

Don't fear the Space Force

Csonka on alternative aviation fuels

Auralizing urban air mobility noise

AEROSPACE

★ ★ ★ AMERICA ★ ★ ★



NET-ZERO

The clashing plans of Airbus and Boeing to neutralize air transport's carbon footprint.

PAGE 26



Demanding more of Space Force

Today's U.S. Space Force does little if anything beyond what the Air Force did when it led the country's military space operations. Humanity's terrestrial history and the increasingly bold plans of entrepreneurs to settle and economically exploit space suggest that change is coming. Don't be afraid. [Peter Garretson](#) explains.

BY PETER GARRETSON



Today, the majority of humanity's political and economic interests reside on Earth, and it is terrestrial militaries that can capture or threaten those interests. Most observers, therefore, assume that the primary role of the U.S. Space Force will be to serve as a support service for the Army, Navy and Air Force.

That view is shortsighted. Over time, American citizens are sure to demand a greater role for their new Space Force.

As America's entrepreneurs work to create an economy of space stations, factories and mines in cislunar space and beyond, the Space Force's roles and missions must be broadened. The great American naval theorist Alfred Thayer Mahan remarked that the need for a navy arises with commercial shipping. As America becomes a space-faring nation, it will develop economic and political interests in space that require protecting.

Over time, the roles and missions of the Space Force should come closer to resembling the roles and missions performed by our Navy and Coast Guard. A constant peacetime presence along the lines of commerce will ensure freedom of navigation and safety of navigation, promote peace and provide a vigilance that deters coercion.

Terrestrial militaries rescue individual citizens from natural or human-made dangers, evacuate citizens, provide humanitarian relief and clear hazards that threaten safety of navigation. They also provide support to civilian regulatory and law enforcement authorities, and build and maintain public works such as roads, bridges and canals. Similarly, we can predict that the Space Force will be asked to perform such functions.

Surveillance, for starters

First will come simple vigilance. As American and competitor activities extend beyond geostationary orbit to the environs of the moon, our national leadership will expect to know what is happening. Certainly, the National Reconnaissance Office, if it survives as an independent organization, will have a role to play in the surveillance of adversary activities. The Commerce Department, which now has the lead for space traffic management, is also likely to have a role. But there will be an operational necessity to piece together a common operating picture synthesizing adversary and U.S. commercial, civil and military activities to provide situational awareness and recommendations to policymakers. While such a common operating picture would be managed by Space Command, it would be built using spacecraft, assets and personnel from the Space Force. Space Force is already the lead for space domain awareness and precision navigation and timing through the GPS constellation, and it is well

practiced at timely operational collision avoidance and space control. It will be natural to look to the Space Force to develop that common operating picture, which is the foundation for vigilance.

Simple vigilance is a powerful deterrent. Malign actors are less likely to threaten U.S. interests if they know their actions can be observed and attributed. This is one reason why the U.S. revealed its previously classified Geosynchronous Space Situational Awareness Program and why the Space Force is exploring the concept of deploying Cislunar Highway Patrol Satellites, or CHPS, to observe activity around the moon.

But vigilance may not be a deterrent if the adversary knows you can't do anything to respond to a provocation. Therefore, response capabilities will be required. On the sea, lines of commerce are not defended by keeping warships omnipresent to protect from every threat. Rather, warships threaten retaliation with their ability to punish. Therefore, we can expect that the Space Force will develop patrol craft capable of a variety of responses. Inevitably, adversaries will compete for spacecraft that are capable of deeper and more responsive operations, which will force a competition for advanced propulsion.

Most of the time, those general-purpose patrol craft will not be countering coercion or engaging in war. But they will be significant investments with significant logistics and response capability. Therefore, when U.S. or allied citizens, companies or activities run into problems, it will be natural for policymakers to ask for the Space Force to come render assistance.

Such a request may initially be treated by Space Force leadership with the same attitude of other militaries when first asked to conduct "military operations other than war." The reaction is typically, "Not my job." But the need for leaders to protect their nation's global reputation and appear as responsive to the media, the public, or powerful or wealthy constituents will overcome such objections. And America will not want to duplicate its investment just to create a separate constabulary service.

Even if services are routinely accomplished by commercial actors, we can expect to see Space Force asked to assist in debris removal, towing, inspection and emergency servicing in the near term. But as more human activity begins to take place in orbit, we can expect to see search and rescue operations, medical evacuations, vessel-board search and seizure for contraband or illegal activity, and perhaps even requests to cope with unruly space tourists or hostage situations. If the Space Force is capable, it might even be politically expedient to rescue astronauts or citizens of one's political rival.

Natural threats

At some point, our nation, its allies or friends will be confronted with the threat to the homeland of

When U.S. or allied citizens, companies or activities run into problems, it will be natural for policymakers to ask for the Space Force to come render assistance.

an asteroid or comet impact. “Not my job” or “no one told us that’s our job” will not be acceptable responses. The American people will naturally expect that if someone is going to defend their lives and property from an asteroid, it will be the Space Force. Certainly, America’s stature would be diminished if another power had to come to our rescue or the rescue of others. Therefore, I think it is likely that the American electorate will demand the Space Force take on planetary defense.

As detailed in my book with Namrata Goswami, “Scramble for the Skies: The Great Power Competition to Control the Resources of Outer Space,” there are ongoing efforts by nations and private actors to access the vast energy and material resources of outer space. These resources are so vast that they could alter the balance of power and pecking order among nations. In the past, such opportunities led to significant efforts by European powers to capture new resources in the New World and Africa.

Although the U.S. and others are attempting to moderate such conflict by establishing rules of the road, such as NASA’s Artemis Accords, with respect to space resources, history would suggest that at some point, actors will have conflicting interests and conflicting interpretations. We can hope for negotiation, but in an anarchic system, there is no authority above nation-states to prevent the use of force or war. Past agreements to divide up the world were honored until they weren’t.

Already we know of certain regions with concentrations of resources. Access to those resources and commerce are controlled by astro-strategic

terrain. Just as the United States sought Alaska, Texas and the Louisiana Purchase for its economic ambitions, and just as militaries appreciated the ability of Puerto Rico, Pearl Harbor and the Panama Canal to secure trade and control commerce, the nations and militaries of the world have already begun to perceive the strategic value of important regions in space for economic or military power. The competition to occupy and control these regions — or challenge such control, such as through freedom of navigation operations — will become an important activity of the Space Force.

Economic interests

We can’t know at what point resources on the moon or asteroids will reach vital economic significance, but the footholds of the European powers were geostrategically important to future wealth long before they were profitable. Moreover, stretched to the limit of a nation’s logistics efforts, the winners and losers were often determined by tiny expeditionary forces at the farthest reaches from the nation. At such limits, a very small amount of force can blockade, starve, coerce or capture. Thus, we can anticipate that nations will aggressively protect their fragile footholds, and America will expect its Space Force to be there to protect the significant investments of the nation and its citizens. Such situations could result in a military crisis decades before economic dependencies have arisen.

At some point, Earth will have significant economic interests and dependencies in space, and it is likely to have significant off-Earth communities, whether Elon Musk’s SpaceX colony on Mars or Jeff Bezos’ dream of trillions of people in free-flying space colonies.

The possibility of having Space Force personnel in space or having crewed spacecraft may seem remote or frivolous today. But over time, as more and more citizens are residing in space, and as the costs come down, it will seem silly for the Space Force not to have personnel in space.

It is perhaps natural for those space professionals who have spent two to three decades in relatively unchanged satellite support operations to dismiss such projections. Small, embattled and fearful of ridicule both by the public or the other services, it may appear a wise course for the Space Force to project a cautious view of a limited set of roles and missions for a Space Force that looks down to protect America’s Joint Force, as we call our military services.

But such a narrative is dangerous and must not be encouraged. The more serious risk is that the U.S. commercial sector will move faster and that a visionless Space Force will be caught flat-footed and unable to defend U.S. interests. Therefore the U.S. electorate must insist that the Space Force plan ahead — that it takes seriously the visions and plans of industry. ★



Peter Garretson

is a senior fellow in defense studies at the American Foreign Policy Council in Washington, D.C., and co-director of its Space Policy Initiative. Garretson is the co-author with Namrata Goswami of the 2020 book “Scramble for the Skies: The Great Power Competition to Control the Resources of Outer Space.”