Responses

Nuclear Exchange

Does Washington Really Have (or Want) Nuclear Primacy?

Just the Facts

PETER C. W. FLORY

The essay by Keir Lieber and Daryl Press ("The Rise of U.S. Nuclear Primacy," March/April 2006) contains so many errors, on a topic of such gravity, that a Department of Defense response is required to correct the record.

Lieber and Press assert that current U.S. nuclear policy looks "like a coordinated set of programs to enhance the United States' nuclear first-strike capabilities," an erroneous inference that has already prompted harsh reactions in Russia and other countries. Lieber and Press allege that the U.S. Air Force is "significantly improving its remaining ICBMs [intercontinental ballistic missiles] by installing the MX's high-yield warheads and advanced reentry vehicles on Minuteman ICBMs, and it has upgraded the Minuteman's guidance systems to match the MX's accuracy."

In fact, the MK-21 reentry vehicles and warheads from retired Peacekeeper missiles (formerly known as "MX") are being installed on Minuteman III missiles to take advantage of the MK-21's improved safety characteristics. There is no increase in yield, and the MK-21 reentry vehicles do not increase the accuracy of Minuteman III missiles. Nor will the guidance replacement program under way for Minuteman III missiles—which involves upgrading guidance components to extend the missiles' lives—result in those ICBMs' reaching a level of accuracy equal to that of the Peacekeeper.

The authors go on to question why crews of the B-2 stealth bomber train in low-altitude flight "unless their mission is to penetrate a highly sophisticated air defense network such as Russia's or, perhaps in the future, China's." It is no secret that the combination of stealth technology and low-altitude flight increases the survivability of an aircraft in a hostile environment. But these attributes are valuable across the full spectrum of warfare (B-2s have been employed in the Balkans, Afghanistan, and Iraq).
Flory, Payne, Podvig, Arbatov, Lieber, and Press

Publicly available facts contradict Lieber and Press’ thesis that the United States is pursuing a first-strike strategy. President George W. Bush set the nation on a path to reduce its reliance on nuclear weapons in a May 2001 speech at the National Defense University, stating, “I am committed to achieving a credible deterrent with the lowest possible number of nuclear weapons consistent with our national security needs, including our obligations to our allies. My goal is to move quickly to reduce nuclear forces.”

The Department of Defense acted promptly to implement the president’s directive. The result was the December 2001 Nuclear Posture Review, which declared that by 2012 the United States will have decreased the number of nuclear warheads deployed on its operational forces by two-thirds (we are already halfway to this goal). Additionally, by 2012 the United States will have cut its total stockpile of nuclear warheads nearly in half. Already, we have removed from strategic service four ballistic missile submarines, and, perhaps most relevant to the discussion at hand, we have voluntarily retired the Peacekeeper missiles, our most accurate and powerful ICBMs. Ironically, during the Cold War, some criticized these land-based missiles, which are capable of being equipped with ten MIRVs (multiple independently targetable reentry vehicles), as representing the ultimate first-strike weapon.

Further, in the recently released Quadrennial Defense Review, the Department of Defense announced plans to modify about ten percent of its submarine-launched Trident II missiles so that they will carry nonnuclear warheads and to retire ten percent of the remaining land-based Minuteman III ICBMs.

These are hardly the moves of an administration seeking, in Lieber and Press’ words, “to enhance the United States’ nuclear first-strike capabilities.”

This administration has continued the policy of previous administrations in that it does not rely on the ability to conduct a nuclear first strike to ensure the survival of the United States. The Department of Defense’s force posture of dispersed ICBMs and survivable ballistic missile submarines is designed to make clear to any adversary that might contemplate a first strike against the United States that in the aftermath of such an attack the U.S. military would retain the ability to respond with such devastating force that an aggressor could not stand to gain. This is not a first-strike posture.

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A Matter of Record

KEITH PAYNE

Lieber and Press claim that for 50 years the Pentagon has “structured the U.S. nuclear arsenal according to the goal of deterring a nuclear attack on the United States and, if necessary, winning a nuclear war by launching a preemptive strike that would destroy an enemy’s nuclear forces.” That is a gross mischaracterization of U.S. policy, as numerous declassified documents and authoritative public statements by government officials attest.

Throughout the 1960s, for example, Defense Secretaries Robert McNamara and Clark Clifford, as recorded in draft presidential memoranda, explicitly rejected
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a “credible first-strike capability.” They instead identified the capacity to guarantee “assured destruction” of the Soviet Union as the fundamental measure of whether U.S. nuclear forces were sufficient and used that metric as the basis for rejecting the policy direction and force structure Lieber and Press assert that they sought.

The Department of Defense’s declassified History of the Strategic Arms Competition, 1945–1972 concludes:

[U.S.] thinking about strategic defensive operations quickly narrowed to thinking primarily about means of safeguarding the deterrent forces in case of an enemy first-strike. ... Though the United States and the Soviet Union both came to conceive of strategic forces as having the function of war prevention, their views concerning these forces continued to be different, the U.S. emphasizing manifestation of capability for inflicting unacceptable damage on an adversary’s homeland, and the Soviets emphasizing manifestation of capability for fighting a war. (italics in the original)

Many other declassified policy statements by senior officials across the decades support this conclusion and refute Lieber and Press’ thesis. For example, the Nixon administration’s 1974 top-secret (now declassified) National Security Decision Memorandum 242, the Strategic Air Command’s top-secret (now declassified) December 1979 memo “Current US Strategic Targeting Doctrine,” and President Jimmy Carter’s top-secret (now partially declassified) Presidential Directive 59 all used classic deterrence language and rejected a first-strike policy. Defense Secretary Harold Brown concurred with this position, writing in the Department of Defense Annual Report, Fiscal Year 1980 that “in the interests of stability, we avoid the capability of eliminating the other side’s deterrent, insofar as we might be able to do so. In short, we must be quite willing—as we have been for some time—to accept the principle of mutual deterrence, and design our defense posture in light of that principle.”

Indeed, beginning in the mid-1960s, the United States virtually abandoned substantial defensive capabilities that would have been essential to any “war-winning” policy, including a national civil defense program and active defenses to protect against a large-scale strategic-bomber and missile attack. There is no indication that Washington plans to begin funding such measures. The White House’s 2002 unclassified National Security Presidential Directive 23 presents missile defense only in terms of defending against limited missile threats from rogue states, and the United States’ current limited deployment of a missile defense system fully reflects this orientation. In addition, the 2001 Nuclear Posture Review, as described publicly by then Undersecretary of Defense Douglas Feith, not only rejected a first-strike policy but also explicitly excluded Russia as an immediate threat in determining the appropriate size for the operationally deployed nuclear force. Accordingly, the Bush administration has committed to reducing the number of operationally deployed strategic nuclear warheads by almost two-thirds and has just completed retiring, without replacement, the Peacekeeper ICBMs.

Lieber and Press’ Cold War–style modeling can reveal nothing meaningful absent an accurate discussion of the policy context, which they do not provide. They cherry-pick and misstate information about U.S. force developments—such as their

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false claim about the Minuteman guidance upgrade—to fit the policy they have so miscast, while ignoring or dismissing U.S. force reductions and glaring deficiencies that do not fit their characterization. Their message plays well to the most regressive and militaristic Russian audiences. As former Russian Prime Minister Yegor Gaidar has observed, empowering that particular audience at this time represents a real concern in Russia. Lieber and Press plead that they are just the messengers. But their message is a gross distortion of U.S. policy, and that distortion is destabilizing U.S.-Russian relations.

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Open to Question
PAVEL PODVIG

In arguing that the United States has achieved nuclear primacy and thereby made mutual assured destruction obsolete, Lieber and Press rely on some questionable assumptions about the status of Russia’s strategic forces.

To make their case that the Russian strategic nuclear arsenal “has sharply deteriorated,” Lieber and Press quote statistics showing that Russia today has “39 percent fewer long-range bombers, 58 percent fewer ICBMs, and 80 percent fewer SSBNs [ballistic-missile-launching submarines] than the Soviet Union fielded during its last days.” These numbers are generally correct, but a similarly one-sided examination of U.S. forces would have painted a similarly dire portrait; after all, the U.S. nuclear arsenal today has 66 percent fewer strategic bombers, 50 percent fewer ICBMs, and more than 50 percent fewer ballistic missile submarines than it possessed during the Cold War.

Lieber and Press claim that Russia’s strategic bombers “rarely conduct training exercises,” implying that Russia’s military is neglecting strategic aviation. Yet Russia’s strategic air forces participated in four major exercises in 2005 alone. Similarly, Lieber and Press refer to a number of failures during launches of submarine-launched ballistic missiles (SLBMs) in 2004 to illustrate the decline of the Russian navy. But they do not mention the much larger number of successful launches or the Bulava SLBM development program, which has been quite successful so far.

It may be true, as Lieber and Press write, that “over 80 percent of Russia’s silo-based ICBMs have exceeded their original service lives,” but regular and successful tests of ICBMs that have been kept in silos for 25 years or longer suggest that this has not affected the missiles’ reliability. Russia is decommissioning its ICBMs not because they are unreliable but because it does not need them. Lieber and Press claim that the development of the next-generation Russian ICBM, the Topol-M, has been “stymied by failed tests.” But of 15 flight tests conducted to date, only one has failed—a remarkable achievement for any missile-development program. It is true that the production rate of new Topol-Ms is low, but that may be because Russia has decided to concentrate on producing the mobile version of the missile, which it will begin deploying this year.
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Lieber and Press are right to state that Russia may end up having as few as 150 land-based missiles by the end of the decade. But about half of those ICBMs would probably be road-mobile Topols and Topol-Ms, which, if operated properly, would have a good chance of surviving a first strike. Lieber and Press dismiss Russia’s mobile missiles by saying that they “rarely patrol.” In reality, very little is known about Russia’s mobile-missile patrol rates, and although it is quite plausible that they are low, it is a stretch to assume that they are zero.

Lieber and Press describe Russia’s early warning system as “a mess.” In fact, although the system is past its prime, it has lost surprisingly little of its effectiveness. It may seem counterintuitive, but Russia would gain very little were its early warning system to be deployed to the fullest extent. Adding the capability to detect SLBM launches would not dramatically increase the time available to the Russian leadership for assessing attacks. The much-discussed “gaping hole” in the radar coverage east of Russia also should be put in context. Missiles launched from the Pacific could not cover the entire range of Russian targets that would need to be destroyed in a first strike. The scenario that Lieber and Press postulate, in which “Russian leaders probably would not know of the attack until the warheads detonated” because of flaws in their early warning system, is simply impossible.

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Cutting a Deal

ALEXEI ARBATOV

Lieber and Press are not out to scare anyone. Their article works within the limits imposed both by the information available to them (and accurate data about Russian nuclear forces are not available in sufficient detail) and by their models (which are quite simple compared to those used by Russia’s general staff and the U.S. Department of Defense). Based on their findings, they sounded the alarm.

Those who read Lieber and Press’ article attentively—and not in our Russian, sometimes paranoid way—will see the argument clearly: The strategic balance between the United States and Russia is becoming less stable, and the objective, technical possibility of a first strike by the United States is increasing. At a time of crisis, this instability could lead to an accidental nuclear war. For instance, if Russia feared a U.S. first strike, Moscow might make rash moves (such as putting its forces on alert) that would provoke a U.S. attack. Lieber and Press are rightly concerned about that risk.

Lieber and Press show that the major reason for the upset in the strategic balance is not that the United States is seeking to acquire the ability to deliver a disarming first strike. It is true that the United States is upgrading its strategic arsenal, but the steps it is taking today are nothing compared to those it took in the arms race during the Cold War. Rather, the primary reason for the shift is that Russia’s capabilities are declining because Moscow has not paid enough attention to its nuclear forces over the past 15 years.
Today, Russia has about 3,500 warheads based on heavy bombers and sea- and land-based missiles. Most of these were built in Soviet times, and their service lives are running out. Accordingly, these increasingly unreliable weapons will soon be removed from service. At that point, Russia’s modern nuclear arsenal will only include three or four new ballistic missile submarines and around 100 Topol-M missiles, both mobile and silo-based. These forces will still be enough to serve as a minimal deterrent, but it will rely heavily on a hair-trigger alert, which is very dangerous in the age of nuclear weapons proliferation and catastrophic terrorism.

A secondary cause is that both sides have abandoned their once-successful approach to arms control talks. For more than 30 years, the nuclear balance was maintained through negotiations. Washington pressured Moscow, Moscow pressured Washington, and so a great deal of arms limitation and reduction was achieved. Today, no such negotiations are under way. Some might say that this is because the United States is not interested in resuming talks. But Washington is interested in cooperating with Moscow on a whole number of issues—North Korea, Iran, and much else.

During the Cold War, the United States applied the so-called linkage policy very successfully, tying progress on issues important to Russia to progress on issues important to the United States. Moscow can now play the American game. The strategy is simple: the Russian government could, for example, offer to work with the Americans on Iran in exchange for Washington’s signing a new strategic arms reduction treaty that would significantly cut U.S. nuclear forces. (Russia’s own force level will fall dramatically with or without a treaty.) Then, 15 years from now, both Russia and the United States would probably have 1,200 or, perhaps, 1,000 nuclear warheads mounted on survivable delivery systems. That would make life calmer for both the Russians and the Americans, who would no longer fear that Moscow might press the button in a critical situation.

But both sides must take steps to build a better relationship and eventually abandon mutual deterrence through de-alerting their nuclear forces and building joint early warning and antimissile systems. Now that Russia and the United States are no longer enemies, they must work to ensure that their security is no longer held hostage to their ability to destroy tens of millions of each other’s citizens. To ignore the issue and hope it will somehow go away on its own is wrong.

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Lieber and Press Reply

In our original article, we argued that the United States is on the cusp of nuclear primacy and that the nature of improvements to the U.S. strategic arsenal suggests that Washington has intentionally sought that capability.

Peter Flory disagrees and asserts that cuts to the U.S. arsenal are evidence that our argument is misguided. But although the U.S. arsenal is smaller today than it was 15 years ago, the United States has upgraded its remaining weapons to make them much deadlier.
Consider recent changes to the U.S. submarine force. Flory points out that the Pentagon has reduced the size of the ballistic missile submarine fleet. But he fails to mention that the United States has more than quadrupled the yield of hundreds of SLBM warheads and dramatically improved the accuracy of all of the missiles.

The result of these upgrades is stunning. During the last years of the Cold War, a U.S. SLBM warhead had roughly a 12 percent chance of destroying a hardened Russian ICBM silo. Of the two types of U.S. submarine-launched warheads currently deployed, one has about a 90 percent likelihood of destroying such a silo and the other has a 98 percent chance. Despite such progress, the United States continues to improve the lethality of its SLBMs. These steps are unnecessary for deterrence and strongly suggest a desire for nuclear primacy. Only such a goal would justify additional upgrades to U.S. counterforce capabilities.

While Flory trumpets reductions to the U.S. ICBM force, including the retirement of the powerful Peacekeeper missiles, he dismisses the importance of improvements to the remaining ICBMs. Yet modernization has made those missiles vastly more effective. At the end of the Cold War, a warhead from a Minuteman III had less than a 57 percent chance of destroying a hardened Russian silo. After the upgrades currently under way are completed, a Minuteman III warhead will have greater than an 81 percent chance of destroying such a silo.

Flory says that our essay contains several factual errors. For example, he asserts that upgrading the Minuteman III ICBMs has not increased the missiles’ yield. But we never made that claim. (Moreover, the truth about the ICBM improvements is more complicated than Flory suggests.)
According to the 2001 Nuclear Posture Review, the current upgrade program will increase the yield on some ICBMs and decrease it on others.) Flory also contends that even with recent improvements to their guidance systems, Minuteman III ICBMs are less accurate than the Peacekeepers. If that is true, then the Minuteman modernization program did not meet its stated goal of achieving Peacekeeper-like accuracy. Regardless, that the program had this goal at all reveals Washington's interest in nuclear primacy. Finally, Flory writes that the MK-21 reentry vehicle is no more accurate than its predecessors. In fact, the MK-21 has several advanced features that reduce the harmful effects of heat during atmospheric reentry, thereby increasing its accuracy.

Flory consistently returns to the theme that the U.S. arsenal has shrunk since the end of the Cold War. But our analysis shows that when one factors in U.S. force reductions, upgrades to the remaining U.S. weapons, and steep cuts to the Russian arsenal, the result is a greatly enhanced U.S. first-strike capability.

While Flory criticizes our interpretation of the current administration's actions, Keith Payne challenges our description of past administrations' policies. We claim that during the Cold War the Pentagon designed the U.S. nuclear arsenal not only to deter an attack on the United States but also to allow Washington the option of launching a preemptive strike.

Payne argues that the United States had essentially stopped planning for preemptive nuclear war by the early 1960s, but there is overwhelming evidence to the contrary. For example, a recently declassified White House memorandum from 1969 reveals that the nuclear war plan at the time included five options for a full-scale nuclear attack, three of which were explicitly preemptive. The document even refers obliquely to the possibility that the United States might have considered launching a nuclear attack without a preceding period of tensions in order to take the Soviets completely by surprise. (The document is posted on the Internet at www.nd.edu/~klieber.)

Furthermore, although scholars do not yet have declassified, detailed descriptions of U.S. nuclear war plans in the 1970s and 1980s, changes to the nuclear arsenal during that era indicate that Pentagon strategists continued to contemplate preemptive nuclear strikes. During those years, and particularly during the 1980s, the United States invested heavily in programs designed to enhance its capability to destroy Soviet strategic forces, notably by improving the accuracy of its ballistic missiles and developing stealth technology for bombers. The United States also made intensive efforts to track Soviet ballistic missile submarines. Payne's claim that the United States abandoned plans for preemptive nuclear war by the early 1960s is, therefore, wrong, and it appears that the United States has never given up that effort.

Finally, Payne suggests that we mischaracterized the U.S. missile defense system. He says that it is too limited to be used against China or Russia. But those countries' arsenals are so vulnerable that even a limited missile defense (if it can be made to work) could mop up the few missiles that survived a U.S. first strike. He also notes that the declared purpose of the shield is only to protect against attacks from rogue states, not China or Russia. But in 2005, the director
of the U.S. Missile Defense Agency publicly acknowledged that the United States was seeking the ability to counter Chinese missiles.

Pavel Podvig puts the issue of U.S. intentions aside and focuses instead on the Russian arsenal. Podvig is an excellent scholar, but his response to our essay understates the maintenance and readiness problems plaguing Russia's nuclear forces today. He also downplays the ongoing problems affecting Russia's efforts to develop and deploy new weapons systems. For example, Russia's attempts to create a new class of ballistic missile submarines and SLBMs have encountered repeated delays and failures. The keel for the first submarine was laid a decade ago, but the boat is still incomplete. And the initial attempt to build a new SLBM for the submarine ended in failure. The current program, aimed at developing the Bulava SLBM, is behind schedule; indeed, Podvig has described it elsewhere as "troubled." Russia's unambitious goal of deploying just one new submarine with its complement of missiles by 2010 is now widely considered unrealistic.

More important, Podvig denies that the United States actually has the ability to carry out a first strike. He says that we are wrong to assume that Russia's mobile ICBMs always remain in their garrisons, but Podvig has misread our analysis. We do not assume that the mobile ICBMs never leave their bases, only that there will be times when no mobile missiles are on patrol or when U.S. satellites have located them. Podvig apparently agrees; he has written elsewhere that Russia's mobile ICBMs are "vulnerable to detection by space-based reconnaissance," that the mobile missiles have "almost certainly
developed detectable patrol patterns," and that the Russian military thus does not "consider mobile launchers to be undetectable and therefore invulnerable during their normal peacetime operations."

Podvig also contends that the gap in Russia's early warning network is not critical because SLBMs "launched from the Pacific could not cover the entire range of Russian targets that would need to be destroyed in a first strike." In fact, we have located launch positions in the Pacific that would allow U.S. submarines to fire missiles through this gap and hit targets throughout Russia, even as far west as Moscow. (Maps showing these trajectories are available on the Web site indicated above.) Even if a few bases could not be hit by sending SLBMs through the gap, the United States has B-2 stealth bombers and approximately 400 stealthy nuclear-armed cruise missiles that could hit those targets. Accordingly, Russian leaders would have virtually no warning of an incoming strike.

The changes in the nuclear balance that we describe are real, potentially destabilizing, and deserving of sustained discussion. In this context, we appreciate Alexei Arbatov's sober words. If Russian leaders were to heed his advice by publicly linking their cooperation on matters important to Washington to changes in U.S. nuclear strategy, a much-needed debate in the United States over the wisdom of continuing to pursue current policies might finally be sparked.