

# WebMemo



Published by The Heritage Foundation

No. 3379

September 29, 2011

## Five Myths About China's Space Program

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As the Chinese orbit their Tiangong-1 space lab, the spotlight is once again turned on China's space program. To help inform the discussions, it would be helpful to address a few of the myths surrounding China's space efforts.

**Myth #1: China is in a space race with the United States.** Perhaps the most common myth is that China is interested in directly challenging the U.S. in space. In fact, leaders of the People's Republic of China (PRC) have been interested in developing a space capability almost since its founding in 1949. After China orbited its first satellite in 1970, the main focus of Chinese space development has been on building systems that would facilitate national economic development (communications satellites, earth resource satellites, navigation satellites), although national security concerns have become more prominent in the past several years.

The Chinese have followed a steady, methodical path in their space development effort. The pace of Chinese space launches is hardly setting a blistering pace, especially in the area of human spaceflight. Since 2003, when Chinese colonel Yang Liwei became the first Chinese astronaut to orbit the earth, the Chinese have launched only two other manned missions at intervals of two to three years.

**Myth #2: China is catching up with the U.S. in space.** China is currently the only nation whose space program is on track to place people into orbit. The U.S. has decommissioned its Space Shuttle fleet, while the failure of the Russian launch

of the unmanned Progress 44 supply mission raises the real question of whether Russia is up to the task of safely shuttling astronauts to and from the International Space Station. China's space industry workforce is younger than the American one and substantially younger and healthier than the Russian one. Chinese leaders appear committed to sustaining their space efforts for the coming decades.

Yet the U.S. still enjoys substantial leads over China in a variety of ways, whether it is the range of satellites it fields, the capability of certain types of payloads, and, above all, experience in space operations. American astronauts have clocked thousands of hours in space, substantially more than the Chinese have.

**Myth #3: China seeks cooperation with the U.S. in space.** The Chinese are not racing with the U.S., but neither are they desperately seeking cooperation. China is pursuing space capabilities for its own ends and does not need American technology or permission. As important, China is not about to allow others to determine the course of its space development. Those who would hope that, by cooperating with Beijing, Washington could somehow have some control or even influence over

This paper, in its entirety, can be found at:  
<http://report.heritage.org/wm3379>

Produced by the Asian Studies Center

Published by The Heritage Foundation  
214 Massachusetts Avenue, NE  
Washington, DC 20002-4999  
(202) 546-4400 • [heritage.org](http://heritage.org)

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Chinese development badly misunderstand the Chinese view of themselves and their relations with the outside world.

This is not to suggest that China would refuse to cooperate if asked. However, the Chinese will cooperate only when they see the opportunity for some kind of gain—how would it serve Chinese interests? Once upon a time, it might have been for the prestige of being recognized as a peer with the leading space power. But with the end of the Space Shuttle program, it is not clear that China needs the U.S. for prestige purposes.

China would gladly cooperate with the U.S. in other aspects of space development—e.g., developing improved sensors, power systems, and the like—but that raises the question of whether it would be in the American interest to share advanced technology with the PRC.

**Myth #4: China's space program is civilian in nature.** The reason for concern about Chinese access to technology is that the Chinese have not separated their civilian and military space programs. Instead, the People's Liberation Army (PLA) is intimately involved in Chinese space efforts. Unlike the Kennedy Space Center in Florida or the Johnson Space Center in Houston, China's space facilities are all manned and operated by elements of the PLA. Similarly, Chinese reporting about their human spaceflight program (the *Shenzhou* and *Tiangong* programs) and lunar exploration missions (the *Chang'e* program) all include senior PLA officers as "commanders" of the effort. Space cooperation with China will almost inevitably mean cooperation with China's military.

In this light, any technology that is transferred to China, openly or as a result of espionage, is likely to benefit the PLA. This is exacerbated by the lack of transparency into China's space program. For example, there are no good estimates of how much China spends on its space program. Similarly, why China decided to shoot down a weather satellite in 2007, and who was involved in that decision, remains a mystery.

**Myth #5: China is focused on sending astronauts to the moon (or Mars).** This opacity, in turn,

makes it difficult to predict China's goals in space. One of the most commonly asked questions is whether China intends to land a man on the moon. At this point in time, there has been no official word about whether the Chinese are interested in such a goal. By these same lights, some have wondered if China might have even grander goals, such as a manned mission to Mars. This, too, is impossible to answer authoritatively, as it is not clear even whom to ask.

In this light, China's expanding range of military satellites should raise real questions about the ultimate Chinese goals in space. The previous concentration on developing space for national economic purposes appears to be giving way to a more military-oriented set of programs. How this will integrate into the human and lunar spaceflight programs, if at all, remains to be seen.

**What the U.S. Should Do.** Like Aesop's fable about the hare and the tortoise, China can surpass the United States in space only if America stops competing. To prevent that from happening, U.S. policymakers should:

- **Recognize the significance of space to American power and security.** Space capabilities touch upon a range of U.S. interests, from economic to technological to military. Without a robust space capability and supporting industry, the foundations of American power would weaken. In the midst of budget cuts, U.S. lawmakers should recognize the essential, ongoing importance of space systems.
- **Recognize the significance of space as a field of competition.** Beijing is not engaged in a space race with Washington. But China is engaged in a great power competition with the U.S. in which space is one arena. American decision makers should come to terms with this duality. In this regard, the Chinese are unlikely to be manipulated by American proposals on "codes of conduct" or meetings with the head of NASA. As long as Beijing and Washington are in competition, space will be one of the major venues.
- **Recognize the political significance of a space presence—or absence.** Studies and polls often

indicate that NASA has one of the best “brands” in the U.S. government, both at home and abroad. The PRC understands that a robust space capability with highly visible achievements is something that serves terrestrial purposes, whether it is advertising Chinese high-tech prowess or intimidating China’s neighbors. Washington policymakers should see space achievements in the same light. When the U.S. cedes the field of human spaceflight to China, the impact is felt globally, and not just within the space community. Above all, this demands a coordinated set of policies regarding U.S.–China space interactions. The national interest is ill-served when the Administration refuses to inform Congress and

the American people about the results of NASA Administrator Charles Bolden’s October 2010 visit to China or ignores congressional concerns about future cooperation.

**Spacing Out.** China is certainly entitled to develop space as it sees fit, but U.S. national interests require that it retain its lead. China could achieve parity with the U.S. in some areas—but only if the U.S. neglects its space capabilities. To prevent that from happening, it is up to American decision makers to maintain a strong American presence in space.

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