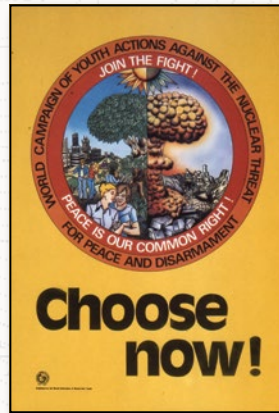
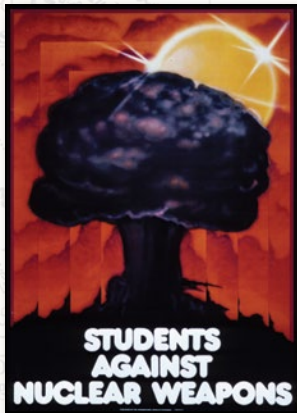


STRATEGIKA

CONFLICTS OF THE PAST AS LESSONS FOR THE PRESENT



Missile Defense: Given the specter of more emerging nuclear powers, how and where should the US focus its missile defense capability?

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Kiron K. Skinner • Frederick W. Kagan
Victor Davis Hanson • Bruce Thornton



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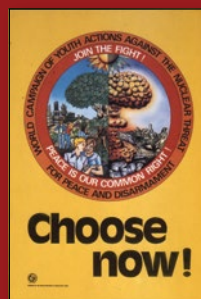
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Missile Defense: Past, Present, and Future

Kiron K. Skinner

A new era of modern warfare began when German V-2 missiles hit London in September 1944. Soon thereafter, the US military began studying how to proceed in the development of defensive counters to ballistic missiles. US missile defense technology evolved slowly, to be sure, and other states have acquired a wide range of missile capabilities that remain challenging to defeat. Nevertheless, missile defense has now assumed a central role in global security.

In some ways, US missile defense grew out of the air defenses of the 1950s and 1960s. Today we speak of missile defense largely in terms of “interceptors,” a word formerly given to the aircraft designed to defend against Soviet bombers coming over the North Pole, sometimes with nuclear-armed air-to-air missiles. Surface-to-air missiles (SAMs) like Nike were deployed near cities around the country, and some of those sites remain visible today. One air-defense program, at one time called “SAM-D,” became known as the PATRIOT in 1976.

As the Cold War nuclear arms race escalated between the United States and the Soviet Union during the 1960s, US defense policy was influenced by the idea that the preservation of peace with the Soviet Union was best served through Mutual Assured Destruction (MAD), a doctrine premised on carefully managed mutual vulnerability to nuclear attack. The 1972 Anti-Ballistic Missile Treaty between the United States and the USSR codified this relationship, allowing only two missile defense deployments for each superpower, and only one after amendment in 1974. The United States initially deployed nuclear-tipped Spartan and Sprint interceptors near ICBM fields in North Dakota, but these were operational for only six months. Sensor technology for tracking and discrimination was geometrically less advanced than today’s technology, and nuclear warheads served to compensate for the inability to intercept directly.

In contrast to the conventional view of deterrence associated with MAD, President Ronald Reagan advocated unorthodox thinking about national security, centered on the view that missile defense could serve as a means of transcending assured vulnerability. In 1983, he laid out his vision of rendering nuclear weapons obsolete. His Strategic Defense Initiative (SDI), or Star Wars, was an umbrella for experimental research and development

programs to devise nonnuclear methods of destroying incoming missiles, both through kinetic “hit to kill” intercepts and more exotic technologies such as directed energy.

During the Gulf War, Saddam Hussein used numerous Scud missiles against coalition forces. These attacks showed that even conventionally armed ballistic missiles could be used as a tool to accomplish strategic purposes. The deployment of PATRIOT missiles in Israel and their use against the Scuds helped keep Israel out of the war and kept the coalition intact. The Gulf War experience led to a growing sense that at least minimal defenses against rogue-state missiles were necessary. In the mid-1990s, the ABM Treaty was amended both to acknowledge the dissolution of the Soviet Union and to allow for lower velocity, or “theater,” missile defenses that could not counter faster ICBMs.

The perception of the ABM treaty as the cornerstone of strategic stability waned in the 1990s. In 1998, a congressional commission led by Donald Rumsfeld provided an assessment of North Korean and Iranian missile development indicating that threats could develop sooner than previously expected. Shortly thereafter, North Korea conducted a provocative flight test of a Taepo Dong ballistic missile over Japan, which helped to galvanize both American and Japanese interest in active defenses. In 1999, Congress passed the National Missile Defense Act, which declared it US policy to field a national missile defense system as soon as technically feasible. In December 2001, the George W. Bush administration announced its decision to withdraw the United States from the ABM treaty, and preparations were soon made to begin deploying at least some kind of capability against North Korea-style threats.

The United States now has four deployed missile defense architectures: the PATRIOT family of interceptors and For Point defense against shorter-range threat; the Terminal High Altitude Area Defense (THAAD) for larger area defense; the Ground-Based Midcourse Defense (GMD) to defend the homeland; and the ship-based missile defense system, Aegis, employing the Standard Missile-3 (SM-3) to provide fleet and regional defenses against short-, medium-, and intermediate-range threats. The United States currently has five Aegis BMD ships forward deployed at Yokosuka Naval Base in Japan along with a PATRIOT battalion on Okinawa Island. The United States also deploys a THAAD battery in Guam as well as three THAAD batteries garrisoned in Texas available for deployment abroad.

In 2004, the United States began fielding the GMD system, designed to defend against a limited number of simple, first-generation ICBMs. Based at Ft. Greely, Alaska, and later at Vandenberg Air Force Base in California, 30 ground-based interceptors (GBIs) are currently deployed, with that number set to increase to 44 by 2017. The GMD’s test record has been beset by fits and starts as well as by uneven funding, but its most recent intercept test in June 2014 was a success.

It is the international dimension of missile defenses, however, that has truly helped secure their place as an accepted part of global security. The NATO Strategic Concept of

2010 ratified missile defense as a core alliance mission. In the 1980s, some NATO allies were skeptical of SDI, concerned that the shield might so alter the Cold War relationship that the United States would be decoupled from Europe. That concern has gradually diminished with post-Cold War proliferation. The Bush administration planned to place another ten GBIs in Poland and other shorter-range European interceptors to defend both the homeland and NATO allies against Iranian missiles, but in 2009 this plan was abandoned and replaced with a series of deployments known as the European Phased Adaptive Approach (EPAA). The first phase of EPAA involved the forward basing of four Aegis BMD ships in Rota, Spain. Subsequent phases include Aegis Ashore installations in Romania and Poland. Along with other shorter-range defenses, these installations provide a limited defense for virtually all of NATO. While thus far the focus has been on Iran, NATO members may need to reevaluate their individual and collective air and missile defense plans in the face of a resurgent and provocative Russia.



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In the Middle East, the United Arab Emirates is in the process of purchasing two THAAD batteries, and other countries like Qatar and Saudi Arabia may purchase them as well. The release of Iranian missile sanctions under the Joint Comprehensive Plan of Action will help Iran's ambitions for a longer and more diverse range of missiles. In this context, the states of the Gulf Cooperation Council (GCC) feel the need to buy defensive systems as a deterrent against their neighbor. Plans for GCC-wide information sharing to notify one another of Iranian missile launches would go a long way toward increasing capability and capacity, but political differences remain. In South Asia, India has begun an indigenous program as well.

Israel, with strong US backing, is developing a three-tier air and missile defense shield, including Iron Dome to defeat rockets, older-generation PATRIOT batteries and the future David's Sling for medium-range and air-breathing threats, and the Arrow system for long-range threats from Iran, whose third generation is currently in development. Both David's Sling and Arrow are being developed with substantial US financial and technological

support. The United States also operates a TPY-2 X-band radar deployed in Israel supporting both US and Israeli missile defense in the region.

Countering North Korean and Chinese missile threats represents an especially high priority for Asia-Pacific allies. Japan currently deploys four Aegis BMD ships and has partnered with the United States to codevelop the newest Aegis interceptor, the SM-3 Block IIA, as well as to coproduce PATRIOT. South Korea, under tremendous threat from North Korea's large arsenal of short-range missiles, rockets, and artillery, has begun to take real steps to address the threat, but its efforts remain far from sufficient.

The future focus of missile defense will differ substantially from that of the past two decades, which has been largely centered on ballistic missiles like the Scud or a North Korean ICBM. The future threat environment will be far more complex, including non-ballistic threats such as cruise missiles and hypersonic glide vehicles as well as sophisticated antiship missiles, which have spread even to Iran and Hezbollah. Already, some Aegis ships are equipped with SM-6 missiles specially designed for cruise missile threats. Space-based satellites remain an important but unaddressed need for early detection and tracking, but given the vulnerability of space assets, UAV-based sensors will be needed for redundancy. Revolutionary technologies such as directed energy (lasers) and electromagnetically powered railguns have the potential to both dramatically increase magazine capacity and substantially decrease the cost per intercept. UAV-mounted lasers may provide a credible concept of operations for boost-phase defense that until recently had not been thought possible.

The dynamic future of missile defense will see defenses against missiles of various kinds continuing to spread to allies, partners, and even adversaries. Although missile defenses have not rendered nuclear weapons obsolete, technological development begun in the 1980s has introduced a realm of innovative capabilities that contribute to deterrence and stability. New challenges lie ahead, but none of this would have been possible had Ronald Reagan and others not chosen to lead in the first place.



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It's Mad to Forgo Missile Defense

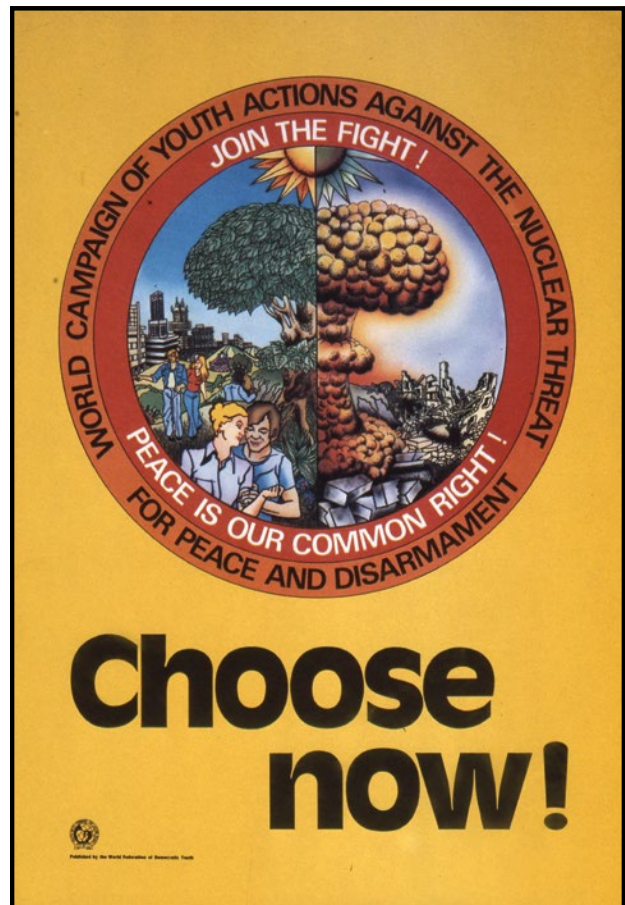
Frederick W. Kagan

American thinking about missile defense has been incoherent from the very beginning. The issue is superficially simple: the Soviet Union threatened the American people with nuclear missiles, so the United States should naturally have tried to defend them against those missiles. Missile defense is among the most unequivocally defensive military systems one can imagine. It cannot be used for attack. Yet the United States signed the Anti-Ballistic Missile Treaty with the Soviets and has refrained from serious efforts to build and deploy large-scale missile defense ever since. This policy never made sense and now makes even less. The proliferation of long-range precision missiles that can strike the United States and our allies with either nuclear or conventional warheads requires that America develop and field effective missile defense against all likely foes.

Objections to missile defense have always been based on the belief that it would be destabilizing. The United States persuaded itself that the most effective way to prevent nuclear war with the USSR was through "mutual assured destruction" or MAD, under which stability in a nuclear world required the nuclear states to know that all would be destroyed if any started a war. The Soviets, interestingly, did not accept this view and strove instead to achieve nuclear predominance. They feared that American technological advantages would allow the United States to field an effective defensive system, however, that would nullify their growing lead in missiles and warheads. So they lent their propaganda resources eagerly to the

fight against the Strategic Defense Initiative pursued by Ronald Reagan, with a large measure of success.

Whatever sense MAD might have made in the 1970s, it makes no sense today. America would not be more secure, nor the world more stable, if our potential adversaries such as Iran and China, to say nothing of al-Qaeda, knew that they could destroy us utterly at the outbreak of major war. Presidents Bush and Obama have both seemed to realize this fact and worked somewhat tepidly to deploy and enhance



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systems that could defend against Iranian missiles aimed at Europe or at our forces in and around the Persian Gulf.¹

The nuclear agreement with Iran heightens the urgency of missile defense because of the way the Iranians have interpreted the deal.² They reject any constraints on their ability to deploy missiles of all ranges and payload-weights, and claim that the agreement itself does not impose any such constraints upon them.³ They are right about that—the constraints, such as they are, are in the UN Security Council Resolution endorsing the agreement, not the agreement itself.⁴ They have gone beyond claiming their rights to develop missiles, moreover, and are ostentatiously building, testing, and fielding them. Tehran went out of its way, in fact, to test a missile that violated a UN Security Council resolution just

days before that resolution was to be cancelled.⁵ Iran is serious about building a long-range missile arsenal whatever its designs on a nuclear weapon might be.

Yet the legacy suspicion of missile defense continues to paralyze the United States, helped, once again, by Russia.⁶ Geometry shows that missile defenses designed to protect Europe or the United States from Iranian missiles should be placed in Eastern Europe. It also shows that defenses located there cannot interfere with Russian missiles launched against the United States. Yet Vladimir Putin has persuaded many people that the deployment of American missile defense systems in Eastern Europe would be an intolerable provocation of Russia and has largely scuttled them.⁷

Putin's claims were nonsensical as well as unscientific when he began making them because the United States had no desire or intention of trying to defend itself against Russian missiles, despite the fact that Russia's nuclear arsenal is still large enough to destroy America completely. His intrusion into the discussion of how to defend against Iranian missiles seemed to come from nowhere because Americans gave no thought to Putin's missiles.

But we must now relook at the complacency with which we contemplate Russia's arsenal. Putin has threatened to use his nuclear weapons on numerous occasions, including in response to nonnuclear attacks.⁸ He has upgraded Russia's missile delivery systems and deployed them further west as part of an effort to intimidate Europe.⁹ He has thus deprived us of the ability to protect against Iranian missiles even as he has increased the threat his own missiles pose.

This nonsense must end. Both American and Israeli technology has been demonstrated to be able to shoot down incoming ballistic missiles with very high accuracy. Such systems should be expanded and forward deployed to protect US bases and our allies in

POLL: HOW SHOULD THE US PURSUE MISSILE DEFENSE?

- ☐ Nuclear missiles can't be stopped; to try would only disrupt the peace.
- ☐ The United States should adopt any missile defense systems only through treaties with other nuclear powers.
- ☐ The United States should only have a limited shield to protect the American homeland.
- ☐ America should base missile defense in dangerous areas like the Middle East and Korea.
- ☐ We must build a comprehensive global system to protect the homeland, our allies, and our interests.

Europe and the Middle East from any and all potential missile attacks. But missile development has continued, and we now face increasing threats from cruise missiles and from hypersonic missiles, against both of which current systems would likely prove ineffective. So another round of missile defense research must be launched to respond to those new threats.

Missile defense is not destabilizing. It does not cause war. It saves lives. Just ask the people of Israel living under the shadow of Iron Dome. Developing effective defense against the most dangerous weapons on the planet is a strategic and moral imperative.

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The Pragmatics of Missile Defense

Victor Davis Hanson

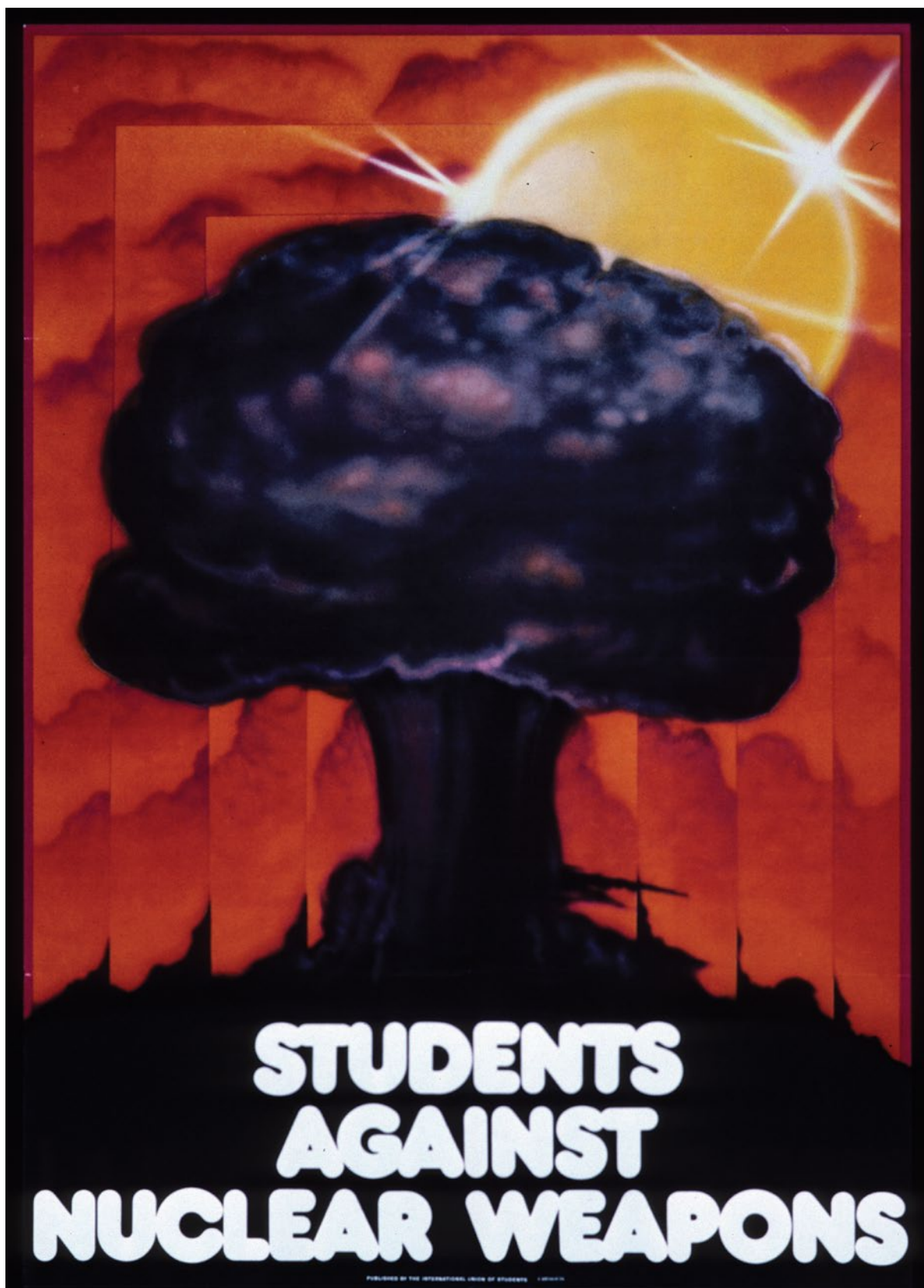
Anti-ballistic missile (ABM) defense, as originally conceived in the 1950s and 1960s, was a Cold War era answer to the nightmare of Mutually Assured Destruction, the linchpin of Soviet and American deterrence. Nonetheless, costly ABM systems were alleged to be both destabilizing and a sure way to rekindle a bankrupting new arms race. Treaties (like the 1972 accord with the Soviet Union), cost, and unreliable technology all retarded widespread employment of such defense systems. And the world then was simpler, as each of the two nuclear superpowers and their alliances ostensibly promised to keep in check their own nuclear allies, respectively France and Britain, as well as China.

Ostensibly, we now employ the more generic term “missile defense,” rather than the old rubric “anti-ballistic missile,” to reflect complexity well beyond the notion of just huge “ballistic” weapons pointed at two superpowers. A “missile” now may mean almost anything from a rogue state’s short-range Scud to a terrorist’s small Katyusha to multistage intercontinental missiles to thousands of ship-to-shore conventional missiles launched simultaneously against a nuclear carrier. And the mechanism to take down a missile is well beyond just firing an “anti-” missile, given advances in laser, cyber, and electronic defenses.

In the quarter-century since the end of the Cold War, a number of unforeseen developments have vastly altered the strategic landscape that once deterred, and largely prevented, widescale missile defense. New and more unpredictable nation states

well beyond Russia, China, India, the US, Britain, Pakistan, and France have acquired nuclear weapons. There are now all sorts of nuclear trigger wires between India and Pakistan, China and Taiwan, Israel and Iran, and North and South Korea. Moreover, nation states such as Iran, which is likely to become nuclear, and North Korea, which possesses presumably a small number of nuclear warheads, seem to boast that they are immune from Western notions of deterrence. Both seem to find strategic value in sounding apocalyptic. In the case of the Iran nuclear accords, it is likely that our traditional Middle East allies—Egypt, Jordan, Saudi Arabia, and the other Gulf monarchies—as friends may claim title to the same proliferation protocols that we have extended to veritable enemies in Iran, a wink and a nod route to eventual nuclear acquisition.

In addition, the post-9/11 rise of radical Islamic terrorist groups that dream of threatening the West by acquiring a nuclear weapon is now no longer fantasy—given the huge amounts of cash, the collapse of nation states, and the nuclear status of Pakistan in the Middle East. Finally, traditional American allies that have the capability to build sophisticated nuclear weapons quite quickly—Australia, Germany, Japan, South Korea, Taiwan—have always recused themselves from the nuclear club on implicit grounds that the vast US nuclear deterrent provided friends unquestioned security from blackmail. It is no longer clear, however, whether the Obama administration still believes in that traditional American role as the nuclear protector



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of pro-Western, free-market republics from strategic intimidation from China, North Korea, or Russia.

Another unfortunate catalyst for nuclear recklessness was the global acceptance that Middle East countries that have the bomb—Pakistan and soon Iran—were exempt from American attack or invasion, while those that did not—Afghanistan, Iraq, Libya—were not. Certainly, had Saddam Hussein, Bashar al-Assad, or Muammar Gaddafi all finished their incipient nuclear programs, they probably would have not been attacked or threatened with bombing by the United States—again, a fact now canonized in the Middle East.

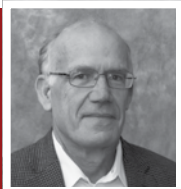
Can classical deterrence counter all these diverse threats from rogue nations, terror groups, former Cold War enemies and a rising China? In the long term, even with vast advances in technology, probably not.

How then should the United States incorporate missile defense to ensure the implausibility of a single missile reaching American soil? Of all the major powers, the United States enjoys the most strategically reassuring geography. We are protected by two oceans and are bordered by two more North American, non-nuclear

allies. Few Americans any more, even in our current state of financial stasis, oppose upgrades and improvements to a North American continental anti-ballistic missile system, whether on land or mounted on ships at sea, that would defend us from a nuclear shower launched from relatively great distances by a power of the status of China or Russia. Certainly, there is less Cold War-like animosity to the establishment of a much more sophisticated “ABM” system.

More worrisome are intermediate- and short-range missiles launched by rogue nations and terrorist groups—claiming they are not subject to deterrence as we understand it—against US overseas facilities and our allies, presumably in sudden 9/11 fashion. Many of these weapons are crude and not subject to cyber attacks on their launch and control systems. To protect against the sort of madness we currently witness in the Middle East, North Korea, and Iran, the United States will have to establish local missile defense systems and far more sophisticated sea-based programs that can shift quickly to areas of unrest. Iron Dome-like missile defenses and their successor systems will likely eventually be employed around US bases and allied population centers.

Yet ultimately, the greater need for missile defense always reflects a breakdown in perceived deterrence. When the United States issues empty serial deadlines or faux redlines, or leaves chaos after abruptly yanking out all US troops, or is ambiguous about which state is a friend, enemy, or neutral, the perception spreads that it will do almost anything to avoid confrontation with aggressors. That is a sure way to encourage missile-equipped terrorists and rogue states to consider aggressive acts that they otherwise would not have dared—given overwhelming US power and the likelihood of being on the receiving end of it.



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Meet the Missile Challenge with the Anti-Missile Response

by Bruce Thornton

Challenge and response has been the dynamic of warfare since the beginning of civilization. Whether it be the bowmen on chariots or cavalrymen countered by the hoplite infantrymen arrayed in phalanxes, Marshal Ney's cavalry crashing into ruin on the British squares, Grant's charge at Cold Harbor foundering bloodily in front of the Confederate trenches, the tank neutralizing the trenches and machine guns of World War I, or the counterinsurgency doctrines that stabilized northern Iraq, historically innovations in technology or tactics have responded to military challenges. The challenge of explosives delivered by missiles has already begun to be met with systems like the Israelis' Iron Dome and Arrow. There's no reason to think that such development will stall, if we have the will to spend the money on anti-missile defenses and deploy them.

But the problem is as much one of morale as of technical development. The apprehension about ballistic missiles sometimes is reminiscent of the fear of aerial bombing in the 1920s and 1930s. Theorists like K. A. Bratt, Lionel Charlton, and Giulio Douhet speculated about the ability of bombing to deliver a "knock-out blow," the supremacy of airpower over land forces, and the efficacy of strategic bombing of cities and factories. Popular novels like H. G. Wells's *The Shape of Things to Come* luridly described the destruction of London, as did pacifists like C. E. M. Joad and Bertrand Russell. Military historian

J. F. C. Fuller predicted that after an enemy air raid "the homeless will shriek for help, the city will be a pandemonium," and the government "will be swept away by an avalanche of terror." Churchill estimated that 30,000-40,000 would be killed or injured in 7-10 days, and 3-4 million Londoners would have to evacuate. During the Cold War, Harold Macmillan wrote, "We thought of air warfare in 1938 rather as people think of nuclear warfare today."

Such projections and the anxiety they created influenced the foreign policy of the late 1930s. Earlier in the decade, the future prime minister Stanley Baldwin famously counseled his fellow citizens that "the bomber will always get through," and that "The only defence is in offence, which means that you have to kill more women and children more quickly than the enemy if you want to save yourselves." By the infamous Munich Conference of 1938, which took place as Londoners dug trenches in parks and passed out gas masks, it was clear that the English did not have the stomach yet for that kind of fight. Indeed, in his report to the cabinet after his second meeting with Hitler at Godesberg, Chamberlain mused about flying back to London over the Thames, and "asked himself what degree of protection we could afford to the thousands of homes he had seen stretched out below them, and he had felt that we were in no position to justify waging a war today in order to prevent a war hereafter."

Of course, the capitulation at Munich meant war had to be waged anyway.

In the event, new technologies such as radar and improved fighter planes like the Spitfire and Hurricane blunted the German attacks during the Battle of Britain. Even including fatalities from V-1 and V-2 rockets, casualties were around 90,000, twice Churchill's earlier estimate, but not even close to delivering the "knock-out blow" in a few weeks that would end the war. And Germany paid a high cost in planes and pilots to achieve that result.

Today missile defense is similarly a question not of technology, but of morale and politics. As part of the "reset" with Russia, for example, President Obama mistakenly put on hold the missile defense systems intended to protect Europe from Iranian missile attacks. Some argue that Russia has been emboldened by such a move in its aggression against Ukraine, and Iran encouraged as well in its adventurism abroad. Domestic economic politics, which have significantly shrunk the military budget in recent years, could in the future drive reductions in funds budgeted for development of anti-missile systems, particularly if money is needed for sustaining entitlements, as it surely will be down the road. Moreover, the unlikelihood, for now, of a rogue state possessing nuclear missiles that can reach our shores may create a complacency among voters in a democracy who, as Tocqueville once noted, "are more apt to feel than to reason; and if their present sufferings are great, it is to be feared that the greater sufferings attendant upon defeat will be forgotten."

Yet the proliferation of missile technology, particularly missiles that can deliver nuclear warheads, represents an insidious danger to our security and interests, especially from rogue states like North Korea and Iran. We cannot be frightened into thinking

that the "missile will always get through," that there is not a response to that challenge, and so we must negotiate appeasing treaties with our adversaries. Nor can we assume that the technical difficulties of creating weapons that can carry nuclear warheads to our country is a reliable safeguard because of the lack of development infrastructure in some nations. If a failed state like North Korea can manufacture a nuclear weapon, it likely will eventually successfully develop nuclear-tipped missiles.

Anti-missile research and development must be adequately funded, and systems manufactured and deployed across the globe to protect our allies and military bases. We cannot lose our nerve or sacrifice "guns" for more entitlement "butter."

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DISCUSSION QUESTIONS

GIVEN THE SPECTER OF MORE EMERGING NUCLEAR POWERS, HOW AND WHERE SHOULD THE UNITED STATES FOCUS ITS MISSILE DEFENSE CAPABILITY?

1. In the past, have any new weapons technologies been nullified by new anti-weapons systems?
2. Does deterrence or an international treaty better curb the dangers of lethal weapons?
3. Are missile defense systems ever viable over the long run?
4. Do missile defense systems encourage first-strike capabilities and increase the dangers of accidents?
5. Does missile defense lead to a Maginot Line mentality of passive defense?

SUGGESTIONS FOR FURTHER READING

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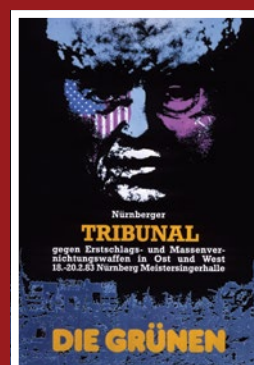
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IN THE NEXT ISSUE

WHY IS GERMANY A NONNUCLEAR POWER AND WILL IT EVER BECOME ONE?



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