Asymmetric Military Aspirations and Capabilities of the People's Liberation Army of the People's Republic of China

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China's Military Modernization and Its Impact on the United States and the Asia Pacific Region
Washington, D.C.
March 29-30, 2007

Statement of William Schneider, Jr., Senior Adjunct Fellow, The Hudson Institute, Washington, D.C., March 29th, 2007 before the US-China Economic and Security Review Commission.

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Chairman Bartholomew and Vice Chairman Blumenthal, it is a great privilege to once again be afforded an opportunity to testify before this Commission. This occasion has given me an opportunity to review the recent work the Commission has undertaken. The Commission's output has, in my view, contributed significantly to our understanding of China's economic and security policies. I hope my testimony will be helpful to the Commission.

I am William Schneider, Jr., an Adjunct Fellow of the Hudson Institute in Washington, D.C. I am trained as an economist, and have focused on international security affairs and effects of the military applications of advanced technologies. I have served in the national security research community in the private sector, as a member of several government advisory bodies, and as a government official in both the legislative and Executive branches.[1]

China's opaque military modernization

China's military modernization has been underway for more than two decades and in recent years has evolved to mirror China's transition from a nation with regional pre-occupied with local and regional interest to a global military power. Although the Maoist concept of "People's War" remains an enduring expression of China's demographic mass

[1] I have served as a Professional Staff member of the Hudson Institute (1967-71), a staff member of both the US House of Representatives and the US Senate (1971-81), Associate Director for National Security and International Affairs in the Office of Management and Budget (1981-82), Under Secretary of State (1982-86), and Chairman of the General Advisory Committee on Arms Control and Disarmament (1987-93). Subsequent to leaving government service, I have served as a member of several Presidential Commissions and US government advisory boards. I currently serve as Chairman of the Defense Science Board and as a member of the International Security Advisory Board in the US Department of State. The views expressed here are those of the author and do not necessarily reflect the views of the US government.

and geographic depth, its modernization themes reflect a decisive policy shift away from approach embodied in Maoist theories of the 1950s and 60s in favor of a much more technology-centered effort. This technology-driven effort supports the global reach of China's diplomacy and international interests that have paralleled China's profound economic transformation. While some aspects of China's modernization are similar to the path taken by other modern industrial societies, other aspects of their modernization program differ significantly. These observations can be supported by a few illustrations.

China is acquiring modern capabilities that mimic those found in other contemporary defense establishments. China is modernizing its long-range nuclear weapons delivery systems in both qualitative and quantitative terms. The mobile land-based intercontinental DF-31 series missiles, its upgraded silo-based ICBM, and the JL-1 submarine launched ballistic missile are counterparts to systems deployed by other major powers, though at present, on a smaller scale. The military and strategic significance of these new platforms will be magnified if they are equipped with multiple independently targetable re-entry vehicles (MIRV).

General purpose forces, especially those suitable for expeditionary campaigns and combined ground-air operations are also be recapitalized and modernized. Two aircraft carriers are being acquired as are current generation Russian combat aircraft, diesel-electric submarines, surface naval combatants, strategic airlift aircraft, airborne warning and control aircraft (AWACS), and aerial tankers. More advanced indigenous aircraft will soon be deployed that lever the PRC's access to advanced dual-use technologies from the US, Europe, and Japan. The advanced state of China's civil sector telecommunications infrastructure implies that its modernization program is supported by contemporary command-control-and-communications (C^3) technologies as well. While some of these capabilities have been acquired from Russia, China's access to advanced technology from the global market has enabled China to create military capabilities that are invested in indigenous developments as well. China's acquisition of military technologies from Russia and modern civil technologies from elsewhere in the world is

supplemented by a very aggressive commercial and clandestine defense-industrial espionage effort as well.

The scope, though not yet the scale of these investments is consistent with global aspirations, but by most assessments, is excessive in relation to China's regional security needs. However, China has been silent on the doctrinal and policy basis that is driving the unique character of its modernization and recapitalization effort. Moreover, China's investment continues to grow significantly. Concern about China's silence on the rationale for its modernization program has prompted the US government to appeal to the on numerous occasions for greater transparency about the aims of its modernization and recapitalization effort. Most recently, the Chairman of the US Joint Chiefs of Staff, General Peter Pace reiterated this request in his visit to China this month. Apart from embryonic "confidence building measures," China has not responded to requests for greater transparency leaving China's defense modernization open to many alternative interpretations.

Investment in the creation of asymmetric military capabilities

While some aspects of China's defense modernization and recapitalization program have readily understood parallels with other major industrial nations, other aspects of China's defense program are unique in their scale and comprehensive character. Investments in technologies that in turn have created capabilities for what this Commission has described as "irregular means and methods to prosecute war" serve to deepen the enigma about China's defense modernization.[2]

Investment in these irregular capabilities by any nation can be described as being consistent with an "anti-access" strategy – a dimension of an asymmetric approach to defense investment. The underlying concept reflects a recognition that investment in

[2] The Commission describes "irregular means and methods" in its 13 March 2007 letter of invitation to this hearing as "cyber attacks, special operations attacks on infrastructure, manipulation of the political attitudes and perceptions of the populace in a potentially hostile state, and the deliberate targeting of arms supply chains through economic means…."

traditional military capabilities, especially against the United States would be unlikely to offer any benefit in supporting coercive diplomacy or military advantage. However, a much lower level of investment in well-chosen asymmetric capabilities could, in some circumstances, limit the ability of the US to achieve its military aims. In suitable circumstances, the ability of the US to employ military power could be affected by a well-executed pattern of asymmetric investment:

- by significantly raising the cost of US military operations; and/or
- by augmenting the capabilities of a more limited traditionally equipped military forces to provide support for coercive diplomacy or increased military effectiveness in time of war.

A decade or so ago, the Defense Science Board engaged in some speculative activity (it was not associated with any specific country) about the opportunities presented by the abundance of very effective but low-cost (~ $10 billion/year) technologies widely available in the civil sector to create highly effective anti-access military technologies.[3] The study concluded that such an approach was practical because of the impact of modern information and telecommunications technology on military capabilities. By focusing the application of these technologies on asymmetric or anti-access capabilities such as information operations and electronic warfare, mine warfare, air defense, cruise missiles, anti-satellite operations, and similar applications which lever widely available civil sector or dual-use enabling technologies, such capabilities are aimed at US military advantages.

While China is investing in the traditional combined arms (air-sea-land) forces and nuclear weapon and associated delivery capabilities, there is growing evidence that it also is acquiring asymmetric capabilities that reflect a studied assessment of US civil and

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[3] Defense Science Board 1996 Summer Study Task Force on **Tactics and Technology for 21st Century Military Superiority**, (Office of the Under Secretary of Defense for Acquisition Technology and Logistics, Washington, DC), October 1996. The unclassified portions of this study can be accessed at: http://www.acq.osd.mil/dsb/reports/tatvolone.pdf, and http://www.acq.osd.mil/dsb/reports/tatvoltwopartone.pdf

military vulnerabilities as well. Chinese aspirations to acquire capabilities which focus on US civil and military vulnerabilities are illustrated by the PLA's investment in integrated network electronic warfare and space/counter-space capabilities.

The PLA has a large infrastructure that is focused on exploiting and attacking computer networks that will diminish the need to attack many targets by kinetic means or will magnify the effectiveness of kinetic attacks. China's concept involves a fusion of computer network attack and exploitation with electronic warfare. Computer network attacks are a good illustration of asymmetric capabilities China has been developing to leverage its investment in traditional military capabilities.

For the most part, US civil and military institutions share the national information infrastructure. Developing a capability to successfully attack the US information infrastructure can mitigate limitations on its military capabilities in time of crisis, while providing a channel for intelligence exploitation of the US civil and government sector in peacetime. These capabilities fit the doctrine developed by Deng Xiaoping in the mid-1980s of "fighting an early war."

Attacks on the information infrastructure can facilitate access to defense-industrial information to enhance the effectiveness of China's active campaign to acquire defense industrial information from US industry. In time of mobilization, the ability to exploit and attack the information infrastructure can support China's military planning activities as well as to provide opportunities to disrupt US mobilization.

China's investment in space and counter-space activities creates a significant portfolio of asymmetric military capabilities as well. China's recent demonstration of its ability to track, locate, and attack low altitude satellites underscores China's progress in developing effective asymmetric capabilities. Low altitude satellites are the region where many satellites supporting intelligence and military requirements are deployed. Hence, an ability to physically attack these platforms provides an opportunity to diminish the ability of the US (and other nations using reconnaissance satellites) to employ these systems in

time of war, or to force users to take measures to protect the satellites from physical attack that will reduce their operational effectiveness.

Attacking higher altitude satellites that are used for communications and navigation would be a more formidable aspiration. However, China's interest in being able to hold US space assets at risk, and the PLA's intense interest in manned space operations makes it plausible that its aspirations could be extended to other space assets that could eventually be placed at risk as well. Taken together the application of traditional and asymmetric capabilities aimed at the US command-control-communications-computation-intelligence-surveillance-reconnaissance (C^4ISR) infrastructure poses a significant threat.

Other asymmetric capabilities include special operations forces, mine warfare (especially sea mines), anti-ship cruise missiles, and land attack cruise missiles. Special operations forces exploits and build upon a long history of Maoist military doctrine that emphasizes both asymmetric and asynchronous capabilities (i.e. the timing of military operations) used against a superior adversary.

The use of mine warfare is a modern legacy of China's limited Cold War-era naval capability. During most of the Cold War period, US open ocean operations diminished the need for large scale counter-mine operations. However, the post-Cold War emphasis on littoral naval operations has greatly increased the operational utility – and the threat posed – by the application of advanced sea mines. China has used its access to modern Russian sea mines and modern diesel-electric submarines to create a significant capability for sea mining operations in littoral waters.

The use of sea mines for littoral defense is augmented by China's acquisition of anti-ship cruise missiles. China has a long history of investing in anti-ship cruise missiles, using both foreign systems (from France and Russia) as well as indigenous modifications of these systems. The use of anti-ship cruise missiles focuses on exploiting the limitations of sea-based air defense, by emphasizing swarm attacks and related forms of massed

raids on surface naval battle groups. The indigenous industry is sufficiently well-developed to make it a significant player in the international export market. China is, for example, the primary supplier to Iran's Navy of the supersonic C-802 cruise missile.

China's history of investment in anti-ship cruise missile has also provided it with the scientific and industrial infrastructure to become a developer and producers of land attack cruise missiles.

Other asymmetric capabilities

Chinese strategists have also addressed other dimensions of inter-state conflict that are not typically addressed. These include conflict relating to trade, the environment (or "ecological war" in the terms used by Chinese specialists), and finance. These concepts do not appear to be fully developed, but appear to be aspects of a more fundamental approach to conflict that in the words of one Chinese specialist proposes to "use any method, including military and non-military means, lethal and non-lethal means to force the enemy to satisfy one's own interest"

Conclusion

The PLA has institutionalized the process of analyzing and investing in the creation of asymmetric military capabilities. While the PLA's doctrine for employing these capabilities remains poorly understood, they could significantly augment China's modernized defense capabilities to make China a very powerful East and Southeast Asian regional security player. Over time, these capabilities could support a global posture for China as well.