Amid China’s outcry at South Korea’s decision to deploy an advanced US missile-defense system, much attention has been paid to the perceived threat to China’s security of a system whose deployment is aimed at North Korea’s rapidly evolving missile capabilities. Chinese critics point especially to the ability of the system’s radar to penetrate deep into Chinese territory.

Those and other arguments don’t wash, argues Marc R. DeVore. The real source of China’s outrage is that the nature of missile defense systems intrinsically help lay the foundations for closer US alliances in Northeast Asia.

CHINA RESPONDED to the South Korean government’s July 2016 agreement to allow the United States to deploy an anti-missile system, the Terminal High Altitude Area Defense (THAAD), with a harshness that surprised observers. China punished South Korea economically by preventing Chinese tourists from vacationing in South Korea and by shutting down Korean department stores in China, among other moves. Quasi-official sources, more ominously, suggested that China would expand its nuclear arsenal and target South Korea should hostilities erupt between China and the US. These actions were all the more dramatic considering that China had enjoyed better relations with South Korea than most other neighboring states and that Beijing therefore risked alienating a key regional partner.

China’s hostility towards the US deployment of THAAD is puzzling at first glance. Although states occasionally react with similar animus to foreign weapons deployments, it is offensive systems rather than defensive ones that generally spark controversy. It was the deployment of offensive ballistic missiles that triggered the 1962 Cuban Missile Crisis and the 1977-87 Euromissile dispute. Lesser crises, such as that sparked by the Soviet construction in 1970 of a nuclear subma-
Chinese rhetoric suggests that the answer lies in either China’s belief that missile defenses are intrinsically destabilizing or that THAAD’s radar will undermine China’s nuclear deterrent. I argue, however, that neither explanation holds up under scrutiny despite their superficial plausibility. Chinese strategists do not regard missile defenses as especially destabilizing and are actively developing a gamut of missile defenses equivalent to those of the US. Arguments about THAAD’s radar, despite their veneer of technical believability, also cannot account for China’s behavior. Although the range of THAAD’s radar indeed reaches into China from South Korea, it cannot provide the tracking data that would help the US intercept Chinese strategic missiles.

If China’s public critiques of THAAD lack credibility, then what other factors account for its policy response? I answer this question by demonstrating that China’s behavior is, first and foremost, driven by its government’s fears that US missile-defense deployments will bolster and multilateralize US alliances in Asia. Chinese leaders have long expressed their fear that the US will transform its fragile “hub-and-spoke” Asian alliance architecture into a solid multilateral alliance more akin to the North Atlantic Treaty Organization (NATO). Missile defenses, by virtue of their technical characteristics, generate technical imperatives and opportunities for precisely this form of alliance transformation.

The Chinese government is therefore willing to risk political capital to oppose THAAD because it fears that deployment of it and other similar systems will enable the US to consolidate and strengthen its Asian alliances.

**PRINCIPLED OPPOSITION TO MISSILE DEFENSES?**

Recent Chinese rhetoric suggests that its opposition to the THAAD deployment is part and parcel of a principled opposition to missile defense per se. China’s use of this argument resonates so widely because it taps into an intellectual commonplace that has evolved since the 1960s. Missile defenses are, within this context, decried because they are allegedly inherently incapable of protecting a country, yet will aggravate arms races and the likelihood of nuclear war.

This principled critique was originally developed by American scientists in the 1960s and later gained traction in Europe before being adopted in the rhetoric of Chinese diplomats in the late-1990s. Missile defenses are, according to this critique, uniquely pernicious because successful defense against ballistic missiles is technologically unfeasible, yet the existence of missile defenses aggravates arms races and creates incentives for a nuclear first strike because states cannot accurately assess exactly how (in)effective enemy anti-missile systems will be.

According to this critique, penetrating missile defenses will always be technologically simpler and economically cheaper than building defenses impervious to penetration. Missile designers can equip strategic missiles with cheap penetration aids, such as chaff and decoys, since for most of their trajectory longer-range missiles travel in orbit, where penetration aids possess the same flight characteristics as missile warheads. Within the atmosphere, at terminal ranges, missile designers can build warheads that are both stealthy, because they are constructed out of radar-absorbent materials, and maneuverable, because gravity grants them greater aerodynamic potential than anti-missile interceptors.

Scholars of international relations argue that the uncertainties that missile defenses generate are even worse than the defenses’ intrinsic shortcomings. Since attackers can conceal their penetration aids from defenders until they use them in combat, defenders must design defenses to defeat an attack whose precise characteristics they ignore. Neither attackers nor defenders can therefore accurately anticipate what proportion of missiles will penetrate defenses. The resultant uncertainty arguably increases war’s likelihood because it drives states to develop doctrines based on worst-case scenarios, such as destroying much of an opponent’s missile force in a surprise attack and then intercepting the remainder with its anti-missile systems. States are driven by fear of “disarming” first strikes to engage in arms racing and adopting “launch on warning” doctrines, which raise the likelihood of nuclear war.

Missile defenses are, thus, intrinsically destabilizing according to the principled critique. Although American, European and Russian critics first popularized this argument, Chinese diplomats have evoked it since 1999. China’s government, however, employs the principled critique in an instrumental fashion. It was Russia, in fact, that convinced China to adopt its rhetoric beginning in January 1999, when both countries protested against the missile defense plans that US President Bill Clinton was then adopting under pressure from a Republican Congress. China’s embrace of this argument only tightened once President George W. Bush’s administration accelerated the US’s missile-defense programs and openly questioned the Anti-Ballistic Missile Treaty’s relevance. The director of the Chinese Foreign Ministry’s Arms Control Department, Ambassador Sha Zukang, used this principled critique in communiqués and UN resolutions that China cosponsored in opposition to US missile defenses.

The sincerity of Chinese leaders’ adherence to the principled critique is, however, belied by China’s own vigorous missile defense efforts. Mao Zedong authorized China’s first missile-defense program in 1964, the same year that the country detonated its first atomic bomb. The resultant Project 640 enjoyed considerable support and was pursued until 1983, but failed because China’s technology was inadequate at that time. Although Deng Xiaoping cancelled Project 640, he authorized new anti-missile research programs three years later under Project 863. Chinese missile-defense research has been continuous ever since then, and political leaders reaffirmed their commitment to missile defenses with Project 998.

China began purchasing mature Russian anti-missile systems to supplement its indigenous efforts in the 1990s. It first acquired Russia’s S-300PMU missile and its accompanying radars in 1991 and followed up by buying improved S-300PMU-1s (1994), upgraded S-300PMU-2s (2003) and the naval variant S-300F (2002). China’s defense industry then developed the HQ-9 based on the S-300PMU. Altogether, China has amassed at least 192 land-based missile launchers and 12 warships equipped to fire S-300 or HQ-9 variants. More recently, China in 2014 concluded

**THAAD, in sum, offers the US no additional anti-missile capabilities that it does not already possess vis-à-vis China. THAAD interceptors cannot reach Chinese missiles bound for the US and the AN/TPY-2 cannot provide any relevant data from intercepting Chinese strategic missiles that the US does not already possess.**
The deployment of THAAD to South Korea, in China’s eyes, opens the door for functional spillovers that will reinforce America’s Asian alliances and possibly multilateralize them. It is therefore hardly surprising that Chinese leaders view South Korea’s decision to deploy THAAD as a betrayal of the two countries’ détente.

China’s own longstanding commitment to missile defenses suggests, in sum, that the principal arguments of its leaders against US anti-missile deployments must be regarded as an opportunistic tactic.

CHINA’S STRATEGIC DETERRENCE

The other major argument that China advances to oppose the THAAD deployment is that this system will undermine China’s nuclear deterrent. Proponents of this argument insinuate that THAAD’s true purpose is to intercept Chinese, rather than North Korean, missiles. Although the range of THAAD’s radar’s lends superficial verisimilitude to this argument, it is nonetheless technically flawed.

Any argument about THAAD’s utility against China’s intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs) is undermined by the inability of THAAD’s interceptors to reach such missiles. THAAD interceptors can hit targets at a maximum altitude of 150km, which pales in comparison to the altitudes of 1,200km that strategic missiles attain. To make matters worse, the velocity of THAAD’s interceptors of 2.6-2.8km/s renders it all but impossible for them to destroy Chinese ICBMs travelling at 7km/s. It is, in sum, all but impossible for THAAD missiles to intercept Chinese strategic missiles travelling over South Korea.

Chinese claims, however, focus mainly on THAAD’s AN/TPY-2 radar. The most valuable function that radars provide for missile defenses is to provide tracking data on an incoming missile, which is necessary to calculate an intercept flight path to enable the missile interceptor to destroy the missile. Chinese statements about THAAD imply that the AN/TPY-2 radar can provide such data on Chinese missiles, which will then be used to calculate intercept trajectories for the United States’ longest-range missile defenses, which are based in California and Alaska. Tracking data requires, however, that multiple radar pulses from the same radar observe the missile at close intervals and identify the missile’s precise location at each interval.

Radars can only scan a very narrow segment of the sky and must do so at very high frequencies to produce tracking data. This, in turn, means that complex phased-array radars like the AN/TPY-2 have much shorter tracking than identification ranges. The best available data on the AN/TPY-2 suggests a tracking range of 1,000km. While such a range enables the radar to track targets within China, it cannot track Chinese strategic missiles along their predicted flight paths. China’s static ICBMs are, within this context, deployed westwards of the radar’s tracking range and its ballistic-missile submarines reportedly patrol in the South China Sea. Launched from these positions, the flight paths of China’s ICBMs and SLBMs would circumvent the THAAD radar’s coverage.

While the AN/TPY-2 cannot track Chinese strategic missiles, it can identify them. The missile’s identification range, which involves collecting less precise information, covers China’s ICBM launch zones. This capability contributes nothing new to American anti-missile capabilities since the US already possesses three means of detecting Chinese missiles. The US’s premier detection system is its infrared DSP satellites, which can detect a missile’s hot exhaust plumes as soon as it is launched. The United States has also already deployed two AN/TPY-2 radars in Japan and built a massive PAVE PAWS radar complex in Taiwan. These radars collectively cover much of China and already provide identification data on the zones that a South Korean-based AN/TPY-2 would cover. THAAD, in sum, offers the US no additional anti-missile capabilities that it does not already possess vis-à-vis China. THAAD interceptors cannot reach Chinese missiles bound for the US and the AN/TPY-2 cannot provide any relevant data from intercepting Chinese strategic missiles that the US does not already possess.

THE REAL TARGET: NORTHEAST ASIAN ALLIANCES

So, what motivates China’s opposition to THAAD if it can’t be explained by either a principled rejection of missile defenses or by fears for its own nuclear deterrent? The answer to this conundrum lies in China’s fear of encirclement by a US-led alliance system. Although many of China’s neighbors have formal alliances or security relationships with the US, America’s Asian alliances do not as yet constitute a robust multinational alliance equivalent to NATO. Chinese leaders fear, however, that the US is using missile defenses to transform its loose hub-and-spoke alliance system into a more robust multinational alliance.

Anti-missile systems, by their nature, enable such an evolution. Missile defenses must operate at short notice after long periods dormant. Since they are designed to counter surprise attacks and first strikes, they must also be fully integrated and operational in peacetime. This implies that allies collaborating on missile defense need to network their radars in peacetime and establish common battle management centers. Allies must, in sum, pursue a higher degree of peacetime command-and-control integration for collaborative missile defense than other forms of combined warfare.

Chinese decision-makers have consistently evinced this fear: that anti-missile co-operation
will lead to structurally tighter relationships between the US and its Asian allies. Chinese leaders first raised this concern in the late 1990s with regard to Taiwan by arguing that American anti-missile assistance could result in a level of military-to-military integration tantamount to an alliance. Chinese Ambassador Xia explicitly warned that US missile defense transfers to Taiwan would constitute “a serious infringement of China’s sovereignty and territorial integrity,” even though he tacitly accepted America supplying Taiwan with other forms of defensive weaponry.

Anti-missile co-operation between the US and Japan, meanwhile, generated precisely the type of integration that China fears. The Japanese government’s 2003 decision to procure Patriot PAC-3 and SM-3 IA anti-missile systems incentivized Japan and the US to integrate their armed forces more fully. The two governments established a Bilateral Joint Operations Coordination Center at Yokota Air Base in 2005 to fuse data collected by each country’s radars and sensors into a common operational picture. The two countries then set up a joint operations room in the Japan Air Self-Defense Forces’ basement to divvy up incoming missiles for destruction, and Japan approved the deployment of two American AN/TPY-2 X-Band radars to Japan. Many regard these measures as reinforcing the two countries’ bilateral anti-missile integration to the point that they “have essentially created a joint command relationship … from the perspective of any potential adversary.”

South Korea long appeared the exception to the process of ballistic-missile defense driving the US and its Asian allies closer together. Under former President Lee Myung-bak, South Korea’s government committed itself to developing a Korean Air Missile Defense architecture independent of the US. Even if this system received data from American early warning (DSP) satellites, it would not share data from its own Israeli-built Green Pine radars and would not establish a common battle-management center with the US. Later, in 2012, South Korea aborted a general sharing of military information agreement that would have facilitated trilateral anti-missile co-operation with Japan and the US.

South Korean President Park Gyun-hye’s July 2016 decision to welcome the deployment of THAAD altered this state of affairs. The US deployment of a THAAD battery and AN/TPY-2 radar to Seongju will generate strong incentives for the US and South Korea to integrate their missile defenses. For one thing, the two countries can only obtain the significant advantages associated with launching sequential interceptors against incoming missiles — termed “shoot-look-shoot” tactics — by networking the United States’ upper-tier THAAD system with South Korea’s lower-tier Patriot, M-sAM and L-sAM systems. Furthermore, integrating data from America’s AN/TPY-2 X-band radar with South Korea’s Green Pine L-band radars would greatly increase their collective efficiency.

The threat of a North Korean surprise attack, or one with minimal warning, necessitates that the US and South Korea integrate their missile defenses in peacetime, not wait for a crisis. Once Japan and South Korea are benefitting from one another’s early warning assets, it would only take a small, yet logical, step for them to begin preparing for how they would co-operatively engage enemy missiles, divvying up targets between Japanese cruisers with SM-3 missiles, America’s THAAD and South Korea’s L-SAM. Thus, the deployment of THAAD to South Korea, in China’s eyes, opens the door for functional spillovers that will reinforce America’s Asian alliances and possibly multilateralize them. It is therefore hardly surprising that Chinese leaders view South Korea’s decision to deploy THAAD as a betrayal of the two countries’ détente.

CONCLUSION

The proliferation of missiles and missile-defense systems in Asia will likely increasingly strain China’s relations with its neighbors. Growing regional ballistic-missile arsenals, whether driven by North Korea, Indo-Pakistani rivalries or China itself, compel Asian states to acquire missile defenses. Many of these states turn to the US, because they possess security relationships with it and because the US and its regional allies share tracking data and establish joint command protocols. A technical problem, ballistic-missile proliferation, thus generates political effects in terms of bolstered and multilateralized alliances. Chinese leaders cannot but view such developments as threatening. Their reaction to South Korea’s decision on THAAD shows just how seriously China’s government takes the potential reinforcement of America’s Asian alliances. Missile defenses, in sum, cannot be examined as a purely military issue, but must rather be conceptualized as systems whose political effects, for good or ill, exceed their military impact.

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