China's Military Calls for Putting Its Nuclear Forces on Alert

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Summary

For the first time, China is discussing putting its nuclear missiles on high alert so that they could be launched quickly on warning of an attack, similar to the current state of U.S. and Russian missiles. This would be a significant—and dangerous—change in Chinese policy. The experience with U.S. and Soviet/Russian warning systems, especially early in their deployment and operation when hardware and procedures were not yet reliable, illustrates the dangers of maintaining the option to launch on warning. Such risks are especially acute in a crisis.

The nuclear weapons policies of the United States are the most prominent external factors influencing Chinese advocates for raising the alert level of China's nuclear forces.

According to newly translated Chinese sources, discussions of putting missiles on high alert appear to stem from increasing Chinese military concerns about retaining a credible nuclear retaliatory capability in the face of accurate U.S. nuclear weapons, the development of high-precision conventional weapons, and missile defenses. In addition, U.S. unwillingness to acknowledge mutual vulnerability in bilateral nuclear talks with China creates the impression that the United States is still seeking to render itself invulnerable to a Chinese retaliatory strike. These sources suggest that the Chinese military, which is already developing more survivable mobile missiles and submarine-launched missiles, believes that putting the nation's missiles on high alert would be a step toward assured retaliation.

Therefore, at some point in the near future, quite possibly during the current process of drafting the next five-year plan, military leaders may ask President Xi Jinping and China's new generation of leaders to consider putting China's nuclear forces on high alert.

U.S. policy makers should be aware that U.S. statements and actions regarding nuclear weapons influence Chinese thinking and decisions about its nuclear forces. Indeed, the nuclear weapon policies of the United States are the most prominent external factor influencing Chinese advocates for raising the alert level of China's nuclear forces.

U.S. leaders should take steps to persuade China not to put its weapons on high alert. Doing so would increase U.S. security by reducing the risk of a Chinese accidental, unauthorized, or mistaken nuclear launch.

Introduction

China maintains a small nuclear arsenal—well under 300 warheads—that is kept off alert: the warheads are separated from the missiles (Kristensen and Norris 2015). The arsenal's limited size and conservative posture are the consequence of a nuclear weapons policy established by Mao Zedong, Zhou Enlai, and the first generation of Chinese communist leaders. While many areas of Chinese public policy have changed in the wake of the passing of those leaders, including Chinese foreign and defense policies, China's nuclear weapons policy has not.

Many U.S. analysts believe it is only a matter of time before Chinese nuclear weapons policy changes as well. Some argue that a change is already well underway (USCC 2015). Their arguments are based on assessments of China's continuing effort to improve its nuclear-capable missiles, particularly the development of a new mobile intercontinental-range missile that

reportedly can carry multiple warheads, as well as the development of a submarine-launched missile. Some analysts believe those developments may herald a significant increase in the size of China's nuclear arsenal.

Chinese analysts, on the other hand, state that any increase in the number of China's nuclear-capable missiles will be modest. They contend that China is seeking to maintain its ability to launch a retaliatory nuclear strike in the face of U.S. technical advances in missile defense, long-range precision guided munitions, and the ability to track and target mobile missiles. U.S. refusal to assure China that the United States is not seeking invulnerability to a Chinese retaliatory strike appears to legitimize Chinese concerns (Roberts 2013). Most importantly, Chinese analysts argue that China's new missiles do not portend a change in the nuclear policy established by the founders of China's nuclear weapons program and maintained by their successors (CEIP 2015).

With the discussion focused on the size of China's nuclear arsenal, indications that China is considering raising the alert level of its nuclear forces has been largely overlooked. Arguably, a higher alert level would signal a more significant and worrisome shift in China's nuclear policy than its deployment of some additional land or sea-based nuclear-armed missiles.

This report describes China's historical position on alert levels, presents evidence that the Chinese military is discussing raising China's alert level, and examines why Chinese proponents believe it is necessary.

China's Low Alert Level is a Basic Principle

Unlike the United States and Russia, China currently keeps its nuclear weapons off alert, with nuclear warheads not mated to the delivery vehicles. For this reason, under the counting rules of the 2010 New START agreement between the United States and Russia, the total number of "deployed" Chinese nuclear weapons would be counted as zero (UCS 2010).

Mao Zedong, Zhou Enlai, and the founding generation of China's communist leaders chose to keep China's nuclear weapons off alert. They only planned to use nuclear weapons for retaliation after China was attacked first, so they did not require a high state of alert. Moreover, they saw keeping nuclear weapons off alert as distinguishing China's nuclear weapons policy from U.S. and Soviet policies in a way they believed would strengthen China's international standing.

Understanding this early decision to keep nuclear weapons off alert requires some familiarity with the history of China's communist government, its relationship with the United States, and the events that informed the establishment of China's nuclear weapons program.

China's Development of Nuclear Weapons

The People's Republic of China (PRC) was established by the communists in 1949 at the dawn of the Cold War in the shadow of the United States' dropping of the atomic bomb on the Japanese city of Hiroshima at the end of World War II. The United States refused to recognize the PRC and worked to keep it out of the United Nations. Within a year, the newly established Chinese government was fighting U.S-led United Nations forces in Korea. During the Korean war, the United States threatened to attack the PRC with nuclear weapons. According to PRC historians, these threats precipitated the Chinese government's decision to develop nuclear weapons (Sun 2013).

The PRC released a statement in 1964 on the day of its first nuclear weapons test that describes U.S. influence on China's decision to build the bomb (People's Daily 1964). The statement called the test a "major achievement" in a struggle "to oppose the U.S. imperialist policy of nuclear blackmail and nuclear threats." It explained that China developed nuclear weapons "for protecting the Chinese people from U.S. threats to launch a nuclear war." The statement defended the decision to conduct the test by saying China was doing it "under compulsion (People's Daily 1964)."

China's statement, however, was not addressed to U.S. policy makers or the U.S. public. The intended audiences were the non-nuclear weapons states in general and the newly independent, non-aligned nations of the developing world in particular—nations whose votes in the UN General Assembly China was pursuing to override continuing U.S. efforts to deny it admission to the United Nations.

The non-aligned nations took a strong stand against nuclear weapons when they met for the first time at the Bandung Conference in 1955 and continued to urge China to refrain from developing nuclear weapons for years afterwards (Prashad 2007). Zhou Enlai's extemporaneous speech in Bandung, which renounced the use of force and Chinese interference in the domestic affairs of the non-aligned nations, assuaged the concerns of many conference members that China, like the United States and the Soviet Union, would become another hegemon, especially in Asia (Zhou 1955).

China's successful nuclear test nine years later was seen by many non-aligned nations as a betrayal of the Bandung spirit and caused considerable harm to China's credibility among them. China's 1964 statement on its nuclear test, which was drafted by Zhou Enlai, can be interpreted as an attempt to regain some of the trust China lost among developing nations.

The bulk of the 1964 statement was intended to distinguish China from the other nuclear powers. It stated that "China is developing nuclear weapons not because it believes in their omnipotence nor because it plans to use them." Moreover it promised that "China will never at any time or under any circumstances be the first to use nuclear weapons." The statement closed by calling for an international conference to discuss abolishing all nuclear weapons. As a first step, such a conference should "conclude an agreement among nuclear weapons states not to use nuclear weapons, either against non-nuclear countries or nuclear free zones or against each other (People's Daily 1964)." The called-for international conference never convened, but in 1995 China issued a unilateral assurance not to use or threaten to use nuclear weapons against non-nuclear weapons states (United Nations 1995).

Mao Zedong and Zhou Enlai could make these promises because they believed that nuclear weapons could not be used effectively on the battlefield to fight or win a war. The sole purpose of nuclear weapons, in their view, was to respond to nuclear threats from other nuclear-armed states. By demonstrating a credible ability to retaliate with nuclear weapons, China's leaders believed they could prevent a U.S. first-strike nuclear attack, and that any future U.S threat to launch such an attack against China would be nothing more than the crackling of a "paper tiger (Mao 1977)."

A Credible Arsenal Requires Survivability

The requirements for a credible ability to retaliate to a nuclear first strike from another nation are subjective. Mao Zedong, Zhou Enlai, and other senior Chinese leaders believed that the mere possibility that a handful of Chinese nuclear weapons might strike a few U.S. cities was a risk U.S. decision-makers were unwilling to bear. They believed demonstrating this risk did not require a large nuclear arsenal, any early warning systems, or the ability to launch quickly. They felt the mere existence of the weapons would suffice.

> ***China's leaders made no discernable preparations to acquire an early warning system to detect an attack or to take other measures to allow China's nuclear weapons to be launched quickly.***

A credible ability to retaliate did, however, require convincing U.S. decision makers they could not, with any certainty, wipe out China's small nuclear force in a first strike. So Chinese nuclear planning prioritized survivability of its nuclear force over response time. Enormous effort and expense went into constructing a vast network of tunnels and underground facilities to protect China's nuclear forces from an incoming nuclear attack. More recently, the development of land-mobile and submarine-based missiles appears to be intended to further decrease the vulnerability of Chinese missiles to attack. All China's nuclear efforts are consistent with the nation's no first use policy, which requires it to ride out a nuclear first strike.

Because of their beliefs, China's leaders made no discernable preparations to acquire an early warning system to detect an attack or to take other measures to allow China's nuclear weapons to be launched quickly before it arrived.

New Language on Alert Level from the Chinese Military

On 5 December 2012, three weeks after assuming office, Chinese President Xi Jinping visited the Second Artillery Corps, which operates China's land-based nuclear missiles. Xi is also the General Secretary of the Chinese Communist Party (CPC) and the Chairman of the Central Military Commission (CMC)—the highest authority with jurisdiction over the development, deployment, and use of China's military forces. He gave a major policy address that included statements on China's nuclear weapons policy (Wei and Zhang 2012).

A first-hand account of the speech posted on the website of the Chinese Ministry of Defense reports that Xi reconfirmed the Chinese leadership's view of the purpose of nuclear weapons and the direction of Chinese nuclear weapons policy remains unchanged (Sun 2014).

The following week, however, General Wei Fenghe, the commander of the Second Artillery, and Zhang Haiyang, the political commissar, published a short news article on Xi's visit that contained a paragraph on strategic threats (Wei and Zhang 2012). It closed with an exhortation to "*maintain a high alert level throughout the execution of the mission, assuring that if something happens we're ready to go.*"

The use of "high alert level" in this context by a commander of China's nuclear missile force was unusual. Indeed, it raised the eyebrows of Chinese nuclear policy professionals who wondered whether the leadership of the Second Artillery was attempting to put words in the mouth of the new Chinese president to change China's nuclear policy.

The following year, in December 2013, China's Academy of Military Sciences (AMS) published an updated edition of *The Science of Military Strategy*, a standard Chinese military text on strategy. The new text suggested that China's nuclear forces could move towards a "launch on warning" posture (AMS 2013):

> *When conditions are prepared and when necessary, we can, under conditions confirming the enemy has launched nuclear missiles against us, before the enemy nuclear warheads have reached their targets and effectively exploded, before they have caused us actual nuclear damage, quickly launch a nuclear missile retaliatory strike.*

Acquiring the ability to launch on warning of an incoming nuclear attack would require the development of the early warning and prompt launch capabilities that Mao Zedong, Zhou Enlai, and the founders of China's nuclear weapons program had intentionally set aside.

An internal military text not for general distribution, published in November 2014, contains a chapter on concepts for constructing a Chinese strategic warning system, which does not currently exist (Zhu 2014). It states, "*There are plans to launch experimental early warning satellites.*" In September 2015, the independent U.S. news service NASASpaceFlight.com reported that an experimental satellite China launched on September 12 may be the first in "a new series of Chinese satellites dedicated to early warning similar to the American Space Based Infra-Red Sensor satellites" (Barbosa 2015). The Chinese press release on the experimental satellite launch, however, says it is for communications, not early warning (CSF 2015). The actual purpose remains unknown.

Chinese military publications do not always reflect official government policy and the military's responsibility is not to make policy but to implement the policies set by the central government.

Nevertheless, these excerpts from military writings show that a domestic conversation about raising the alert level of China's nuclear forces is taking place. China is both fiscally and technologically capable of developing and deploying an early warning system and preparing its nuclear forces for launch on warning. Moreover, China's nascent ballistic missile defense program would require some of the same sensor technologies as a warning system, should China decide to push forward with that capability.

At some point in the near future, quite possibly during the current process of drafting the next five-year plan, advocates, like the authors of the 2013 AMS book, may ask President Xi Jinping and China's new generation of leaders to revisit old questions about the alert level of China's nuclear forces.

The Argument for Raising the Alert Level

Like Mao Zedong and Zhou Enlai, Xi Jinping and the current generation of senior Chinese decision makers are primarily concerned about the threat of a nuclear attack from the United States. Unlike their predecessors, they are not worried about China's standing in a coalition of non-aligned nations whose original *raison d'etre* disappeared with the end of the Cold War, although China does pay attention to international opinion, as discussed below.

The AMS authors also believe that should the U.S. begin to think it is invulnerable to a retaliatory Chinese nuclear attack, both the risk of war and the risk of escalation to the nuclear level would increase.

The extent of contemporary Chinese anxiety about the threat of a U.S. nuclear attack is difficult to measure. Official Chinese public statements on foreign and military affairs express far less concern about the outbreak of nuclear war than did the statements of Mao Zedong and his contemporaries. But the authors of the 2013 Academy of Military Sciences' textbook *The Science of Military Strategy* clearly believe U.S. actions are calling into question the credibility of China's ability to retaliate after a U.S. nuclear attack, and that an effective way to respond would be to raise the alert level of China's nuclear forces so they can be launched on warning of an incoming nuclear attack.

U.S. missile defense plans are one of several factors in what the authors of the 2013 AMS book see as the "increasingly complex nuclear security situation facing China:"

> *First, the principal adversary in China's nuclear struggle is the nation with the strongest nuclear force in the world. The United States is making China its principal strategic adversary, intensifying construction of a missile defense system in East Asia that constitutes an ever more serious influence on the reliability and effectiveness of a Chinese retaliatory nuclear attack.*

U.S. pursuit of new conventional capabilities is another reason the AMS authors are worried about the credibility of China's ability to retaliate:

> *The "rapid global strike" plan currently being put into effect by the United States, as soon as it takes shape as an actual combat capability, will, when used to carry out a conventional attack against our nuclear missile forces, put us into a passive position, greatly influencing our capability for nuclear retaliation, weakening the efficacy of our nuclear deterrence."*

More generally, Chinese scholars point out that the United States does not acknowledge that it is in a mutually vulnerable relationship with China. That implies to them the United States believes it can prevent nuclear retaliation by China—an idea reinforced by U.S. pursuit of accurate nuclear weapons, high-precision conventional weapons, and missile defense.

In addition, the AMS authors argue that international pressure constrains China's ability to significantly increase the size of its nuclear force:

> *The numerical dimension of China's nuclear weapons is on a far different level than that of the United States and Russia. With the progressive development of the situation in international nuclear reductions, the modernization of China's limited nuclear force will suffer increasingly great external pressure.*

Increasing the size of China's nuclear arsenal is one clear way to increase the certainty that China would be able to retaliate following a nuclear first strike. The belief that a significant increase in size comes with significant diplomatic costs may explain why the AMS authors are instead pushing other improvements to increase the credibility of China's ability to retaliate:

> *At present, the construction and development of the nuclear forces should be centered on raising the in-*

formationization level of the nuclear forces, strengthening command and control as well as the construction of strategic early warning and rapid response capability."

A 2015 study by the Union of Concerned Scientists (UCS) shows that the authors of the AMS military strategy textbook still support no first use of nuclear weapons and still agree that the sole purpose of China's nuclear force is to retaliate to a nuclear attack (Kulacki 2015). The AMS authors believe that today the risk of a major war is low, and the risk of escalation to the nuclear level even lower. However, the AMS authors also believe that should the United States begin to think it is invulnerable to a retaliatory Chinese nuclear attack, both the risk of war and the risk of escalation to the nuclear level would increase. As a result, they argue China should consider steps to demonstrate its nuclear forces can survive a first strike and effectively retaliate.

Compatibility with No First Use

According to most Chinese analysts, as well as the Chinese government, China's no first use commitment is the cornerstone of its nuclear strategy, which sees nuclear weapons as having the sole purpose of deterring another nuclear-armed state from launching an attack against China.

Some analysts have argued that a Chinese decision to place its missiles on high alert would undermine its commitment to no first use (USCC 2015). If China puts its weapons on high alert to allow them to be launched quickly on warning of attack—and launches its nuclear weapons before incoming weapons detonated and thereby confirmed they were in fact nuclear weapons—that would appear to be contrary to China's no first use pledge.

The Chinese military tries to solve this dilemma in the same way that the U.S. military does. While the United States does not have a no first use pledge, it does not want to appear to be in a position of launching a nuclear attack in response to a false warning or a non-nuclear attack. It attempts a rhetorical solution to this problem by arguing that its rapid-launch options are not "launch on warning" but rather "launch under attack," with the latter apparently intended to imply a level of certainty in the attack that goes beyond "warning." This is similar to language in the AMS military strategy textbook that states China could launch "*under conditions confirming the enemy has launched nuclear missiles against us*" but before enemy missiles landed. Neither country, however, explains how it would guarantee this level of certainty, or whether in fact it is possible.

Other Views

Histories of China's nuclear weapons program indicate the Chinese military traditionally played a circumscribed logistical and administrative role in the development of China's nuclear weapons program. The military's responsibilities centered on constructing facilities, managing personnel, maintaining security, and operating the weapons—not strategizing about how many or what types of weapons were needed or how and when they should be used (Song 2001).

China's senior leaders have instead traditionally relied on the scientists and engineers who designed and built China's nuclear weapons to inform their strategic choices. These choices include how to approach international negotiations on limiting and then banning nuclear weapons testing, whether to participate in a voluntary moratorium on the production of the fissile materials used to manufacture nuclear warheads, and how to respond to the U.S. withdrawal from the 1972 Anti-Ballistic Missile (ABM) treaty.

UCS discussions with Chinese technical analysts who are employed by institutions connected to China's nuclear weapons program and by China's leading universities reveal a different view than that of the military. These scholars share many of the military's concerns about advances in U.S. technology, but they do not believe Chinese leaders need to make significant changes in China's nuclear posture, such as a shift to launch on warning (UCS 2015).

Which advice carries more weight with the new Chinese leadership—that from the military or that from scientists in its weapons labs—will influence whether these leaders decide to raise the alert level of China's nuclear forces.

China's decision will affect U.S. national security. U.S. action influenced prior Chinese decisions about nuclear weapons policy. So it is reasonable to assume U.S. policy makers can take steps to influence Chinese deliberations on proposals to prepare to launch their nuclear weapons at the United States on warning of an incoming attack. China is responsive to international pressure not to significantly increase its arsenal size. The United States could also increase the diplomatic cost of China's putting weapons on high alert. Announcing an end to U.S. launch on warning options and removing U.S. missiles from high alert would put pressure on China not to go down that dangerous path.

Implications and Recommendations

A Chinese decision to move to launch on warning would reduce the national security of the United States. The risk of nuclear use is difficult to measure, but a Chinese decision to raise the alert status of its nuclear weapons would clearly increase that risk.

The U.S. and Soviet/Russian experience with warning systems shows that false alarms and unexpected situations occur due to human and technical errors, and are especially likely early in the deployment and operation of a warning system. Such errors increased the risk of a nuclear exchange on multiple occasions for the United States and Russia during and after the Cold War. China would certainly encounter similar incidents. Human and technical errors are especially dangerous during times of crisis.

It is not difficult to imagine situations that could trigger escalation to the nuclear level in the event of war. For example, China could mistakenly launch what it believes to be a retaliatory nuclear attack if the United States launched conventional missile strikes against China. Equipment in the command and control networks of both nations could be destroyed or malfunctioning, especially given the interest of both countries in anti-satellite weapons. Decision makers may not have timely access to accurate information in the fog of a conflict.

One important thing is clear: The discussions taking place in China on launch on warning are part of a broader conversation about the future of China's nuclear forces.

It would be in the best interest of both nations, and the rest of the world, if China kept its nuclear forces off alert. Since concerns about the United States are the principal reason Chinese military analysts are proposing to put China's nuclear forces on high alert, there are steps the United States can take to increase strategic stability between the U.S. and China, and in so doing help forestall a Chinese decision to prepare its nuclear forces to launch on warning. These steps include:

- **Acknowledge mutual vulnerability with China.** Advocates of raising China's alert status believe the United States seeks invulnerability to Chinese nuclear retaliation. Chinese nuclear analysts believe the refusal by U.S. officials to acknowledge mutual vulnerability suggests the United States might use or threaten to use nuclear weapons against China without fear of retaliation. Making clear that the United States accepts the reality of mutual vulnerability with China would reduce China's concerns.

- **Reject rapid-launch options**. Announcing that the United States is eliminating options to launch on warning or launch under attack and is taking its missiles off high alert would put international pressure on China to refrain from putting its weapons on alert.

- **Adopt a "sole purpose" nuclear doctrine**. The principal strategic motivation for raising China's alert level is the concern that China is vulnerable to a disarming U.S. first strike. A U.S. declaration that the sole purpose of U.S. nuclear weapons is to deter and, if necessary, respond to the use of nuclear weapons by another country, could help re-

duce Chinese concerns about a U.S. nuclear first strike.

- **Limit ballistic missile defenses**. Chinese concern that a future U.S. missile defense system could intercept a significant portion of its survivable long-range missile forces is another factor influencing Chinese deliberations over the alert level of its nuclear forces. The United States has repeatedly told China its missile defense efforts are not directed at China's nuclear forces, but China remains concerned about the capability of the U.S. systems. Discussing credible limits and confidence-building measures could reduce China's fears.

- **Discuss impacts of new conventional capabilities**. Advances in conventional military technologies clearly impact Chinese thinking about nuclear weapons policy. Prompt global strike and anti-satellite capabilities are especially problematic. Opening bilateral and international discussions about such systems would help mitigate anxieties pushing Chinese decision-makers toward launch on warning.

One important thing is clear: The discussions taking place within China on launch on warning are part of a broader conversation about the future of China's nuclear forces. Other changes in China's traditional view of nuclear weapons, such as abandoning no first use and using nuclear weapons to deter or respond to conventional attacks, are being discussed and will continue to be debated in the years ahead.

The content of those discussions makes it clear they are being driven by China's perception that the United States is unwilling to further reduce the role of nuclear weapons in U.S. national security strategy, as President Obama promised in his 2009 speech in Prague (Obama 2009). According to one Chinese analyst, the advocates for a more expansive role for Chinese nuclear weapons are taking their lead from what they are learning from the United States:

> *Recently, beginning during the last several years, one can see a few articles in some military periodicals expounding on the question of how China should gradually use various kinds of nuclear weapons during a limited conflict to fight and win a nuclear war… Even though the Cold War has been over for many years, the actual deployment posture of U.S. nuclear weapons and U.S. explanations of nuclear strategy have retained the viewpoint of the war-fighting school. This has had not a small influence on a small number of Chinese military personnel and scholars. To a very great degree the thinking of the war fighting school of Western nuclear strategy influences the viewpoints of this small number of domestic scholars* (Sun 2013).

What the United States says and does regarding nuclear weapons influences Chinese thinking and decisions about its nuclear forces. The ongoing U.S.–China dialogues on nuclear weapons, U.S. missile defense plans, the U.S. refusal to engage China on space security, and planned improvements to U.S. nuclear weapons capabilities such as the U.S. Air Force's Long-Range Standoff (LRSO) nuclear cruise missile, are all pushing Chinese nuclear policy discussions in the wrong direction.

Fortunately, those discussions have not yet led to changes in China's comparatively restrained nuclear posture. But as China continues to debate about the future of China's nuclear arsenal, the pressures that current U.S. nuclear weapons, missile defense, and space policies place on Chinese decision makers could precipitate unwelcome changes, including putting China's nuclear forces on alert to allow a launch on warning.

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