try to resist pressures to denuclearize, or are trying to take advantage of the situation by developing or increasing their nuclear capabilities.

Nuclear Use

The actual use of a nuclear weapon would be a shock of the first order, and it would tend to move international politics toward the extremes of large-scale proliferation or nuclear delegitimation. The particular effects of such a detonation would be highly contingent on the circumstances in which a nuclear weapon is exploded, including whether by accident or design. The effects also would be contingent on the immediate physical consequences of the detonation, locally, regionally, and globally.

Take the most likely case, in which a nuclear weapon is used deliberately by a regional power in the midst of a conflict with one or more regional powers. If the use is "successful"--in the sense of determining the outcome of the war without provoking the intervention of an outside power or causing environmental catastrophe--this would provide an "existence proof" of the utility of nuclear weapons, as well as the risks associated in not having such a weapon. The likely result would be one of increasing and rapid proliferation, not necessarily limited to the region at hand. The incentive to proliferate also would increase if it were perceived that the regional power's nuclear force deterred outside intervention in the conflict, or if nuclear use itself defeated such intervention.

It is precisely to avoid this perception that the great powers will have considerable incentive to intervene in a regional conflict where nuclear weapons have been used, as discussed above. How this might play out in the event is quite complicated. Such intervention need not be military in character, but could come in the form of reassurance, coercion, sanctions, or economic rewards to cease and desist. Conceivably, however, the intervention could result in military

action, either to prevent forcibly the further use of nuclear weapons, or more expansively to stop the conflict altogether. (Some regional powers, such as Israel and South Africa, arguably developed their nuclear programs in part with such a catalytic effect in mind, precisely to provoke outside involvement to their advantage.) If great power intervention is successful in preventing the further use of nuclear weapons, without seeming unduly to reward the perpetrator, interest in nuclear proliferation probably would be curtailed. But there is also the possibility that intervention will fail, in the sense that some great powers might support, and others oppose, efforts to punish or reassure the particular state that employed nuclear weapons. Great power dissension could serve to spark renewed interest in proliferation, as regional states develop nuclear capabilities to attract great power sponsorship or otherwise play one outsider off against the other.

The use of nuclear weapons by a regional power also could be "unsuccessful" because it did not have the desired political or military effect, or because a nuclear exchange proved inconclusive. An unsuccessful use would tend to dampen incentives to proliferate. But the greatest effect along these lines would be caused by the use of a nuclear weapon that had truly horrific consequences--the immediate death of hundreds of thousands, well covered by the international media, with the spread of fallout causing panic and affecting the health of tens of millions outside the combat zone. The reaction, regionally and globally, would undoubtedly be severe, perhaps leading to extraordinary pressure for international punishment of the guilty parties and a general revulsion against nuclear weapon programs in all states.

The actual use of nuclear weapons by one Eurasian power against another could result in horizontal as well as vertical escalation--that is, it could draw in other regional states as well as great powers. In a crowded geographic environment, a nuclear war might be more likely to spread both deliberately and accidentally. For example, nuclear detonations that disrupted command, control, and communications over a wide area could lead other, uninvolved states to believe that they too were coming under attack. Regional nuclear powers that were not initially engaged might also take advantage of the circumstance to launch an attack of their own on a preoccupied rival. The anticipation of such blind-side attacks could lead the likely recipient to launch a preemptive strike of its own, not only against its immediate opponent, but against a feared third party, such as Israel.[24]

Although the potential for the use or threatened use of nuclear weapons in a terrorist mode may be exaggerated, it will nonetheless be in some fashion on the policy agenda, given the bombings of the World Trade Center and the gas attacks in the Tokyo subway. (If nuclear terrorist threats became public, they could have many of the same political consequences as the actual use of a weapon.) State-sponsored nuclear terrorism could be used to deter or retaliate against outside intervention in a regional conflict, for example, Iraq versus the United States. Such acts also could serve to retaliate against the actions of a regional adversary, or to destroy the improvement of relations, for example, between Israel and moderate Arab states or factions. Finally, nuclear terrorism might emerge in the context of a civil war, such as that in Russia or Ukraine.

It should be recognized that nuclear terrorism could be aimed not only at punishing or extracting concessions from the targeted state, but simply at bringing down that state or otherwise striking at the stability of the international system. One could imagine revolutionary states or actors, without regard to their own particular fate, determined to set off bombs in a handful of US cities in an effort to cripple the United States as a world actor. To be sure, the United States may be a less likely target in this respect than US allies, or Russia, but successful subversion of any major state would have consequences for the international community, not least the United States.

Policies to Shape the Nuclear Future

None of this is to say that the prospects for a stable and reasonable nuclear order are poor. There are a number of positive trends, including the voluntary denuclearization of some states, reductions in superpower nuclear stockpiles, efforts to enforce international nonproliferation norms in Iraq, and constructive developments in Latin America. There are certainly no indications that rapid or widespread proliferation is imminent.

Still, there is a wide range of possible nuclear futures, depending on such myriad imponderables as the future of reform in Russia, the potential for changes in the political culture in Germany and Japan, the terms on which the Koreas might be unified, and so on. Most nations are now reacting to events, rather than trying to direct them. But

over time, the leaders of nations or peoples will try to anticipate what the new nuclear environment might look like. They will then seek to shape that world to their advantage, to the extent that is possible, or at least prevent it from being shaped to their disadvantage. At the same time they will create, or at least not rule out, new political and military options for themselves, especially should events go in a less-than-optimum direction.

All this suggests that the next few years will be marked neither by uncontrolled proliferation, nor by a consistent and successful effort to denuclearize international relations. There will be some of both. We are likely to see attempts to regulate the conflicting patterns of proliferation and denuclearization, and especially attempts to establish new relationships among the nuclear weapon states (actual and declared), and between those states and nonnuclear powers. The United States must recognize the existence and complexity of this process, and take a leading role in working out acceptable boundaries for nuclear cooperation and, if necessary, competition.

First, American policymakers should especially understand that there will be a subtle nuclear dimension to many of its political and military interactions, with both greater and lesser powers. For the most part, the United States should not make any particular effort to make visible that which is hidden. It is in the American interest for nuclear weapons to fade into the background of international relations, insofar as that is possible. But neither should Washington ignore the fact that such varied decisions as expanding NATO eastward, strengthening relations with Ukraine, or allowing leaders of Taiwan to visit the United States as private citizens, could at some point have nuclear-related repercussions. And because nuclear weapons ultimately raise fundamental questions of sovereignty and survival for all nations, accounting for these repercussions is essential, even if they must be addressed in a low-key manner.

Second, with this in mind, the United States should take a realistic view of its nuclear relations with Russia and China. Neither of these nations is destined to become a US adversary, and some degree of nuclear cooperation with and among these powers should be explored. But the United States should not expect that nuclear cooperation (e.g., the Nunn-Lugar program) can carry the burden of those relations. Nor should it assume that disagreements and even competition about things nuclear can necessarily be avoided. Early recognition of this fact may actually help avoid unnecessarily exacerbating future political affairs. Along these lines, the United States should appreciate the fact that future nuclear crises with Russia or China are not impossible, and should work accordingly to minimize or moderate this possibility.

Third, Washington should both understand the need for and promote cooperation with leading nonnuclear states, especially Germany and Japan, in dealing with nuclear-related questions in regions of mutual interest. Although the United States will generally exercise leadership in these circumstances, Berlin and Tokyo will increasingly want to have their voices heard, as part of the implicit bargain by which they remain nonnuclear states. Although the Japanese officially accepted the Framework Agreement with North Korea, the sudden apparent change of direction by the United States in making that bargain is not the ideal way to handle such a situation with American allies in the future.

Fourth, and relatedly, the United States must appreciate the broad necessity of reassuring its allies and key regional powers of its continuing commitment to their security from hostile nuclear threats. The old verities of extended deterrence will not necessarily hold in the future. To be sure, the nuclear dimension of US alliance relationships will be less important, as there is no longer an overarching Soviet danger against which friendly nations need protection. The issue of nuclear assurance will probably be raised and settled in the context of resolving more general concerns about reliability and durability of US security commitments. The United States should pay as much attention to friendly states that might be inclined to develop a nuclear option if their nuclear security is not accounted for in some fashion, as to the nuclear programs of rogue powers.

Fifth, the US military should devise plans and forces for a wide range of contingencies involving nuclear weapons. The focus is now on a canonical blue versus red problem--in this case, operating against a nuclear-armed Iraq or North Korea. But this analysis suggests the possibility that American policymakers may also want options for influencing a regional conflict where the United States is not immediately involved (e.g., Pakistan and India), but where Washington may seek to prevent nuclear weapons from being used--or to contain or minimize the effects of their use. Although widely-publicized war games have indicated that American officials will want to avoid such intervention, domestic and international political realities may be such that US action must be seriously considered, and the US military should be prepared for that eventuality.

Finally, while policymakers cannot anticipate all potential nuclear surprises or shocks, neither should they assume that the future will be merely a linear extrapolation of the past. In many ways, sensible diplomacy and flexible military forces are the best way to hedge against surprise, but these may not be sufficient to overcome the effects of a truly revolutionary event involving nuclear weapons. This means asking and answering a series of hard "what if" questions—e.g., What happens if there is a civil war in Russia? What happens if a unified Korea attempts to retain a nuclear capability? What happens if a major nuclear accident creates enormous domestic and international pressures for denuclearization? What if Pakistan threatens to use nuclear weapons against India unless the United States intervenes to stop an Indian military invasion? By seeking answers to such hard questions, the United States may identify steps that can be taken in advance to prevent or mitigate such surprises, or at least provide itself with realistic options to deal with a highly uncertain strategic environment.

NOTES

The author would like to acknowledge the following individuals for their helpful comments on various drafts of this essay: Stephen Cambone, Shahram Chubin, Gerrit Gong, Philip Gordon, Steve Maaranen, Brad Roberts.

1. For a discussion of the issues surrounding the NPT regime and its extension, see Joseph F. Pilat and Robert E. Pendley, eds., *1995: A New Beginning for the NPT?* (New York: Plenum Publishers, 1995).
2. For a broad consideration of the Russian nuclear future, see Konstantin E. Sorokin, "Russia After the Crisis: The Nuclear Strategy Debate," *Orbis*, 38 (Winter 1994), 19-40.
3. Andrei Kozyrev, "Partnership or Cold Peace," *Foreign Policy*, No. 99 (Summer 1995), 314.
4. Theresa Hitchens and Stephen LeSueur, "Critics Fear Misuse of Aid to Destroy Russian Arms," *Defense News*, 27 June - 3 July 1994, p. 14.
5. Jonathan Pollack, "The Future of China's Nuclear Weapons Policy," in John C. Hopkins and Weixing Hu, *Strategic Views from the Second Tier: The Nuclear Weapons Policies of France, Britain, and China* (San Diego: Institute on Global Conflict and Cooperation, Univ. of California, San Diego, 1994), pp. 157-66; John Caldwell, "China's Nuclear Modernization Program: Developments and Implications," unpublished paper for the Los Alamos National Laboratory, 1994.
6. For an excellent discussion of these points, see Alastair I. Johnston, "Chinese Nuclear Doctrine and the Concept of Limited Deterrence," unpublished paper prepared for the Los Alamos National Laboratory, November 1994.
7. Shulong Chu, "The PRC Girds for Limited, High-Tech War," *Orbis*, 38 (Spring 1994), 177-92; Paul Godwin and John Schulz, "Arming the Dragon for the 21st Century," *Arms Control Today*, 23 (December 1993).
8. The future nuclear-related issues for Germany and Japan are reviewed in Ronald D. Asmus, *Germany's Geopolitical Normalization* (Santa Monica: RAND, July 1993); Philip H. Gordon, "Normalization of German Foreign Policy," *Orbis*, 38 (Spring 1994), 225-44; Stephen F. Szabo, "United Germany and Nuclear Proliferation," unpublished paper for the Los Alamos National Laboratory, September 1994; and Mike M. Mochizuki, "Japan's Nuclear Policy and Regional Security," unpublished paper for the Los Alamos National Laboratory, June 1994.
9. On the broader subject of a virtual nuclear deterrent, see Michael J. Mazarr, "Virtual Nuclear Arsenals," *Survival*, 37 (Autumn 1995), 7-26.
10. Ronald D. Asmus, Richard L. Kugler and F. Stephen Larrabee, "NATO Expansion: The Next Steps," *Survival*, 37 (Spring 1995), 31.
11. For a discussion of Ukrainian security and nuclear weapons, see Sherman W. Garnett, "Ukrainian Nuclear Policy: Sources, Conduct and Future Prospects," unpublished paper prepared for the Los Alamos National Laboratory, September 1994. See also the debate between John J. Mearsheimer and Steven E. Miller in *Foreign Affairs*, 72

(Summer 1993), 50-80.

12. For an argument that the United States should not be at the center of such future nuclear relationships, see Ted Galen Carpenter, "Closing the Nuclear Umbrella," *Foreign Affairs*, 73 (March-April 1994), 8-13. The larger question of extended deterrence is considered by Charles T. Allan, "Extended Conventional Deterrence: In from the Cold and Out of the Nuclear Fire?" *Washington Quarterly*, 17 (Summer 1994), 203-23.

13. This topic is discussed in Lawrence Freedman, "Great Powers, Vital Interests and Nuclear Weapons," *Survival*, 36 (Winter 1994-95), 35-52.

14. On this point, see David S. Yost, "Nuclear Weapons Issues in France," in John C. Hopkins and Weixing Hu, *Strategic Views from the Second Tier: The Nuclear Weapons Policies of France, Britain, and China*, pp. 19-104.

15. See Aaron L. Friedberg, "Nuclear Multipolarity," unpublished paper prepared for the Los Alamos National Laboratory, June 1994.

16. The issue of nuclear weapons in regional crises and conflicts is discussed in Stephen Peter Rosen, "The Problem of Regional Nuclear War," unpublished paper for the Los Alamos National Laboratory, October 1994.

17. Freedman, "Great Powers, Vital Interests and Nuclear Weapons," p. 39. For a contrary view, see David Andre, *The Third World "Few Nuclear Weapons Problem": Policy Implications for Military Planning Guidance as Derived From Gaming* (McLean, Va.: Science Applications International Corporation, April 1993).

18. Mary C. Fitzgerald, "The Russian Military's Strategy for 'Sixth Generation' Warfare," *Orbis*, 38 (Summer 1994), 457-76.

19. Patrick J. Garrity, *Why the Gulf War Still Matters: Foreign Perspectives on the War and the Future of International Security* (Los Alamos, N.M.: Los Alamos National Laboratory, July 1993), pp. 90-92; Jacob Kipp, "The Gulf War, High Technology, and Troop Control: The Nexus Between Military-Political and Political-Military Aspects of Future War," unpublished paper, US Army Foreign Military Studies Office, May 1992, p. 25.

20. Leonard Spector, "Strategic Warning and New Nuclear States," Director's Series No. 5 (Livermore, Calif.: Lawrence Livermore National Laboratory, 1994).

21. Brad Roberts, "1995 and the End of the Post-Cold War Era," *Washington Quarterly*, 18 (Winter 1995), 7-10.

22. For descriptions of the North Korean and Iranian nuclear programs, see Joseph S. Bermudez, Jr., "North Korea's Nuclear Infrastructure," *Jane's Intelligence Review*, 6 (February 1994), 74-79; Paul Bracken, "Nuclear Weapons and State Survival in North Korea," *Survival*, 35 (Autumn 1993), 137-53; Shahram Chubin, *Iran's National Security Policy: Intent, Capabilities and Impact* (Washington: Carnegie Endowment for International Peace, 1994); and Michael Eisenstadt, "Deja Vu All Over Again? An Assessment of Iran's Military Buildup," in Patrick Clawson, ed., *Iran's Strategic Intentions and Capabilities*, McNair Paper No. 29 (Washington: National Defense Univ., Institute for National Strategic Studies, April 1994), pp. 101-20.

23. For the former Soviet Union, see Kurt M. Campbell, et al., *Soviet Nuclear Fission: Control of the Nuclear Arsenal in a Disintegrating Soviet Union* (Cambridge, Mass.: Harvard Univ. Center for Science and International Affairs, 1991).

24. Such issues are considered in Scott Sagan, "The Perils of Proliferation: Organization Theory, Deterrence Theory, and the Spread of Nuclear Weapons," *International Security*, 18 (Spring 1994), 66-107. See also Marc Dean Millot, Roger Molander, and Peter Wilson, *"The Day After . . ." Study: Nuclear Proliferation in the Post-Cold War World*, vols. 1-2 (Santa Monica: RAND, 1993).

School of Advanced International Studies (SAIS), Washington, D.C., on sabbatical leave from the Los Alamos National Laboratory, New Mexico. He holds a Ph.D. in government from Claremont Graduate School, and has previously been affiliated with the Center for Strategic and International Studies (CSIS) and the Naval Postgraduate School. He has coedited a volume, *Nuclear Weapons in the Changing World: Perspectives from Europe, Asia, and North America* (1992), and is completing a book on the foreign policy dimensions of George Washington's Farewell Address.

Reviewed 25 November 1996. Please send comments or corrections to carl_Parameters@conus.army.mil.