

At Issue:

Is the United States in danger of losing a space race to China?



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are we in a race back to the moon? Should we be? The Apollo program achieved not only its literal objective of landing a man on the moon (propaganda, soft power) but also its more abstract objective of intimidating our Soviet adversary (technical surprise, hard power) and thus played a key role in the end of the Cold War.

Its two follow-on programs, the space shuttle and space station, although fraught with technical issues, had significant success in pointing the way toward a new paradigm for space. That new path involves getting people and machines to satellite assets in space for construction, servicing, extension and repair.

We cannot access satellites now with people and machines because we do not have a transportation system that allows us freedom of movement in the space between Earth and the moon. Recent data from the moon show that it has not only near-permanent sunlight near the poles but also abundant water. This water would allow us to make fuel on the moon to power rockets. Such a system is the logical next step in both space security and commerce. A return to the moon for resource utilization thus contributes to national security and economic interests as well as scientific ones.

What societal paradigm shall prevail in the new space economy? What shall the organizing principle of society be in the new commerce of space resources: the rule of law or authoritarian oligarchy? An American win in this new race for space does not guarantee that free markets will prevail, but an American loss could ensure that free markets would never emerge on this new frontier.

In one of his early speeches defending the Apollo program, President John F. Kennedy laid out the reasons that America had to go the moon. Among the many ideas he articulated, one stood out. He said, "Whatever men shall undertake, free men must fully share."

We explore new frontiers not to establish an empire but to ensure that our political and economic worldview prevails — the system that has created the most freedom and the largest amount of new wealth in the hands of the greatest number of people in the history of the world.

By leading the world into space, we guarantee that space does not become the private domain of powers who view humanity as cogs in their ideological machine rather than as individuals to be valued and protected.



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China's ongoing advances in its space program have raised the question of whether the United States will become engaged in a space race similar to that which occurred in the 1960s.

That race began in 1961 when President John F. Kennedy announced that the United States would reach the lunar surface and return to Earth within the decade. The Apollo program was one fruit of that challenge, which the United States won in July 1969 when the Eagle landed on the moon with two crew members. To achieve that goal, the United States spent billions of dollars in a field of competition that had only come into existence in 1957 when the Soviet Union launched *Sputnik 1* into orbit.

Now, some say that China poses an equivalent challenge to the United States, meaning that a space race will be the logical outcome. I would suggest that the calls for a space race are overinflated because the conditions for such an endeavor do not presently exist.

First, China's rise to prominence has not been cast as a prelude to a weapons race in space; that occurred in the late 1950s when Nikita Khrushchev announced the Soviets would "bury" the United States. That threat was based on the Soviets' possession of nuclear weapons to which were added missiles to reach the United States. China's space program has been cast as a peaceful analogue to earlier American, European, Japanese and Russian/Soviet programs after the successful conclusion to the Apollo program. Weapons in outer space are often cited as a reason for a space race, but such weapons are not as useful as many think.

Second, China's space activities are tracking the earlier U.S.-Soviet space programs with no direct security threats. The Chinese, like the Americans, have a military space program, but that alone does not generate the political support for a space race. Instead, the Chinese are catching up because the United States finds manned space exploration a desired goal but not an overwhelming one into which billions must be poured in order to be first.

Third, human space-exploration efforts are becoming more international — an endeavor the Chinese at some point will join as full members based on their technological achievements and capabilities.

Putting humans in outer space remains a long-term process that crash projects do not in the end advance as readily as systematic efforts incorporating the world's talents most efficiently.