

In My View

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Recommended Citation

O'Connor, Cathal and Tangredi, Sam J. () "In My View," *Naval War College Review*. Vol. 75: No. 1, Article 23.
Available at: <https://digital-commons.usnwc.edu/nwc-review/vol75/iss1/23>

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IN MY VIEW

THE SPACE CONVERSATION

Sir:

In the coming months and years, the American people will need to have an effective conversation about our nation's ability to use outer space freely. This can be a complicated and technical discussion, but the subject is one that will have an increasing impact on our lives in the coming years. Such conversations need to be conducted respectfully, but we also need to deliver a consistent and coherent message that will drive cohesive action—a message that the American people and their elected representatives readily can understand and appreciate, and with which they, by and large, can agree.

Our narrative to Congress about the importance of space must be the same one we make to our local parent-teacher association. If we cannot speak in clear, simple English, without acronyms, then we do not know our subject, and the people and their elected representatives will doubt the validity of our message. If we cannot balance explanations of why we may not be able to use space freely (i.e., the threats we face) with suggestions (presented in broad terms) for how to counter those threats, we will lose public support, we may educate our adversaries by providing too much detail, or in some other way we may defeat our own strategy. To avoid that result, I offer below a structure for conducting those conversations.

When our grandparents were children, the ideas of satellites orbiting in space and a man walking on the moon were pure science fiction. Today we take for granted both our access to and our ability to operate in space, because space has become integral to our daily lives. For example, space satellites provide images that allow a farmer to determine which parts of her fields need water and fertilizer, while other images help us forecast the weather. The Global Positioning System (GPS) enables the farmer to apply fertilizer precisely, and thereby to maximize the productivity of her fields. GPS also enables the tracking of the trucks, trains, and ships that bring those crops to market, both here and overseas, while space communications link those vehicles and vessels to their headquarters during

their voyages. Finally, GPS provides the timing signals that keep our cell phone networks and our banking apps on those phones synchronized. That ensures that the farmer's payment check is deposited promptly—not four days after she tries to pay her bills. Thus, space capabilities and our use of space permeate every part of our lives.

The use of space for communications, timing, navigation, and imagery began in the form of military and intelligence systems developed and deployed in the early years of the Cold War. Over the past seventy years, these space capabilities have migrated from the military and intelligence arenas to become central to our nation's economy, diplomacy, and national security. But both the commercial and national-security capabilities depend on a space architecture composed of the same three parts: first, our satellites that orbit the Earth; second, the ground stations that monitor, control, and communicate with those satellites; and third, the communication links that connect our satellites and ground stations.

Unfortunately, all three parts are fragile. In large part, they all were conceived, built, and deployed during the Cold War, when space conflict was tied to nuclear conflict, and there was a high threshold for conflict in space. So, while a fight in space was something that people feared and wrote about, the connection between the use of nuclear weapons and the satellites that would detect the launch of such weapons and communicate that information made it unlikely that our enemies would start conflict in space.

However, since the end of the Cold War, our nation's enemies, led by China and Russia, have observed how we have used space to our advantage in conventional conflicts, such as during the Gulf War and in Afghanistan. Those enemies intend to counter our advantage on the ground, in space, and in between, and they are taking active steps to deny both our access to and our ability to operate in space, for both military and economic advantage.

How do we move forward? We start by looking at the space architecture we have. Our nation has been blessed with remarkably talented people—men and women who have built a constellation of satellites that are works of handmade engineering art. Because of that, these satellites are very capable—and also very expensive, and thus very limited in number. They were not developed quickly and cannot be replaced quickly. Therefore, we will be relying on the satellites we have today for the foreseeable future. We simply cannot afford to abandon the massive investment we have made to date.

Given that reality, in the future we will do two things. First, we will defend our current space architecture—the ground stations, the satellites, and the communications paths that link them. Second, as we make investments in our future space architecture, we must increase its ability to withstand and recover from an attack. In other words, we will improve the architecture's resiliency, across all three segments.

As we construct our narrative for the American people, first we must ensure that all of us understand the importance of space to our daily lives. Second, we must explain how our enemies threaten our access to space and our ability to operate freely there. Third, we must discuss our plan to defend the space architecture we have today and to increase the resiliency of that architecture moving forward. Our narrative needs to be both coherent and consistent, whether in front of a Rotary Club or in a classified hearing in Congress. This is a vital conversation about the importance of space, conducted with both the American people and their elected representatives—addressing what it means to the people of a particular congressional district or state—and what we intend to do going forward.

Our enemies are not waiting; we cannot get this wrong. Failing in this matter not only will impact America economically; it also will influence our nation politically and diplomatically, and will have a bearing on our national security and military readiness.

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**RESPONSE TO "THE LIMITS OF SEA POWER," BY JAKUB J. GRYGIEL,
NAVAL WAR COLLEGE REVIEW 74, NO. 4 (AUTUMN 2021), PP. 95–110.**

Sir:

It is very appropriate for Professor Grygiel to remind navalists that the “conversion of sea power into strategic effects on the [Eurasian] continent is neither guaranteed nor easy.” Likewise, it is quite true that “[s]ailing undisturbed on the oceans does not mean that a sea power, such as the United States, has political influence on land; control of the sea does not yield power automatically over the land.” It may be that if current trends in U.S. defense policy and global politics continue, the United States will not be “sailing undisturbed on the oceans” at the end of this decade. One must acknowledge that sea power indeed “has serious limits.”

However, in his article Professor Grygiel looks at sea power almost exclusively from a political-military point of view and does not acknowledge fully

its ultimate necessity as a geoeconomic instrument for those nations that are separated by seas from the markets and materials that fuel their economies, such as—to use his historical examples—Great Britain, Venice, and, to some extent, the United States. It is the case for the majority of “island nations” that sea power is the prerequisite for maintaining *any* power at all (and perhaps survival) in a perpetually conflictual world. Without a strong economy, it is difficult for a nation to sustain land military power (as the Sino-Japanese saying goes, “rich nation, strong army”). Sea power may not guarantee strong economies for island nations, given all the factors involved, but it can ensure that their vital connection to the world cannot be cut off by another global power.

This is also true for the projection of (land) military power, which Professor Grygiel identifies as necessary for political influence on land. For these states, sea power is a prerequisite for land power. In fact, sea power can magnify the impact of a relatively small amphibious-capable army into a highly potent force, which is why British decision makers could refer to the (relatively small) British army as a bullet fired by the Royal Navy. It also ensures that such a power’s own territory cannot be conquered by those states that do not have comparable naval power.

In his effort to argue that a reliance on sea power instills a lack of confidence in allies—an argument he stretches beyond the breaking point—the author negatively portrays Francis Bacon’s quote that “he that commands the sea . . . may take as much or as little of the war as he will” as indicating a casual approach to supporting allies (thereby making them reluctant or suspicious of the alliance). But in its context, the Bacon quote has nothing to do with alliances. Rather, Bacon is arguing that sea powers can avoid wars directed against themselves, while even the strongest continental states more often are forced to fight.












Contrary to Professor Grygiel’s depiction, the phrase “Perfidious Albion” used by the French bishop and others is not an indictment of Britain’s reputation as a fickle ally but rather a lament that the English Channel prevented any French invasion, while British sea power frequently swept away French pretensions to overseas empire. France’s near-absolute focus on continental warfare in the Seven Years’ War (1756–63) resulted in the loss of its most valuable overseas possessions (Canada and French India), and Britain, not France, became destined to be the economic power that controlled much of the world. Certainly this might constitute perfidy from the French point of view, but that was all because of the relative imbalance in effective sea power. Regarding the result of further rounds of conflict between the two nations, Napoléon was quoted as saying: “Had I been master of the sea, I should have been lord of the Orient.” In short, the author does not provide convincing evidence that sea power makes for tenuous alliances. Meanwhile, sea power has the reassuring quality of being able actually to move land power into a far region to support an ally.

My impression throughout my reading of Professor Grygiel's essay was that he was creating an extreme straw man of what he presumes American strategists think sea power can achieve—a conception that even the most ardent navalists would not necessarily support. Humans live on the land, not the sea—which can be either highway or barrier. Did sea power help nation building in Afghanistan? Of course not. But neither, apparently, could military land power. Can sea power, in the form of a threatened amphibious assault on Kaliningrad, force Vladimir Putin to redeploy troops away from the Ukraine border? Perhaps this is a gamble no one would want to take—but logically it could.

It is interesting that the author concludes with Joseph Conrad's illustration of a *French* man-of-war fruitlessly (and pointlessly) lobbing shells into the interior of Africa. France built a brave navy, but it did not create and maintain sea power, which many French governments, as previously noted, viewed as a luxury, not a necessity. Britain would not have had to lob shells into the interior, because it could control the coast and all connection with the rest of the world, effectively isolating the problem.

Of course, all the discussion above can be dismissed as an esoteric debate between professors. In contrast, the U.S. Marine Corps (USMC) has its way of making significant points very simply. Over twenty years ago, I saw a slide used in several USMC presentations that captured much of this influence of sea power-versus-land power debate. I could not retrieve it, so the graphic below is re-created to place the debate in true and simple context.

SAM J. TANGREDI

THIS IS LAND		THIS IS WATER		
THERE IS MORE		THAN		
TO GET TO THEIR		WE MUST GO OVER		
TO GET TO OUR		THEY MUST GO OVER		
SO WHAT'S MORE IMPORTANT?		OR		

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