FUTURE ROLES OF U.S. NUCLEAR FORCES

IMPLICATIONS FOR U.S. STRATEGY

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Prepared for the United States Air Force

RAND
Project AIR FORCE

The research reported here was sponsored by the United States Air Force under Contract F49642-01-C-0003. Further information may be obtained from the Strategic Planning Division, Directorate of Plans, Hq USAF.

Library of Congress Cataloging-in-Publication Data

Future roles of U.S. nuclear forces : implications for U.S. strategy / Glenn Buchan ... [et al.].
p. cm.
Includes bibliographical references.
MR-1231-AF
ISBN 0-8330-2917-7
1. Strategic forces—United States. 2. United States—Military policy. 3. Nuclear weapons—United States. I. Buchan, Glenn C.

UA23 .F883 2000
355.02'17'0973—dc21

00-045817

Cover design by Tanya Maiboroda

Published 2003 by RAND
1700 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138
1200 South Hayes Street, Arlington, VA 22202-5050
201 North Craig Street, Suite 202, Pittsburgh, PA 15213-1516
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SUMMARY

The defining characteristic of nuclear weapons—their almost unlimited destructive power—makes them unmatched as terror weapons and potentially more effective than any other type of weapon in strictly military terms (i.e., destroying targets). Moreover, the ability to produce nuclear weapons with relatively large yields in very small packages can dramatically increase their potential military value. Accordingly, nuclear weapons offer a range of strategic and tactical advantages to those countries that possess them. They can be used as instruments to

- coerce enemies by threat or actual use
- deter enemies from a range of actions by threat of punishment
- offset an imbalance of conventional forces
- fight a large-scale war
- destroy specific critical installations
- enhance national prestige and win a "place at the table" in the international arena.

The United States has used its nuclear forces for most of those purposes. Even more significant, it has *not* used them in combat since Nagasaki. Most notably, of course, the United States used nuclear weapons to coerce the Japanese to surrender in World War II and later maintained a large nuclear arsenal to deter the Soviet Union from launching a nuclear attack on the United States or invading Western Europe with its numerically superior conventional forces.

The United States also tried, with mixed success, to extract additional political mileage from brandishing its nuclear forces in peripheral conflicts.

The distinctive nature of the Cold War shaped the evolution of U.S. nuclear strategy and force structure in important ways. The dominant threat to the United States was the Soviet Union, an ideological adversary and competing great power armed with nuclear weapons that posed a direct threat to the United States after the Soviets developed long-range missiles and armies that appeared capable of overwhelming the conventional forces of U.S. allies in Western Europe. Once the Soviet Union developed intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs) armed with nuclear warheads, there was no way to protect the United States from a Soviet nuclear attack. After the Soviets deployed their missiles on nuclear ballistic missile submarines (SSBNs) and in hardened silos, disarming them with a nuclear first strike would have been virtually impossible, although the United States never stopped trying to develop the requisite technical capabilities. As a result, the best way to prevent a Soviet nuclear attack on the United States appeared to be to deter such an attack by threatening retaliation with U.S. nuclear weapons.

Implementing that deterrence strategy shaped U.S. strategic forces and operating practices in critical ways that affect U.S. forces to this day:

- A mix of ICBMs, SLBMs, and bombers—the so-called "triad"—was chosen in the 1950s to provide a diverse enough force to complicate an attacker's problem in trying to destroy the entire force and to hedge against technical failures of various sorts.
- A set of tactical warning systems and an associated network of command and control systems and procedures was developed to detect and characterize an impending nuclear attack on the United States, identify the attacker, and provide senior U.S. policymakers with at least a few minutes to respond to an attack before the system broke down.
- U.S. strategic forces were maintained at very high levels of alert—bombers on strip alert, SSBNs at sea, and ICBMs ready to launch within a few minutes—to minimize the effect of a surprise attack.

- U.S. weapons were pretargeted and integrated into a single massive plan—the Single Integrated Operational Plan (SIOP)—with a few variants to make execution of a retaliatory strike as simple, quick, and efficient as possible.

For its success, this approach depended to some degree on historical and geographic accidents:

- The time and space that separated the principal antagonists
- The time to develop and perfect intercontinental nuclear forces on both sides
- The relatively unique nature of those forces
- The relative simplicity of the largely bipolar world.

Although these factors helped reduce the stress and fog of the U.S.-Russian nuclear confrontation, *it was still very dangerous.* Because of the stakes in the competition (e.g., national survival), both sides were willing to take substantial risks—accidental or unauthorized launches, mistakes, miscalculations—to reduce their vulnerability to surprise attacks. Because of the sheer destructiveness of nuclear weapons, any mistake could have had catastrophic consequences. Everyone recognized that fact from the beginning and tried to take steps to reduce the dangers, but the perceived need to deter a deliberate nuclear attack took precedence.

The end of the Cold War changed a lot, but not everything:

- The dissolution of the Soviet Union and the Warsaw Pact greatly diminished the chances of general nuclear war or a major war in Europe. U.S. and Russian relations, while not exactly cordial since the post–Cold War "honeymoon" ended, are much less confrontational than in the past.
- U.S. and Russian nuclear forces are much smaller and operate at lower levels of alert. Still, Russian strategic nuclear forces remain the only current threat to the national existence of the United States. In addition to the overt threat, Russian economic woes; the deterioration of some of its nuclear forces, command and control and warning systems, and nuclear infrastructure; and the general failure of Russian economic and political reforms pose

new kinds of problems for U.S. security (e.g., nuclear theft, proliferation, and unauthorized use) and exacerbate old ones (e.g., war by accident or mistake).

- U.S. strategic nuclear forces are structured basically the same way they have always been. (U.S. tactical nuclear forces have largely been eliminated.) U.S. operational procedures have in the main changed little since the Cold War days.
- Nuclear proliferation is probably a greater problem now than it was during the Cold War. The odds of nuclear use by someone somewhere have probably increased.
- There may be more nuclear players and different types of players with different concepts of nuclear strategy and means of delivering weapons. *That situation could make defending against or deterring nuclear use more difficult.*
- Faced with U.S. military and economic dominance, other nations and nonstate actors are likely to seek different ways to counter U.S. power (e.g., terrorism, covert use of nuclear or biological weapons).
- Political instability in established nuclear states is a cause of major concern. *An established nuclear power coming unglued and lashing out is the worst possible threat to U.S. security for the foreseeable future*.

The United States is currently facing this world with a set of nuclear forces that is only a somewhat reduced version of the force it has maintained for decades. Similarly, its overall strategy is virtually the same—the only real difference is an explicit nuclear threat against countries developing biological and chemical weapons.

We found that the United States has a much broader range of nuclear strategies and postures among which it could choose, including at least

- abolition of U.S. nuclear weapons
- aggressive reductions and "dealerting"
- "business as usual, only smaller"

- more aggressive nuclear posture
- nuclear emphasis.

"Mixing and matching" is also possible. For example, a much smaller nuclear force operated differently could also be used more aggressively if the situation demanded it.

Devising a U.S. nuclear strategy for the future requires a mix of analytical assessments and value judgments. Among our key observations are the following:

- Nuclear weapons still lend themselves best to deterrence by threats of punishment, although one can never be certain how effective such threats will be. Even small nuclear forces should be capable of providing this kind of deterrence.
- Nuclear counterforce strategies, which would not have been effective during the Cold War, might actually work now, especially against emerging nuclear powers.
- The United States can influence, but no longer control, the nuclear "rules of the game" as it once did. As a result, it needs a wider variety of policy instruments than nuclear deterrence to deal with the range of potential nuclear threats.
- The degree to which the United States might need nuclear weapons for actual war-fighting depends to a significant degree on the demonstrated effectiveness of other kinds of forces (e.g., advanced conventional weapons, defenses).
- For most foreseeable actual combat situations, advanced conventional weapons are probably sufficiently effective *if the United States buys enough of them and uses them properly.*
- Still, nuclear weapons trump all others, and if the stakes were high enough, and other options were inadequate, nuclear weapons could give the United States a decisive advantage.
- Counterforce attacks against nuclear weapons that could reach the United States are an obvious example. Otherwise, only a situation where the United States was forced to fight a world-class opponent at long range and could not apply enough mass of firepower with conventional weapons might warrant the use of

nuclear weapons. That would probably require a large number of small nuclear weapons delivered by bombers. The United States does not now have such weapons.

- Unlike the Cold War, future situations that might require U.S. nuclear use are unpredictable. Thus, a *prerequisite for any strategy of nuclear use other than "set piece" exchanges with Russia is a flexibility in planning and execution that is the antithesis of the SIOP.*
- A strategy of deterrence and selective nuclear use could be implemented with a "dealerted" force, assuming that force was designed properly. *Nothing about deterrence by threat of punishment requires prompt retaliation,* and in an uncertain world, a hasty response could be more dangerous than in the past. Two assumptions are critical to the case for a dealerted force:
  - — *The risk of accidental nuclear war must be viewed as greater than the risk of a surprise attack.*
  - — *The Russians would react to a dealerted U.S. force by reducing their reliance on launch-on-warning and preemption.*
- The effect of U.S. nuclear strategy and force structure decisions on the likelihood of further nuclear proliferation is ambiguous and difficult to predict.
- Even if the United States wants to remain a major nuclear power, "withering away" of its nuclear capability over time may be inevitable. That would certainly be the most likely effect of continuing its current nuclear policies.

In sum, nuclear weapons remain the final guarantor of U.S. security. The United States has considerable flexibility in choosing an overall nuclear strategy for the future and in implementing that strategy. Among the range of options, a contemporary nuclear strategy that retains the traditional threat of nuclear retaliation in hopes of deterring serious threats to U.S. national existence coupled with the operational flexibility to actually use a modest number of nuclear weapons if the need is overwhelming and other options are inadequate may offer a balance of benefits and risks for as long as the United States chooses to retain nuclear forces. *Both the forces and the operational practices appropriate for enforcing such a strategy are*

likely to look very different from the current U.S. approach. Nothing about deterrence by threat of punishment requires prompt retaliation, and in an uncertain world, a hasty response could be more dangerous than in the past.