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US Missile Defense and China: An Exchange
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John Warden

Missile defense has become an area of controversy in the US-China relationship. The US government sees an enduring role for a range of relatively limited missile intercept capabilities, designed to protect the US homeland, deployed forces, as well as allies and partners by: 1) dissuading other countries from acquiring and deploying ballistic missiles by reducing their perceived value; 2) deterring the use of ballistic missiles by introducing the possibility of operational failure; and 3) defeating a missile attack. China, by contrast, questions US motives in developing such a system and is particularly concerned with the potential evolution of the technology.

The Obama administration has adopted a phased, adaptive approach for missile defense that focuses on countering the more immediate threat – short – and medium-range missiles – while maintaining options for flexible response to future developments. In particular, the United States worries about development of limited numbers of relatively unsophisticated long-range missiles by a country such as North Korea or Iran.

The United States will continue developing and deploying PAC-3 batteries, AN/TPY-2 X-band radar, THAAD batteries, as well as SM-3 Block IA interceptors aboard Aegis cruisers. In 5-10 years, the United States hopes to deploy the SM-3 Block IIA and possibly the SM-3 Block IIB, which are envisioned to have some capability against longer-range missiles. In addition, 30 ground-based mid-course interceptors – the only deployed system with any capability against long-range missiles – will remain at Ft. Greely and Vandenberg Air Force Base. Because of their limited numbers and capabilities, these defenses would, even if they worked exactly as designed, have no realistic capability against the large and sophisticated strategic nuclear retaliatory forces of either Russia or China.

In East Asia, North Korea with its large number of deployed short-range missiles and interest in developing long-range ballistic missiles is the primary US concern. However, at the tactical and operational level, the US is also concerned with China's declared intention to deploy an anti-access and area denial capability by developing ballistic missiles that would threaten US military forces and assets in the region. To counter these threats, the United States plans to develop and deploy various defenses, including missile interceptors, and to continue its cooperation with key allies and partners.

Some in China are concerned that more advanced (or much more numerous) interceptors might threaten their strategic nuclear deterrent. However, there is no sign of any US effort to build a defense that would do so. It is important to the broader relationship that policies on both sides be based on reality, not exaggerated fears, and that neither do things that could give rise to such fears. Neither the United States nor China wants missile defense, or misperceptions of it, to contribute to crisis instability or an arms race.

He Yun

China has three primary concerns with US missile defense. First, a mature interception system might undermine China's second-strike capability. Second, research and development advances in missile defense might lead to technological breakthroughs that China would not understand the full implications of and could not easily imitate or negate. Third, developments might yield progress in space technology that would lead to the weaponization of outer space.

While US MD systems may not pose a significant threat to Russia's strategic retaliatory forces, China's small and de-mated nuclear arsenal presents a different case. Chinese missiles are quite vulnerable to a US first strike and those that did survive would highly susceptible to a mid-course missile defense system – as proposed in a phased adaptive approach – if such a system becomes more sophisticated. For now, China believes that it is much less expensive and more effective to develop counter-measures. But even this is not an easy task; it requires a high level of technical sophistication to deploy decoys in the right shape and temperature to make them indistinguishable to X-band radars.

Chinese policy makers are also concerned with falling farther behind the US technologically. Such concerns encouraged China to respond to President Reagan's 1983 Strategic Defense Initiative by launching the "863 Program," or State High-Tech Development Plan. This program – begun in March 1986 and continues today – aims to hedge against technological surprise by studying the most advanced science and technology developments with military application.

China's 2010 anti-missile test was a response to these worries. Because China does not have early-warning radars or capable space sensors, it does not intend to develop a missile defense system. Instead, the goal is to understand and master hit-to-kill technology. China conducted an anti-satellite test weeks prior so that it could first shoot down a satellite with a more predictable trajectory, increasing China's confidence in its later anti-missile test. China does not, as some have speculated, intend to develop anti-satellite weapons. China has made it quite clear that it seeks to ban all space weapons, and the US rejection of such proposal is another reason that China is concerned with the development of missile defense.

The argument that the US missile defense deployments are, in part, a response to China's anti-access and area denial capability makes no sense, as such plans were formulated

before China's declared interest in such a capability. Plainly, the US will continue its missile defense plan regardless of China's deployments. While China may feel the need to address US concerns regarding its recent military advancement, for the US, such discussion may be best left outside of the missile defense framework.

Warden Responds

Many of China's concerns with US missile defense are premature and exaggerated: premature because they focus on theoretical possibilities, not what the United States – as demonstrated in official documents and current deployments – is planning to do over the next decade; exaggerated because they greatly underestimate China's present (and future) technological and industrial capability to offset US defenses and thereby maintain China's second-strike capability. Furthermore, in the unlikely scenario that the US tries to negate China's nuclear deterrent, budget levels and deployment patterns would change drastically and China would have ample time to respond.

The US government realizes that, on the nuclear level, mutual vulnerability between the United States and China is a fact, not a choice. China has developed survivable mobile and sea-based missiles to make a theoretical – and unthinkable – disarming US first strike on China's nuclear systems impossible. And even if the US modestly expands its mid-course interceptor deployments and develops more advanced interceptors – such as the SM-3 Block IIB – China can (as He Yun notes) field relatively inexpensive countermeasures, and if necessary, expand the number of its survivable missiles. Such developments would maintain confidence in China's retaliatory capability, and do so at modest expense – and, indeed, with modest impact on US-China relations.

China should accept the reality that US missile defense in East Asia is primarily designed to defend against North Korea's missile capability. Therefore, it is in China's interest to both prevent North Korean aggression, in whatever way possible, and inhibit the expansion of North Korea's nuclear weapons and ballistic missile programs. Most of all, China must keep countermeasure and other advanced ballistic missile technology out of North Korean hands. As the North Korean missile threat grows, the US is likely to increase the size and sophistication of its interceptor deployments in the region.

It is understandable that China worries about technological surprise as it applies to US defenses. However, just as China would like the US to respond to its concerns about potential missile defense capabilities, the United States would like Beijing to respect its concerns about China's anti-satellite and anti-access weapons. These programs have at least as great a potential to stimulate an arms race and undermine the overall US-China relationship as defenses against strategic retaliatory forces. To whatever extent possible, the United States and China should pursue confidence building measures to improve understanding and help ameliorate both sides' concerns.

The United States is unlikely, for the foreseeable future, to deploy missile defense or other weapons in space, if only because other approaches are more practical and affordable. The US recognizes that space assets are quite vulnerable. For that reason, the US is interested in cooperation and collaboration in space, not competition. Lack of interest in a formal space convention shouldn't be misread for hostility.

He Responds

There is no missile defense that cannot be defeated by countermeasures. But, there is also no countermeasure that cannot be defeated by the perfect counter-countermeasure. While China is investing in countermeasures for its strategic missiles, the United States has said it will "increase investments in sensors and early-intercept kill systems to help defeat missile defense countermeasures" (BMDR, 2010). The US has, by restarting missile defense programs, inadvertently dragged China into a technological competition based on real concerns, not exaggerated fears.

Although the US missile defense system is not mature, China cannot ignore its continuing development. China's concern about US ballistic missile defense has nothing to do with deployment per se. Rather, it seeks to mitigate the technological, not military, effects of missile defense.

The US should not pressure China over North Korea by threatening to increase and advance missile defense systems in the Pacific region. First, it won't work. China has less influence on North Korea than the US. When China took a tough stand and condemned North Korea's nuclear test in 2006, North Korean behavior didn't change. Instead, it conducted a second test only 15 miles from China's northeastern border, prompting some Chinese schools to evacuate in fear. The US must realize that North Korea's missile and nuclear development are even more threatening to China than to the US, given the unpredictability of the regime and its proximity to Chinese borders. If China could, it would almost certainly force North Korea to abandon its nuclear weapons program. North Korea knows that, which is why only one Chinese person has been allowed to visit Yongbyon and that occurred before North Korea's first nuclear test.

Second, such statements give the impression that the US can increase its MD capability and presence rapidly if needed, which seems unlikely. US development and deployment of missile defense has its own technological pace and logic. If North Korea further develops its ballistic missile or nuclear program, increasing interceptors quickly is probably not an option, and certainly not the solution. However, by saying that it has such a capability, the US gives China reason to believe that MD technology is more advanced than advertised.

Theoretically, China could increase the survivability of its nuclear forces by increasing the number of missiles or raising their alert status. But either move would at a minimum invite further suspicions about China's intentions, or worse, might be cited as evidence that China is "sprinting to parity." More importantly, survivability is not the issue. The issue is the penetration capability of China's strategic warheads, which is threatened by US development of missile defense. Therefore, the key question is not what China should do to increase its survivability, but what the US should do to alleviate China's concerns. China expects to deal with the missile defense issue with the United States in a cooperative and diplomatic way.