

Missile Defenses: The Case for a Limited Insurance Defense

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President George Bush's inauguration last January settled the issue of whether the United States will proceed with developing and deploying a missile defense system. It will. The only questions that remain are what kind of system will be deployed when, and with what consequences for international stability and security. Those, indeed, are large and important questions with, as yet, uncertain answers.

The decision to proceed with missile defenses results from three factors. First, there is virtual agreement in Washington that the threat posed by the proliferation of missiles and weapons of mass destruction is growing. More countries are believed to be acquiring these technologies, including some countries whose foreign policy behavior is seen to be both unpredictable and inimical to American interests. Second, four decades of research, including spending some \$60 billion on ballistic missile defense research over the past 20 years alone, has begun to pay off in new technologies that promise to provide some protection against small-scale missile attacks. Sensor technologies have advanced to enable adequate discrimination and exceptional tracking and guidance capabilities, so that it is now possible for the proverbial bullet to hit a bullet. Third, with the end of the cold war, long-standing strategic objections to missile defense (including the strict limits on defense incorporated in the ABM Treaty) are no longer applicable. New threats within this new strategic environment call for new responses. Thus, missile defenses are necessary to counter the ability of countries that are once again known as "rogue states" to blackmail or coerce the United States and its allies in ways contrary to their interests. Defenses, in this view, are seen as the best way to extend and protect America's global reach in a proliferating world.

Each of these reasons has merit. More countries may acquire weapons of mass destruction and the missiles to deliver them over great ranges if not now, than possibly in the future. Vast sums of research money are paying off in fielding better technologies. And defenses can add a degree of uncertainty in the minds of actual or potential adversaries that complete vulnerability erases. There is, therefore, good reason to pursue missile defenses and even to deploy systems if and when they become available.

At the same time, it is easy to overstate the threat, the technological advances, and the strategic impact of deploying defenses. Political change in countries like North Korea, Iran, and Iraq may fundamentally alter the character or foreign policy goals of the regime. Developing even near-perfect defenses capable of defeating a dedicated and technologically determined foe may never be possible. And it is unlikely that any president will rely on the uncertainties of defenses (including the knowledge that they may fail with catastrophic consequences) for pursuing policies she or he would otherwise shun.

That leaves a limited, but still important role for deploying missile defenses: basic insurance in case things go wrong. If a missile were ever to be launched against one's territory, it is better to possess imperfect defenses than none at all. And while such defenses may not alter the strategic calculations of the defender, they are bound to affect the calculus of the attacker. Therefore, the United States should work with its allies in Europe and, if possible, with Russia to devise a strategy for deploying defenses against small-scale missile attacks from third countries. Such a strategy will require that Europeans (and Russia) accept the contributions active defense can make to their security, and the United States to accept that deployment can proceed only if it is embedded within both a broader effort to curb and reverse weapons and missile proliferation and a vigorous attempt to reach agreement with Russia on modifying and updating the existing arms control regime to accommodate such a limited defense.

An Evolving Threat

In some important respects, the ballistic missile threat confronting the United States and Europe today is less than it was at the end of the cold war. Russia deploys thousands of missiles less than the Soviet Union did, and countries like Argentina, Brazil, Egypt and South Africa abandoned

space launch and missile programs in the early 1990s.¹ Moreover, the oft-repeated belief that ballistic missile proliferation is increasing even accelerating is not substantiated by the available evidence. Thus, while CIA Director George Tenet testified last February about the continuing and growing threat posed to us by ICBMs, he presented no real evidence to substantiate that conclusion.² There, as elsewhere, the focus was on just three countries: North Korea, Iran, and Iraq.

What has changed is less the evolving threat than the standard by which the U.S. intelligence community assesses that threat. Whereas in the early and mid-1990s, National Intelligence Estimates (NIEs) of future long-range missile threats maintained that the probability of countries developing such capabilities within the next 15 years was low, the latest NIE (released in 1999) argued that North Korea, Iran, and Iraq could deploy such systems much earlier.³ This change followed the publication of the Rumsfeld Commission Report in July 1998, which concluded that the intelligence community might have underestimated the ballistic missile threat to the United States. Indeed, the Commission argued that countries like North Korea, Iran, and Iraq could plausibly deploy ICBM-range missiles with little or no warning.⁴ As if to prove the Commission right, six weeks after the publication of its report, North Korea tested a three-staged Taepo Dong-I missile, which it could theoretically convert into an ICBM. Suitably chastened, the intelligence community decided in 1999 to substitute its best assessment of what was *likely* to happen with a worst-case judgement of what *could* theoretically come to pass. In addition, the 1999 NIE substantially reduced the range of the assessed long-range missile threat by shifting from a focus on threats to the 48 continental states to the threat posed to all of U.S. territory (including the outer

¹ Joseph Cirincione, Assessing the Assessment: The 1999 National Intelligence Estimates of the Ballistic Missile Threat, *The Nonproliferation Review*, Vol. 7 (Spring 2000).

² George Tenet, Statement before the Senate Select Committee on Intelligence on the Worldwide Threat 2001: National Security in a Changing World, February 7, 2001, available at: http://www.cia.gov/cia/public_affairs/speeches/UNCLASWWT_02072001.html (accessed March 2001).

³ National Intelligence Council, *Foreign Missile Development and the Ballistic Missile Threat to the United States Through 2015* (Washington, D.C.: 1999); and National Intelligence Council, *Emerging Missile Threats to North America During the Next 15 Years* (Washington, D.C.: 1995).

⁴ *Report of the Commission to Assess the Ballistic Missile Threat to the United States*. Executive Summary, July 1998.

islands of Alaska and Hawaii) and shortening the timeline from a focus on when a missile would first be deployed to a concern with when it would first be tested.⁵

Lost in all the machinations, politically and otherwise, of assessing the long-range missile threat to the United States was the political context in which such threats might appear. Yet, politics provide a crucial input for threat assessments—ultimately, what matters is intentions as well as capabilities. Thus, while the United States is within the reach of French or British long-range missiles—and may soon also be reachable by missiles fired from Israel or India—no one is particularly concerned or focused on the possibilities. Politics, in other words, are important. And politics at the turn of the century may be changing the character or capabilities of rogue regimes. North Korea has entered a détente of sorts with the South—and it has coupled this with a freeze on missile tests and a far-reaching offer to abandon both the exports of missile technology as well as end its indigenous medium and long-range missile programs.⁶ Iran is in the midst of possibly far-reaching political change—with reformist politicians who dominate the parliament and presidency competing for the power to set the country's future political course with the orthodox and revolutionary forces that still hold most of the reigns of power. And Iraq, though emerging from years of self-inflicted isolation, remains effectively contained by a combination of economic sanctions and a large American military presence in the region.

None of this is to suggest that these countries are about to join Israel or India—let alone our allies—as states that might be capable of threatening the United States, its forces, or friends but clearly have no intention of doing so. But it does suggest that hyping the threat, and basing all analysis on worst-case assumptions about what could happen rather than what is most likely to happen, has its costs—not least to encourage these very same countries to believe that an improvement in political relations with Washington is not possible. That, in itself, can make their decisions to acquire long-range missiles that can threaten the United States with attack more, rather than less, likely.

⁵ Cf. Cirincione, *Assessing the Assessment*.

⁶ For details on this offer, see Michael Gordon, *How Politics Sank Accord on Missiles With North Korea*, *New York Times*, March 6, 2001, p. A1.

This does not mean that the United States should not take the proliferation threat seriously. While politics can change things for the better, it can also change them for the worse – and quickly. It does mean, however, that the more appropriate response to the missile proliferation is a more variegated strategy that combines a proactive nonproliferation strategy with efforts that address the consequences of proliferation. Thus, the best response to missile proliferation involves a combination of efforts designed to prevent countries from acquiring missiles (through export controls, arms control agreements, and security alliances), roll back missile programs that already exist (through diplomatic suasion, by offering economic or other incentives and/or imposing sanctions), and to manage the consequences of missile proliferation (including by deploying defensive systems and possibly through pre-emption). If the Bush administration demonstrates as much commitment to the first two strategies as it does to the third, Europe and Russia are much more likely to support missile defense deployments.

It is within this broader non-proliferation effort that investment in a limited insurance defense makes sense. We live in an uncertain world, in which it would be folly to exclude the possibility that our best non-proliferation efforts might fail. It is possible – perhaps even likely that the United States and its allies will have to confront a long-range missile threat to their territories within the next decade. And given the long lead times for research, developing, testing, and deploying the highly complex and technologically sophisticated defenses that may be needed to counter these threats, deciding now to proceed along this path is the right way to go.

Improving Technologies

Although much of the U.S. debate about missile defenses is conducted on the presumption that there is something to deploy in the very near future, the fact of the matter is that even if President Bush were to decide today that he wanted to move forward with deployment any real defensive capability will not be available until the time he leaves office – assuming, of course, that he will be elected in 2004. This is true even for those technologies that are in the most advanced state of development – the midcourse defense system that the Clinton administration contemplated deploying initially in Alaska. A multi-layered system of the kind Defense Secretary Donald

Rumsfeld has talked about presumably including boost-phase and midcourse defenses based on land, at sea, and in the air and space will take a decade and more to see the light of day.⁷

Therefore, the day that the United States can deploy a perfect, or even a near-perfect, defense against a small-scale ballistic missile attack is still far off. The midcourse defense favored by the previous administration still has to undergo nearly its entire testing program to ensure that the hit-to-kill technology on which it is based will in fact work. Indeed, the failure of two out of the three initial tests of the interceptor rocket and kill vehicle indicates that this may still take some time. Moreover, there are plausible countermeasures to defeat this defense, and these are likely to be available to any country that possesses the technological know-how to build a long-range missile capable of delivering a nuclear or other warhead somewhere in the vicinity of where it is aiming. Boost-phase technologies that attack missiles as they ascent into space are less susceptible to countermeasures, but with the exception of the airborne laser and research conducted on space-based interceptors (the brilliant pebbles) a decade ago, no such systems are currently on the drawing board. It will likely take a good half a dozen years for the basic research and development on such a defense to be completed.

At the same time, a dedicated effort to develop missile defenses is bound to succeed sooner or later. In the years ahead, technology will be available to intercept missiles and warheads in flight not every time nor always perfectly, but with a sufficient probability of success to make proceeding with deployment worthwhile. This point is important, though often forgotten. Because the consequences of a nuclear warhead actually exploding on one's territory are so catastrophic, much of the missile defense debate presumes that the only defenses worth deploying are those that have a very high probability of success on the order of 90 percent or more. And because it is not too difficult to think of reasons why even very able defenses might fail more than 10 percent of the time, opponents of missile defenses have long had the better of the argument.

But the world has changed and so are the terms of debate about the utility of deploying missile defenses. If there is even a small chance that a country will launch a missile topped with a

⁷ For a good overview of the state of missile defense technology, see James A. Lindsay and Michael O'Hanlon, *Defending America: The Case of Limited Missile Defense* (Washington: Brookings Institution Press, 2001), p. 82-115.

nuclear, chemical, or biological warhead, then is not some defense, however imperfect, better than none? Just because it was clearly impossible to defend the United States against a Soviet Union capable of launching thousands of warheads against U.S. territory, does not mean that the United States should not attempt to defend itself against far smaller and more circumscribed missile threats. Particularly if the goal of deploying missile defenses is to provide some form of insurance, then clearly something is better than nothing. Nor do defenses need to be perfect on the first day they become operational – it is possible to improve and upgrade these systems over time, as additional research and testing is done.

Of course, one should only deploy a defense that works. But the definition of what works is no longer as clearcut as it once was presumed to be. Even imperfect defenses that give the defender no more than one in two or even a one in three chance to intercept an incoming missile may well be preferable to having no defense at all. The question is not whether defenses can work perfectly, but whether they can work sufficiently well – and at an acceptable cost – to make a difference. By that standard, there can be little doubt that the technology has advanced sufficiently for a workable missile defense system to be deployed by the end of this decade.

If that is the case, what kind of system should the United States aim to deploy? Given the limited aim of defenses, the most appropriate system to develop would be a two-tiered system that relied mainly on boost-phase defenses deployed on land and possibly at sea and might also include a small mid-course defense based in the United States (and, should Europe want to deploy this second tier, perhaps in Europe as well).⁸ The advantage of boost-phase defenses is that these systems provide global protection against specific missile threats. Thus, a boost-phase defense capable of intercepting a missile fired from, say, Iran could do so no matter whether it was aimed at Moscow, Munich, or Miami. Equally important, land or sea-based boost-phase systems pose no threat to the nuclear missile forces of Russia or China, since these can be launched from positions far removed from where the defenses would be deployed.

Finally, boost-phase defenses offer the advantage – the need actually – of promoting cooperation between the United States and other countries, including possibly Russia, on developing

⁸ For one proposal along these lines, see Lindsay and O Hanlon, *Defending America*, chp. 6.

and deploying defensive systems. Since sea-based systems will be unable to defend against missiles that are launched from Iran or Iraq on a northward trajectory, a boost-phase defense must be deployed north of these countries—in Russia, the Caucasus, and/or Turkey. Thus, aside from a space-based system, an effective boost-phase defense will require the United States to cooperate with other countries to ensure adequate coverage.

A second, mid-course tier could be added to provide added protection. By the logic of compound probabilities, having two shots at an incoming missile—even with defenses that are known to be far from perfect—significantly enhances the likelihood of a successful intercept. Also, since the two tiers are based on different technologies, the attacker faces a more complicated task of trying to defeat the defense by deploying different countermeasures. Finally, a mid-course defense of this kind could possibly be deployed more rapidly than a boost-phase defense that still requires much research, especially if the interceptors and associated radar were to be deployed in North Dakota rather than Alaska, as originally planned. And if Europeans were interested in deploying a similar system, a single interceptor and radar site in central Europe (*e.g.*, the Czech Republic) would provide Europe with some protection against missile threats from the Middle East and Northeast Asia.

A Changing Strategic Environment

The end of the cold war has significantly changed the strategic calculus of missile defenses. At a time when the U.S.-Soviet nuclear rivalry still dominated the strategic environment, there was general (though by no means complete) agreement that efforts to defend national territory against ballistic missile attacks were both futile and destabilizing. In the current environment, one that is no longer marked by the previous nuclear competition, the offense-defense equation has shifted. There is widespread agreement that we no longer need the large, diverse, and sophisticated nuclear arsenals capable of delivering thousands of warheads with precision against an array of military and strategic targets that were deemed necessary to deter the Soviet Union many years ago. As a result, the requirements of U.S.-Russian mutual deterrence have either disappeared altogether or, at the very least, eased significantly. So long as Moscow and Washington retain the ability to deliver hundreds of nuclear weapons under any and all circumstances, the fundamental stability of their nuclear relationship in the current environment will remain unaffected.

This changing strategic reality has implications for the deployment of missile defenses. It is no longer obvious that limited defenses, deployed to address new strategic threats, would have the destabilizing consequences that many feared would be the case during the cold war. Today, the perceived missile threat does not stem from Russia, but from countries like North Korea, Iran, and Iraq that may prove able to acquire long-range missiles capable of threatening U.S. or European territory. Limited defenses, with interceptors numbered in the low one hundreds at most, should have no impact on Russia's perceived ability to deter a U.S. attack or otherwise affect Washington's calculation. But such a defense could, or so advocates argue, have a major impact on the small missile inventories that a Pyongyang or Teheran may be able to amass in the next decade or so.

Some would argue that defenses may also be necessary to address the actual or potential threat posed by China. Over the next decade or two, Beijing may well expand its long-range missile arsenal by a factor of five or ten—whether or not the United States deploys a missile defense system. Some have argued that such an expansion would offer positive proof of China's expansionist pretensions (*e.g.*, towards Taiwan), thus necessitating a similar expansion in U.S. defensive capacity.⁹ But there are two problems with this perspective. First, so long as the United States has the capacity to destroy China as a functioning society, why should an expansion in Beijing's capacity to do the United States harm be of more concern than it is today (unless, of course, one assumes that China's 18 liquid-fuelled ICBMs do not constitute a viable force)? Second, to build a defense able to thwart a dedicated Chinese missile attack once China has expanded its arsenal to 100-200 long-range missiles would require a system vastly larger in scope and capability than anyone is now contemplating. And that, in turn, would invariably bring Russia into the equation, thus raising all the questions about strategic stability that the advocates of missile defenses now claim are beyond us.

It follows that the purpose—the sole strategic purpose—of missile defenses can only be to deal with the threat of small-scale missile attack. That being the case, the question is whether, in a world where countries like North Korea, Iran, and Iraq have acquired long-range missiles capable of attacking the United States and European countries, the deployment of ballistic missile defenses will

⁹ See, *e.g.*, Stephen Hadley, 'A Call to Deploy', *Washington Quarterly*, vol. 23, no. 3 (Summer 2000), p. 106.

have a fundamental strategic impact? Advocates of defenses, including the Bush administration, answer with an emphatic yes. According to this view, the main reason why these countries seek to acquire long-range missiles capable of threatening the United States is to deter American intervention in their region. From that perspective, defenses are a means to neutralize that deterrent, thus enabling America's global reach. As one advocate put it, missile defense is about preserving America's ability to wield power abroad. It's not about defense. It's about offense.¹⁰

This argument has intuitive appeal. Would the United States have tried to reverse the Iraqi invasion of Kuwait if Baghdad was known to possess long-range missiles armed with nuclear, chemical, or biological warheads capable of reaching U.S. territory? Perhaps not. Would Washington have been able to pull together the Gulf War coalition if Iraq could similarly threaten far-away coalition members, including in Europe? Most unlikely. Long-range missiles in the hands of Saddam Hussein might have made a major difference.

But if Saddam had this capability and the United States had deployed defenses able to provide some protection to U.S. and allied territory, would that have fundamentally altered U.S. and allied calculations? I have my doubts. If there was a fifty or twenty-five or even a ten percent chance that a missile launched at their territory would penetrate the defenses, presidents and prime ministers would likely weigh that probability as heavily as if the chance was one hundred percent. Of course, even with these risk calculations, leaders might still decide to go to war if the stakes were judged sufficiently high. Even without defenses, U.S. and some allied leaders can rely on their ability to inflict unacceptable damage (by conventional or other means) to deter an attack on their territory. After all, while he had demonstrated the capability and will before, Saddam did *not* use chemical or biological weapons against U.S. or allied forces, having apparently been deterred by the knowledge of what the United States could do in response.¹¹

The mere deployment of defenses is therefore unlikely to have a major, let alone a fundamental, impact on the strategic calculus of the United States and its allies. Risks will continue to be weighed against the interests affected—and those interests will themselves tend to dominate.

¹⁰ Lawrence F. Kaplan, "Offensive Line," *The New Republic*, March 12, 2001, p. 20.

¹¹ Cf. McGeorge Bundy, "Nuclear Weapons and the Gulf," *Foreign Affairs*, vol. 70, no. 4 (Fall 1991).

Thus, whether or not the United States would have acted similarly as it did in 1990-91 if Baghdad had been able to threaten U.S. territory directly is a decision that was likely to have remained unaffected by whether defenses had been deployed. The chance of a defense's failure would have to weigh heavily in any president's mind, as it would in the public's. But if the interests were judged to be sufficiently great, then intervention could be a reasoned judgement even if the defenses were far from perfect, or absent altogether.

However, while U.S. or allied strategic calculations may be little affected by the deployment of defenses, the same would not of course be the case for the countries against which such defenses would be deployed. A North Korea that possessed a handful of missiles, and perhaps as few as two or three nuclear warheads, would have to be deeply concerned that its one, two, or three-shot chance might be successfully deflected by a limited defense. That, coupled with the near-certainty of devastating retaliation, might well dissuade a leader in Pyongyang from using or even seriously threatening to use a nuclear-armed missile against the United States. And in that sense, the deployment of a limited insurance defense could have important strategic benefit.

The Way Forward

The United States should proceed with the deployment of a limited insurance defense — a LID — designed explicitly to defend its territory and that of its allies against a possible small-scale missile attack from countries like North Korea, Iran, and Iraq. Such a defense would likely consist of boost-phase interceptors based at sea and on land. These systems would preferably be developed in cooperation with any country concerned about a possible missile threat, including NATO members and, if agreeable, Russia. In addition, the United States might also consider deployment of a midcourse defense, based in North Dakota, and consisting of a small number (25-50) of interceptors. This defense could be built rapidly, should the need arise, and its initial deployment (notably the construction of a new battle management radar in North Dakota) could proceed within the restrictions imposed by the ABM Treaty. This two-layered defense would provide adequate protection against a small-scale missile attack without creating the perception in Beijing or Moscow that its deployment was aimed at undermining their nuclear deterrent forces.

But the United States must do more to reassure Europeans and others about the reasons for moving forward in this direction.¹² First, Washington should make clear that it views the pursuit of missile defenses as an inextricable part of a broader non-proliferation effort. That effort is geared to preventing countries from acquiring missiles, rolling back missile programs that already exist, and managing the consequences of any proliferation that does occur. To put substance behind this effort, it is important that the Bush administration reverse course on a number of policy stances that point in the opposite direction by encouraging early Senate approval of the Comprehensive Nuclear Test Ban Treaty, redoubling efforts to strengthen the Biological Weapons Convention, and immediately engaging North Korea in negotiations on terminating its missile program. Europe cannot be asked to support missile defenses if the United States is not ready to support the many multilateral efforts designed to stem proliferation of weapons of mass destruction and ballistic missiles.

Second, Washington should reassure its allies, Russia, and other countries that it is fully committed to continuing the international regulation of defensive deployments. In practice, this means a recognition by the Bush administration that it must work with Russia toward an agreement on updating and modifying the ABM Treaty. While the sentiment expressed by many senior Bush administration officials that the ABM Treaty is a relic and belongs to a different era may have some merit, the onus is on the Bush administration to devise ways in which its key principles can be upheld while deployment of limited defenses proceeds. In particular, although the specifics of such an agreement have to be left to further negotiations, it is critical that any revision in the treaty or even a replacement upholds and strengthens three fundamental principles that were accepted by Washington and Moscow in 1972:

- **A ban on strategically significant missile defenses.** The ABM Treaty did not bar the deployment of ballistic missile defenses only the deployment of a nation-wide defense. In fact, the treaty specifically allowed for up to 100 interceptor missiles to be deployed at two different sites (reduced to one site in 1974). Any modified treaty must continue to bar the

¹² These ideas are further elaborated in: Ivo Daalder, James Goldgeier, and James Lindsay, "Deploying NMD: Not Whether but How," *Survival*, Vol. 42, no 1 (Spring 2000); Ivo Daalder and James Goldgeier, "Russia and the ABM Treaty," in James Wirtz and Jeffrey Larsen, eds. *Rockets' Red Glare: Missile Defenses and the Future of World Politics* (Boulder, CO: Westview Press, forthcoming); Ivo Daalder and Philip Gordon, "There's Time Now for Serious Talking about Missile Defense," *International Herald Tribune*, September 7, 2000; and Ivo

deployment of defenses capable of posing a threat to the Russian or American nuclear deterrent.

- **Guard against the rapid breakout of limits on defensive systems.** The ban on strategically significant defenses is useful only if it is difficult for either side to break out from limits imposed on the deployment of defenses. That is why the 1972 treaty barred deployment of all but fixed, land-based interceptors and placed severe limits on the type, location, and orientation of radar installations. An updated treaty might be able to relax some of these limits (for example, allowing for the deployment of mobile boost-phase interceptor missiles on land and at sea), while confirming others (notably a ban on space-based weapons and tracking sensors).
- **Prevent the circumvention of treaty restrictions.** At the time of the ABM Treaty's negotiation in the early 1970s, and ever since, the United States and Russia have been concerned about the possible adaptation of non-ABM systems like surface-to-air missiles, anti-tactical missile systems, and anti-satellite weapons to ABM systems. Indeed, as late as 1997, Moscow and Washington agreed on how to differentiate between so-called theater missile defenses (which are not constrained by the treaty) and ABM interceptors (which are). An updated treaty must take account of this principle, notably by restricting battle management/command, control, and communication systems and by placing strict limits on the type and location of sensors.

It will not prove easy to forge a cooperative path on missile defenses between Russia and the United States. But it is important for both sides to try. The question of whether missile defenses will be deployed may have been settled. But given the possibility that their deployment can have highly destabilizing consequences for U.S., European, and international security, it is important to consider carefully how that is to be done.