Missile Defense Malfunction: Why the Proposed U.S. Missile Defenses in Europe Will Not Work*

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The U.S. proposal to establish missile defense sites in Poland and the Czech Republic has exacerbated relations with Russia to a degree not seen since the height of the Cold War, and has done so despite the fact that the system has no demonstrated capability to defend the United States, let alone Europe, under realistic operational conditions. Further, it is being built on the shoulders of a missile defense system that has not come close to proving itself in testing and is still missing major components. Indeed, even the branch of the Pentagon charged with developing missile defense, the Missile Defense Agency (MDA), claims only to be able to address an "unsophisticated threat." As this paper will demonstrate, the proposed U.S. missile defense system in Europe creates much havoc and provides no security in return.

Limits and Capabilities

Since President Ronald Reagan's "Star Wars" speech in 1983, the United States has spent over $110 billion on the elusive goal of establishing some sort of missile defense system for its territory, its troops abroad, and its allies, yet no effective system exists to date. What the United States has proposed for Europe is part of an overall ballistic missile defense system (BMDS) that would, it is claimed, eventually defend against all ranges of ballistic missiles during all stages of their flights. The primary missile defense system—the one most commonly associated with the subject—is the Ground-Based Midcourse Defense (GMD) system. In its development of the GMD system, the MDA has arbitrarily minimized the hypothetical threat against which it would defend to just one or at most two enemy intercontinental ballistic missiles (ICBMs). Generally, the countries used as justification for this particular system are North Korea and Iran. As of the end of

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2007 the GMD system had twenty-four ground-based interceptors deployed in Ft. Greely, Alaska, and Vandenberg Air Force Base, California.[1]

Despite a middling test record of seven intercepts out of thirteen attempts over the course of a decade, the GMD's three-stage interceptor is being used as the model for extending the system to Europe. What is particularly notable is that, because of the expense of the tests and the embarrassment associated with failure, all thirteen tests have been conducted with advance information about the mock attack, information that no real enemy would willingly provide. Nonetheless, tests have failed roughly half the time. This is not unusual for a system that is so early in its development process, but it does indicate that the GMD system has much progress to make before it can be depended upon to provide a defense against ICBMs. The proposed European deployment, also called the "third site" because it would be the third deployment after the interceptors in Alaska and California, would include a two-stage variant of the GMD interceptor, which is yet to be developed and is not scheduled to be tested until 2010.[2] The GMD system has run into many problems during testing. Starting in 1999 the system tests included a few simple balloons as decoys, but these proved exceedingly challenging. These countermeasures were later phased out of the testing program, but may begin to be incorporated into system tests in 2008 after a six-year hiatus. Until they are consistently a part of the testing process, however, one cannot say that the tests are operationally realistic, as any country that could make a long-range, multistage ballistic missile that could reach the United States or Europe could also add simple but effective decoys to the missile.

Decoys and countermeasures are the Achilles' heel of any missile defense, and the proposed system in Europe is no exception. To use a popular analogy, shooting down an enemy missile is like trying to hit a hole-in-one in golf when the hole is moving at 17,000 mph. And if an enemy uses decoys and countermeasures, missile defense is like trying to hit a hole-in-one when the hole is moving at 17,000 mph and the green is covered with black circles the same size as the hole. The defender does not know which target to aim for. Decoys can include any of a variety of objects that resemble the attacking enemy missile or its warhead encased in a reentry vehicle (RV), such as a cone-shaped black balloon. Other countermeasures could include chaff or debris deliberately scattered by the attacker with the target missile or warhead to reflect the search radar of a missile defense system; infrared-burning pellets to confuse systems that operate in the infrared; and jamming or electronic interference to evade radar detection.

An enemy can also apply radar-absorbing materials to the attacking missiles or RVs to reduce their radar cross-sections, thus making them "stealthy." Of course, in an all-out battle missile defense radar and interceptor sites would be prime targets for an enemy, which we discuss later.

As for the defense system itself, according to the Fiscal Year 2008 MDA budget request:

> *This initial capability is not sufficient to protect the United States from the extant and anticipated rogue nation threat* [emphasis added]. We therefore must close the gaps in the system and improve its capability to keep pace. Three key elements of this effort are additional Aegis BMD sea-based interceptors, the introduction of four transportable Terminal High Altitude Area Defense (THAAD) fire units consisting of radars and interceptors, and the introduction of a land- and sea-based volume kill capability (Multiple Kill Vehicle program) to address potential countermeasures. Additionally, to ensure full coverage of the United States against threats from the Middle East, we will upgrade an Early Warning Radar in Thule, Greenland. This radar, in conjunction with the radar at Fylingdales, U.K., provides the ability to track threats to the U.S. and Europe from the Middle East. Because we must protect these radars or risk losing the "eyes" of our system, we are planning to field ground-based interceptors and an associated ground-based midcourse radar site in Europe. This achieves four goals: protecting the foreign-based radars; improving protection of the United States by providing additional and earlier intercept opportunities; extending this protection to our allies and friends; and demonstrating international support of ballistic missile defense.[3]

As this candid assessment makes clear, the MDA sees the proposed missile defenses in Europe as a first line of defense to protect existing radar sites in Greenland and the United Kingdom necessary to defend the United States, not first and foremost to defend Europe.

Major Elements of the Plan

As mentioned, the proposed interceptor for the European sites would be a two-stage variant of the GMD interceptor. The United States proposes fielding up to ten of these GMD-variant interceptors in Redzikowo, Poland, a former Polish air base. Furthermore, Washington wants to modify an X-band radar that has been used for testing the GMD system in the South Pacific and move it to a site in the Brdy military zone in the Czech Republic. The goal is to have the sites in place roughly around 2012, and the expected cost is nearly $6 billion. In its FY2009 budget the administration has requested just over $1 billion for the proposed European deployments, including about $285 million for construction.[4]

Because the one proposed radar in the Czech Republic would not be sufficient for the system, an additional search radar would also be required. Its location has not yet been determined, but it is likely to be located farther south, not in the Czech Republic or Poland. Furthermore, there are two new satellite networks being built to provide a much-needed capability to detect and track missile launches. The first, the Space-Based Infrared System (SBIRS), is a U.S. Air Force system that is being designed to detect if a missile is launched. The second, the Space Tracking and Surveillance System (STSS), is an MDA satellite network that is supposed to track enemy missiles during their flight. Neither system is up and running at present. SBIRS, in fact, has had so many problems in its development that the Air Force has initiated work on a second network, the Alternative Infrared Satellite System (AIRSS), which is being designed as a potential substitute for SBIRS.

One more cog in the GMD system is the Sea-Based X-Band Radar (SBX). This massive, twenty-eight-story radar on a movable platform floating in the Pacific Ocean is not part of the proposed system for Europe. Based in Adak, Alaska, the SBX is supposed to be used to track enemy missiles from North Korea and help provide updates to the GMD interceptor during its flight. To date, however, it has been used only to observe GMD tests, and has yet to be used to take in data and then use it to guide an intercept attempt.

The Worldwide Threat?

Beyond the U.S. missile defense sites in Europe, the administration is proposing an immense buildup of missile defenses around the world, citing missile proliferation as the justification. To defend the need for missile defenses, Lt. Gen. Trey Obering, head of the MDA, has claimed that the threat from enemy missiles is growing and points to missiles in twenty countries. However, all but two of these twenty countries—Iran and North Korea—are either friends, allies, or countries from which we have no missile threat: for example, Israel, India, Pakistan, Vietnam, South Korea, Moldova, Ukraine, Saudi Arabia, and Egypt. Even Venezuela was recently added to the list. Further, with the exception of Russia and China, none of these twenty countries—including Iran and North Korea—has missiles that can reach the United States. As recently as October 2007, the White House announced: "America faces a growing ballistic missile threat. In 1972 just nine countries had ballistic missiles. Today, that number has grown to 27 and it includes hostile regimes

with ties to terrorists."[5] Curiously, it has never explained how it came up with twenty-seven countries, rather than Obering's already exaggerated claim of twenty.

Given the large number of Russian ICBMs, even the most futuristic missile defenses would not be dependable against a Russian attack. In fact, the U.S. Congress shut down the Safeguard ABM system in 1975, just one day after it was declared operational, for precisely this reason. Surely, the Russian military and scientific establishment knows this as well. Russia, after all, has also tried to develop missile defenses and knows how truly difficult it is. China, for its part, currently has about twenty missiles that can reach the United States, and some have countermeasures that would confound U.S. missile defense systems. However, in response to U.S. missile defense efforts, China could decide to build up its stockpile of ICBMs to approximate Russian levels and also have the ability to overwhelm U.S. defenses. If China should choose to do so, U.S. missile defenses will have destabilized the international situation.

As for the threat from North Korea, in 1999 former U.S. Secretary of Defense William Perry, at the request of the Clinton administration, made what must have been an exhausting series of diplomatic trips to persuade North Korea to stop developing and testing long-range missiles. Perry was remarkably successful in encouraging the North Koreans to enact a missile testing moratorium, which held for some time. In fact, as news of his success reached the Pentagon, officials there joked: "There goes the threat!"[6] This underscores the fact that the most effective route in dealing with nuclear and missile proliferation threats can be through creative diplomacy, not military technology. Dollar for dollar, Dr. Perry was the most cost-effective missile defense system the United States ever had, and he showed that effective diplomacy is hard to beat. Unfortunately, the Bush administration did not sustain and support that agreement. The United States continued making threatening remarks toward North Korea, and so North Korea resumed the development of long-range missiles. Now that Ambassador Christopher Hill has achieved diplomatic success with North Korea, not unlike Dr. Perry's success eight years earlier, some in the Pentagon may be saying once again, "There goes the threat." In fact, if North Korea and the United States continue to make progress in face-to-face negotiations and in the Six-Party Talks, there will be no justification for the U.S. missile defense systems in Alaska and California, or in Japan either.

Moreover, the proposed missiles exacerbate U.S.-Russian relations to the point of creating a volatile situation that did not previously exist. In October 2007,

Russian President Vladimir Putin drew the analogy between the current situation and the 1962 Cuban missile crisis, when the Soviet Union based missiles in Cuba that could easily reach the United States. "The situation is quite similar technologically for us," said Putin. "We have withdrawn the remains of bases from Vietnam and Cuba, but such threats are being created near our borders."[7]

Just as forty-six years ago America saw Russian missiles in Cuba as an alarming threat, Russia clearly feels that the proposed U.S. missile defenses in Poland and the Czech Republic are too close for comfort. True, the Soviet missiles in Cuba were offensive, and the planned U.S. interceptors in Poland are to be defensive. Nevertheless, the U.S. proposal is in direct violation of the joint declaration issued in conjunction with the Strategic Offensive Reductions Treaty—also known as the Moscow Treaty—signed by Presidents Bush and Putin on May 24, 2002.[8] The joint declaration calls for joint research and development on missile defense technologies and U.S.-Russian cooperation on missile defense for Europe. The Bush proposal to establish U.S. missile defenses in Europe was neither joint nor cooperative, and was initiated unilaterally almost before the ink had dried on the joint declaration.

Putin also noted that the U.S. decision to deploy missile defenses close to Russia was presaged by the unilateral withdrawal in 2002 of the United States from the Anti-Ballistic Missile Treaty, which U.S. President Richard Nixon and Soviet Communist Party Secretary Leonid Brezhnev signed in Moscow in 1972. It is therefore not surprising that Russia might regard the proposed interceptors as potentially offensive. These are, after all, two-stage variants of a proven launch vehicle, Pegasus missiles, which have enough payload and thrust to carry satellites into low-earth orbit. Accordingly, these missiles could easily carry nuclear warheads aimed at Russia. If Russian verification and inspection provisions are to accompany the deployment of U.S. missile defenses in Europe, those agreements themselves could take years.

Faulty Logic

The official justification for the proposed missile sites in Europe—an Iranian long-range ballistic missile threat—has not changed since the United States began to fully press for extending missile defense across the Atlantic. However, the official account of the area meant to be defended by the European site has changed, and keeps changing. At first, the site was intended mainly to protect the United

States against Iranian missiles. Later, it was promoted more as a defense for Europe against Iranian missiles. Most recently, missile defense officials claim it will protect *both* the United States and most of Europe against an attack.

Why Iran would strike Europe with missiles is hard to fathom. And, bearing in mind the massive retaliation that would follow, why Iran would want to attack the United States is a question that goes unanswered by promoters of missile defense. Often they mistake capabilities with intent, but in this instance even Iran's capabilities are questionable. Iran does not have a missile that could reach the United States, nor is it expected to for the better part of a decade. In fact, Iran's longest-range known ballistic missile, reported in November 2007 to be a new solid-fueled ballistic missile with a range of 2,000 kilometers known as the Ashura, can at most reach countries in southeastern Europe, such as Romania or Bulgaria.[9] There are rumors of longer-range ballistic missiles in Iran's arsenal, but these are unverified, and it seems extremely doubtful that a country would use an untested missile for an unprovoked attack against the United States. It is even more improbable that a country such as Iran would initiate an attack with just one ICBM, but that is the unrealistic scenario that the United States is planning for. In effect, then, justification for the proposed missile defense systems for Europe depends on Iran behaving in a manner that is detrimental to its own survival. If through creative diplomacy (undoubtedly with help from Europe) Iran and the United States were to sit down together and settle their differences—as North Korea and the United States have begun to do via the Six-Party Talks—there would be no justification for the proposed European deployments—a fact confirmed by General Obering himself. On January 25, 2007, Obering held a roundtable whereby reporters could question him via conference call. When one reporter asked what the point of the European site would be if the so-called Iranian threat went away, he could not offer an alternative justifying threat. Clearly, where missile defense spending for Europe is concerned, the Pentagon has been dependent on the idea that Iran is or would soon become a threat.

In December 2007 the United States released the unclassified version of its latest National Intelligence Estimate (NIE) on Iran (dated November 2007), which stated that the U.S. intelligence community believed that Iran had stopped working on its nuclear weapons program back in 2003. This meant that even if Iran had missiles that could reach Europe, it would not have a weaponized nuclear warhead for a payload. With respect to Iran's uranium enrichment program, the NIE stated, "We judge with moderate confidence that the earliest possible date

Iran would be technically capable of producing enough HEU [highly enriched uranium] for a weapon is late 2009, but that this is very unlikely."[10] Furthermore, the NIE goes on to assert:

> We judge with moderate confidence Iran probably would be technically capable of producing enough HEU for a weapon sometime during the 2010–2015 time frame. (INR [the State Department's Bureau of Intelligence and Research] judges Iran is unlikely to achieve this capability before 2013 because of foreseeable technical and programmatic problems.) All agencies recognize the possibility that this capability may not be attained until *after* 2015 [emphasis in the original].[11]

There have been previous attempts to determine if and when missile defenses should be deployed that sought to separate the decision from political issues.[12] In December 1999 the Clinton White House announced four criteria they would use before making a deployment decision:[13]

1. Whether the threat is materializing;
2. The status of the technology based on an initial series of rigorous flight tests, and the proposed system's operational effectiveness;
3. Whether the system is affordable; and
4. The implications that going forward with NMD deployment would hold for the overall strategic environment and our arms control objectives.

Fourteen years earlier the shorter and tougher criteria formulated by the arms control negotiator Paul Nitze were formally adopted as National Security Directive No. 172, on May 30, 1985. These declared that a system should be:

1. Effective;
2. Able to survive against direct attack; and
3. Cost-effective at the margin—that is, be less costly to increase your defense than it is for your opponent to increase their offense against it.

The proposed U.S. missile defense system for Europe meets *none* of the above criteria, neither of Clinton nor Nitze.

European Doubts

The support of the planned host countries, once practically guaranteed, is now faltering. Poland's elections in October 2007 brought in Prime Minister Donald Tusk as the new head of government, who now wishes to discuss with other

countries in the North Atlantic Treaty Organization (NATO) the pros and cons of missile defense cooperation with the United States.[14] Missile defense is on the whole unpopular in Poland, part of an overall frustration with the United States that has arisen since the 2003 invasion of Iraq. Poland was initially part of the "coalition of the willing" and sent troops to Iraq, but felt that it did not receive sufficient gratitude from the United States in return, such as U.S. visas for its citizens or military contracts for its companies. This lack of reciprocity was highly disappointing to Poland, which had been very willing to increase its military ties to the United States in an attempt to separate itself further from its prior enforced attachment to Russia. The Polish government is working with the United States to secure special security guarantees and improvements to its military capabilities in return for its support of the U.S. plan for missile defenses in Europe, and has indicated that it will consult with the Russian government about hosting the U.S. interceptors.

The Czech Republic is also of mixed emotions regarding missile defense cooperation and, again, is considering cooperation more because of the wish to develop closer ties with the United States than an unconditional acceptance of the necessity for protection against an Iranian missile attack or a belief that the U.S. system would be effective. As of this writing (the last week of February 2008), Czech Prime Minister Mirek Topolanek was in Washington, D.C., to work on achieving an accord to host the missile defense radar. The government is so keen on getting domestic approval for missile defense cooperation that it has appointed a "missile defense czar," Tomas Klvana (who previously worked for British American Tobacco), whose job is to rally support for the system among the Czech population.[15] Klvana, however, has his work cut out for him, as there is rising domestic opposition to the program. According to public opinion polls, few Czechs support the proposed missile defense cooperation; for example, a government poll found that only 22 percent of the population supported hosting the radar.[16] Locals in the Brdy area fear that they themselves will come under attack, whether from someone targeting the radar or from an enraged Russia.

In an actual ballistic missile defense battle, Poland and the Czech Republic could become the enemy's first targets, simply as a matter of ordinary military tactics. By attacking the X-band radar, an enemy could blind the system to incoming missiles, and by attacking the interceptors in their silos, an enemy could disable the interceptors themselves. This means that beyond the threat that other European countries might face, Poland and the Czech Republic might need

special missile or other defenses designed to protect those two sites, assuming that such defenses were effective. Poland and the Czech Republic might also need other security guarantees for taking on the new risk of becoming targets themselves; in fact, Poland has requested them. However, Obering has told Congress that the MDA had no plans to put Patriot or THAAD systems at the proposed European sites, as they have done in Japan—not that either Patriots or THAADs could necessarily be depended upon.

Taken more broadly, Europe as a whole does not face a threat from Iran, but the cooperation of Poland and the Czech Republic with the United States might result in Europe becoming a more frequent target of terrorists or even being viewed less favorably by Iran. Also, to the extent that Russia sees the proposed missile defenses as a threat, Russia might retaliate in some way against Poland and/or the Czech Republic, especially if U.S.-Russian relations turned unusually sour. Indeed, Putin indicated last year that Russia might target Poland and the Czech Republic, and threatened to deploy Russian medium-range offensive missiles in the Russian enclave of Kaliningrad on the Polish border.[17]

If Russia is not an enemy, as Bush says, he should be willing to support serious U.S.-Russian cooperation. Perhaps Russia and the United States will cooperate on missile defenses; but if they acknowledge that these missile defenses are not effective under realistic operational conditions, then the real benefit would not be so much the provision of a missile defense but the demonstration that Russia and the United States can cooperate closely on a difficult matter. And if the MDA will not acknowledge that missile defenses are not effective under realistic operational conditions and continues to pretend that U.S. missile defenses actually might work in an all-out war, then it is also pretending that those U.S. missile defenses might work against Russian missiles. If those defenses are located where they might be effective against Russia, this is something Russia cannot accept.

Russia seems to be going through a new period of nationalistic assertiveness, one expression of which is the display of military accomplishments. For example, Russia has announced the successful development of new ICBMs, warned that its nuclear weapons might have to be aimed at Europe, put its strategic bombers back in the air on training flights, and announced that Russia has suspended its participation in the treaty restricting deployments of conventional forces in Europe. Some might say that these displays are more to impress Russian voters than to impress America, as well as to secure Putin's future should he decide to run for president again after sitting out for a term, as can be done under Russian

law. Undoubtedly, Putin would not mind if he impressed Russian voters, but we would argue that these developments are primarily aimed at the United States.

The Putin Proposals

At the G8 Summit in June 2007 the difficulties and complexities of the proposed U.S. missile defenses in Europe were on full display. In the weeks preceding the summit Putin had set the Bush administration—and the world—back on its heels with talk of Russian missiles aimed at Europe in retaliation for proposed U.S. missile defenses in Poland and the Czech Republic. This set the stage for what the Bush administration thought might be a G8 U.S.-Russian confrontation. On June 7, however, Putin proposed a smart technical and policy solution that the Pentagon should have thought of first: establishing a missile defense radar site at the existing Russian-run Qabala early-warning radar station in Azerbaijan. This offer was conditional on the United States dropping the rest of its plans for the European system and stopping its work on a space-based interceptor program.

Bush called the proposal an "interesting suggestion," and seemed to welcome the policy shift, but his administration appeared to reject the offer almost immediately. "One does not choose sites for missile defense out of the blue," commented Secretary of State Condoleezza Rice in an interview with the Associated Press. "It's geometry and geography as to how you intercept a missile."[18] But in that short comment Rice showed that she understood neither the geometry nor the geography of the U.S. missile defense plans, nor of Putin's proposal. Russia had done its homework and proposed a site that was better for missile defense from both U.S. and Russian technical and policy points of view. Because of its location farther south relative to the proposed sites in Poland and the Czech Republic, the Azerbaijan option has several advantages. At that location the missile defenses could "defend" all of Europe, including southeastern Europe. By contrast, the Poland–Czech Republic arrangement would leave Greece, Turkey, and other nations to the southeast outside the system's umbrella. Further, a radar at the Azerbaijan site would not be able to detect Russian missile launches going over the pole toward the United States, and thus would not be viewed by Russia as a threat to Russian ICBM forces. Finally, in an actual missile-versus-missile battle, the originally proposed third site could result in debris falling on Russia if U.S. missile defense interceptors sent Iranian missiles careening off course. The Azerbaijan site would minimize that problem as well.

Within a week U.S. Secretary of Defense Robert Gates also quashed Putin's ideas, saying that the Azerbaijan radar site could complement but not replace the proposed site in the Czech Republic. Gates did, however, commit to work with Russia on optimizing the coverage of Europe from short-range missiles, although the arrangements for a U.S.-Russian experts meeting and other forums to further explore U.S.-Russian missile defense cooperation could take months. Russia immediately saw the shortcomings to this plan, and Gates reported on June 15 that in his meeting with Russian Minister of Defense Anatoly Serdyukov the subject did not even come up.

Two weeks later, during his visit with President Bush in Kennebunkport, Putin proposed locating a search radar in southern Russia, near Armavir, about 450 miles north of the Iranian border. Putin also proposed involving other countries through the NATO-Russia Council established in 2002, thereby eliminating the need for facilities in Poland or the Czech Republic. Again, Bush seemed to respond open-mindedly, but still claimed the sites in Poland and the Czech Republic were required.[19] Officially, the United States has stated that it will not accept any conditions for its radar site in the Czech Republic, and that while it would be willing to use the Russian radar in conjunction with its sites in Poland and the Czech Republic, it would not be content to use the Russian radar exclusively.

Russia's condition regarding the space-based interceptor program has largely been glossed over by the media, but this, too, is unlikely to be accepted by the current administration. The United States officially does not have any space weapons programs, and U.S. policy since the beginning of the space age has been to shy away from weaponizing space. However, the Pentagon FY2008 budget request indicated that it was planning on spending $290 million on a Space Test Bed through 2013. The FY2008 request for $10 million was to start work on "proof-of-concept activity" for a Space Test Bed that would "investigate the potential utility and technical feasibility of a space-based defensive layer to complement the BMDS."[20] This funding has been cut by Congress, but it reappeared in the FY2009 budget request; again, MDA asked for $10 million for a Space Test Bed in FY2009, with the hopes of spending $268.3 million on it through FY2013.[21] This request comes at a time when there have been two satellite shoot-downs by major space powers in the past thirteen months: China's January 2007 antisatellite (ASAT) weapon test and the United States' February 20, 2008, shoot-down of an errant National Reconnaissance Organization (NRO) satellite by a modified version

of the interceptor used by the sea-based Aegis Ballistic Missile Defense system. MDA's Space Test Bed may be a way to justify new research and development for what the U.S. military claims is ensuring its space access and superiority.

Arms Control Ripple Effects

The U.S. insistence on pushing ahead with its missile defense system has already proven to be the downfall of one major arms control treaty. As mentioned earlier, in December 2001, Bush announced that the United States was giving its six-month notice for pulling out of the 1972 Anti-Ballistic Missile (ABM) Treaty. While the justification given at that time was that the U.S. missile defense systems had advanced to the point in their development where they were bumping up against the boundaries set by the ABM Treaty, in actuality it was more likely due to the Bush administration's distaste for international treaties and its propensity for unilateral action. In fact, the missile defense programs had not reached the point where they were being limited by the ABM Treaty, which allows the United States and Russia each to have one site dedicated to national missile defense and theater missile defense programs (as long as they are not used in a national missile defense capacity).[22]

In addition, as of December 12, 2007, Russia is no longer abiding by the 1990 Conventional Armed Forces in Europe (CFE) Treaty, citing in part the U.S. missile defense plans for Europe as the justification for its behavior. This move is the culmination of years of Russian frustration with what it sees as the West's refusal to live up to its side of the bargain by failing to ratify a 1999 update to the CFE Treaty. NATO countries did not want to ratify that update because Russia has yet to pull its troops out of Georgia and Moldova. So while Russia is most likely using the U.S. missile defense plans as an excuse for a move that it has wanted to make for some time, the fact remains that the United States is providing Russia with a convenient rationalization.

Also linked to the proposed U.S. missile defenses are Russia's vague threats over the past several years to pull out of the 1987 Intermediate-Range Nuclear Forces (INF) Treaty. This treaty banned a whole range of ballistic missiles (those with ranges of 500 to 5,500 kilometers, as well as ground-launched cruise missiles), and has held up even after the Soviet Union dissolved into its separate republics. Again, this is an idea that has been floated by Russian officials for the past several years, but also again, they seem to be latching on to the U.S. missile

defense system in Europe as their primary motivating factor. The initial reason for the INF Treaty was that intermediate-range missiles were considered highly destabilizing, as their short flight times meant they could wreak devastation very quickly and made a retaliatory response almost automatic. Because of the specific dangers inherent in intermediate-range ballistic missiles, there has even been talk about internationalizing the INF Treaty and trying to get other countries in unstable parts of the world to sign it as a way of creating confidence-building measures. However, if Russia pulls out of the INF, it would be almost impossible to convince other countries to sign onto the treaty, and the U.S. incentive to continue to follow its provisions would be vastly reduced.

Nonproliferation Problems

There are two serious nuclear proliferation issues facing the world today that require a united response, something that is unlikely if hostilities are increased between the United States and Russia as a result of the U.S. missile defense plans. The first is Iran's nuclear program. While the November 2007 NIE acknowledged that as far as the U.S. intelligence community knew, Iran had stopped work on its nuclear weapons program in 2003, it still indicated that Iran's nuclear intentions are unknown. Furthermore, no one doubts that Iran continues to enrich uranium, possibly to the point where it will become weapons-grade fissile material. Iran is a signatory to the NPT, so in theory it admits there are limits to what it can do with its nuclear materials (although Iranian officials defiantly aver that they are free to do what they wish). This is all to say that the international community can still work together to lessen the threat of an Iranian nuclear weapons program. In fact, the NIE states that Iran's nuclear weapons work "probably was halted primarily in response to international pressure."[23] Russia in particular has a strong relationship with Iran and has been one of the holdouts against strengthening international sanctions against Iran. Furthermore, Russia still indicates that it is holding fast to the option of finishing a nuclear power plant in Bushehr, Iran.[24] Clearly, Russia is a key component to any solution to the Iranian nuclear question. Given how much Iran factors in the justification for extending the U.S. missile defense system to Europe, this cannot be ignored.

The other nuclear proliferation state of concern is, of course, North Korea, which held a nuclear test in October 2006. While it clearly was not as big an explosion as its designers would have liked, it still was a nuclear weapons test and

allowed North Korea to join a very exclusive club.[25] The United States and Russia have been part of the Six-Party Talks being held to persuade North Korea to give up its nuclear weapons program. (North Korea withdrew from the NPT in 2003.) Recently, these talks have finally begun to pay off. In September 2005 a joint statement was released in which North Korea "committed to abandoning all nuclear weapons and existing nuclear programs and returning to [the NPT]." In addition, the United States and North Korea "undertook to respect each other's sovereignty, exist peacefully together, and take steps to normalize their relations."[26] The effectiveness of this agreement was stunted over the next year or so as the two countries disputed each other's good intentions and willingness to carry out the steps outlined in the joint statement;[27] but in February 2007 an action plan was released that began to carry out the joint statement, and in the fall of 2007, North Korea started to dismantle its nuclear reactor at Yongbyon. China's role as chair of the Six-Party Talks did much to move things along, but Russia's presence also helped, given its role as a regional power in northeast Asia. If the United States and Russia had been unable to work together during the Six-Party Talks, this would have been an ominous portent for the future of other international security issues.

Other bilateral agreements between the United States and Russia, such as the Joint Data Exchange Center (JDEC), could also suffer due to relations distressed by a U.S. missile defense site in Europe. This was to be a spin-off of the successful Y2K center created at the turn of the century to ensure that there would not be any unexpected misunderstandings due to Y2K glitches. From Peterson Air Force Base, Colorado, both Russian and U.S. officials monitored missile launches globally. The JDEC was to continue this effort at cooperation with the aim of creating "an uninterrupted exchange of information on launches of ballistic missiles and space launch vehicles from the early warning systems of the United States of America and the Russian Federation."[28] However, it has been stunted in talks almost from its June 2000 inception, largely due to concerns about liability and tax issues, and the program currently is in limbo. If missile defense negatively affects relations, it will not help the JDEC progress.

A crack in relations between the United States and Russia could have long-term consequences for emerging national security issues, such as space weaponization. Until China's ASAT test in January 2007 there had been only two countries that had tested space weapons: the United States and the Soviet Union. During the Cold War, the two adversaries tested ASATs fifty-three times.[29]

Right now the official U.S. policy is to eschew weaponizing space, but the new U.S. national space policy released in October 2006 culminated several years of policy papers by the U.S. Air Force and indicated that it was becoming much more open to the idea.[30] Furthermore, the U.S. military has seized upon China's ASAT test as all the more reason for the weaponization of space. USA-193, the NRO satellite that was shot down by the United States in February 2008, had been launched in December 2006 and almost immediately was unresponsive to ground control and began to deorbit outside the Pentagon's control. Pentagon officials claimed that the satellite was shot down out of health concerns, in order to prevent its hydrazine-filled fuel tank from crashing into a populated area (although these concerns appear to have been exaggerated). They have further alleged that it was a one-time event involving modifications to the software and mode of the three SM-3 missiles that were pulled aside for the mission (only one was used), and that the software and the other two SM-3 missiles were immediately changed back to their missile defense mode. However, one cannot be certain which version of the SM-3 has been deployed from then on: is it the sort used for ballistic missile defense or is it the antisatellite kind such as was used to shoot down USA-193? Russia and the United States are major space players, and both have much to lose if the new international norm were to target satellites or to allow for the free creation of space debris that could damage or destroy expensive space assets. There is a movement to create some sort of space "rules of the road," which would not be a treaty but rather codes of conduct by which all space-faring nations could abide. If the United States and Russia have a rift in their relationship due to missile defense, this cooperative effort will not succeed. China, as a growing space power, would have to be included in these talks, and if the United States and Russia were not able to work together, we could see a repeat of the Cold War dynamic whereby one country would try to pit other countries against each other.

Options for Europe, Poland, and the Czech Republic

Given the many complications already surrounding the U.S.-European missile defense proposal, Poland and the Czech Republic could follow Canada's example. Four years ago the Canadian government—while expressing its continuing commitment to the jointly-run North American Aerospace Defense Command (NORAD)—declared it would not join the Pentagon's missile defense program.

Why did Canada take this strong step? Because Canadian citizens were justifiably skeptical of U.S. missile defense plans. Canadians questioned the likelihood that the United States could develop missile defenses that would be effective against enemy missiles under realistic operational conditions. They were concerned, too, about the costs, and they did not want to participate in creating a new arms race in space. Canada understood correctly that U.S. missile defenses represent the first wave in which the United States could introduce attack weapons into space—that is, weapons with strike capability. While the *militarization* of space is already a fact of life—the U.S. military relies on space satellites for military communications, for reconnaissance and sensing, for weather, and for targeting—the *weaponization* of space has not happened: there are no strike weapons deployed in space.

Another example of restraint is South Korea. While always mindful of a threat from the North, South Korea has opted to take a very different path than Japan. In Japan, political pressures have led to a major buildup of missile defenses. Not that those missile defenses would actually defend Japan from North Korea, but Japan has found U.S. missile defense systems irresistible as a way to show Japanese voters that they are doing something about the perceived North Korean threat. Japan is currently in the process of deploying Patriot missile batteries around Tokyo, and soon will deploy THAAD missile batteries all across the country. It is also supporting U.S. efforts to deploy seagoing Aegis missile ships in the Sea of Japan, and has purchased and is now operating its own Aegis missile defense ships.

By contrast, South Korea will deploy a few short-range and very-short-range missile defenses under the Korean Air and Missile Defense Command they decided to establish in late 2006.[31] Whereas Japan will soon be bristling with missile defenses of questionable effectiveness, South Korea may deploy some modest missile defense systems, but if it does, it will do so in conjunction with its Sunshine Policy of reducing tensions and building up trade and diplomatic ties with the North.

Congress and the Administration

Congress appears unconvinced of the wisdom of establishing missile defenses in Europe, as reflected in its reluctance to fund the project in full. In the FY2008 budget request, the Pentagon asked for $310.4 million to start construction in

Poland and the Czech Republic.[32] The defense appropriations conference committee, which brings together both the House and Senate appropriations committees and is in charge of designating the amount of money that can be spent on various weapon systems, cut the overall funding for the proposed system by $85 million, eliminating all of the required funding for site preparation and construction. In the FY2009 budget request, $720 million is requested for the operating budget for the European sites; an additional $285 million for military construction related to the European sites is located in the military construction budget, which makes a total of a little over $1 billion in FY2009 alone. Furthermore, through FY2013 we can now see that the European site is expected to cost about $5.8 billion.[33]

Congress is also concerned about the effect the proposed systems may have on the prospects for a NATO-wide missile defense system. In November 2007, Rep. Ellen Tauscher (D-Calif.) told reporters that she hoped to "NATO-ize" the proposed U.S. missile defense sites in Europe.[34] NATO is already investigating linking up individual members' missile defense systems as part of an Active Layered Theater Ballistic Missile Defense (ALTBMD); Tauscher has promoted this as a possible way to ensure that all of Europe is covered by a missile shield. The most obvious problem of a NATO-wide missile defense is how NATO countries would determine and agree on what constitutes a threat. NATO has undertaken a study that was due to be completed by February of this year on the consequences of the proposed U.S. missile defense system in Europe; this presumably will affect how much support the organization will put behind the U.S. system. Furthermore, the NATO-Russia Council is attempting to create the working conditions for theater missile defense cooperation. The proposed U.S. missile defenses in Poland and the Czech Republic risk spoiling these NATO missile defense efforts.

Had the United States accepted the Putin proposal of locating the radar in Azerbaijan, it probably would have derailed the establishment of U.S. missile defenses in Europe beyond the time remaining to the Bush administration, leaving it to the next U.S. president to decide the fate of that system. After all, the MDA has been working for five years to obtain the cooperation of Poland and the Czech Republic, yet important questions still remain unanswered. But the Bush administration has been keen to get concrete poured before its term is up. As to the Azerbaijan site, the Pentagon may feel it is too "under the thumb" of Russia from a military standpoint, given that it borders both Russia and Iran. Furthermore, Putin's references to the existing Azerbaijan radar site may have

meant that he intended for it to be a Russian-managed or controlled site, which the Pentagon might not accept. The current arrangement with Russia at the Qabala radar station in Azerbaijan is a ten-year lease, which expires in 2012 with an option for renewal. Nonetheless, Putin's proposal did open up new options for U.S. cooperation that America may need. For example, a second radar site is needed for a powerful transportable Forward-Based X-Band Radar, intended to be placed closer to Iran than the site in the Czech Republic, possibly in Turkey, the Caucasus, or the Caspian Sea region. Negotiations over this second radar site could bring additional Russian objections.

With the controversy over establishing missile defense sites in Europe, and Congress using its power of the purse to withhold some of the funding, it is also possible that the next U.S. president will cut support for missile defense. Certainly, the next administration will want strong ties with Europe, but in actuality there is little chance that it will be as unconditionally supportive of, or as ambitious in, its missile defense plans as the current administration has been. If that proves the case, this whole debate could become moot in the course of several years. On the other hand, if the wheels are set in motion for the proposed missile defense systems in Europe, the project might be very difficult to stop, even if the next administration regards it as a losing proposition. Once major weapon systems are started and contracts have been awarded, it is extremely challenging to reel them back in. While the interceptors installed in Alaska and California are still in the midst of their development, the MDA continues to move forward with purchasing and deploying more interceptors. Missile defense's special developmental process, known as "spiral development" (which involves concurrently deploying and developing the system and no elucidation of end goals), tends to give it more leeway than that allowed other Pentagon programs. If allowed to start up, the proposed systems could continue in a nebulous haze for an unforeseen amount of time, as there is no way to conduct oversight of a system that has no set technical or financial milestones.

It is a truism that Americans in general and the U.S. military in particular have a tendency to count on technological breakthroughs to solve thorny national security problems. By appealing to a single-point technological fix, we hope we can avoid dealing with the long-term problem. In national security, as in other fields, we use our hope for technological relief as an excuse to avoid accommodating or dealing with our adversaries—sometimes at a very high cost in

political and economic terms, sometimes in dangerous self-delusion about our own military capabilities in the global environment in which we all exist.

NOTES

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