



Defense Leadership Forum (2022)

At the annual Defense Leadership Forum summit, the biggest and brightest names in US Defense will come together to discuss how to keep America safe from geopolitical threats. Companies, NGOs, academics, government officials, and military leaders will tackle the most significant threats facing the defense industry, including the changing landscape of public-private military tech, the rise of global defense juggernauts, and the new frontier of space and space tech. The Forum will tackle complex issues, including neutrality and how the industry should work with controversial state and non-state actors. Finally, the Forum will look at some of the emerging conflict zones throughout the world, including Eastern Europe and Northern Africa.

Adapting to a changing globalized landscape - the revolution of the defense industry and the rise of new tech

Background

Here at the Defense Leadership Forum, we care about the security and prosperity of the American people. We represent a cross-section of one of the most vital and important American industries, the defense industry. We bring together the brightest minds from Defense firms, private industry, public offices, academics, and the military to look at the future and adapt to a changing global landscape.

As China, Europe, and Russia invest heavily in high-tech defense technologies and robust militaries, pressure rises on U.S. players to remain at the forefront of global defense technology. Times are changing, and the defense industry of today is not the same one that the U.S. had back in the Cold War.

Just as the global defense industry looks away from the U.S. and towards new emerging actors, it also looks away from traditional forces and towards a new realm of innovative and groundbreaking technologies. Cyber, AI, hypersonics, hybrid-warfare, anti-satellite weapons, and more will decide who wins the 21st century new Cold War.¹

There is another factor that will upend our status quo. The rise of private military technologies has wrested power away from governments and towards the people. Tech companies now launch satellites and seek to explore the great frontier of space. Of course, private actors often don't have the same checks and balances as government forces, and we have a responsibility and a duty to consider all ethical and moral responsibilities of our actions.

How will we start having the difficult conversations and make the necessary movements to ensure the Pax Americana does not die and that the American defense industry continues to thrive?

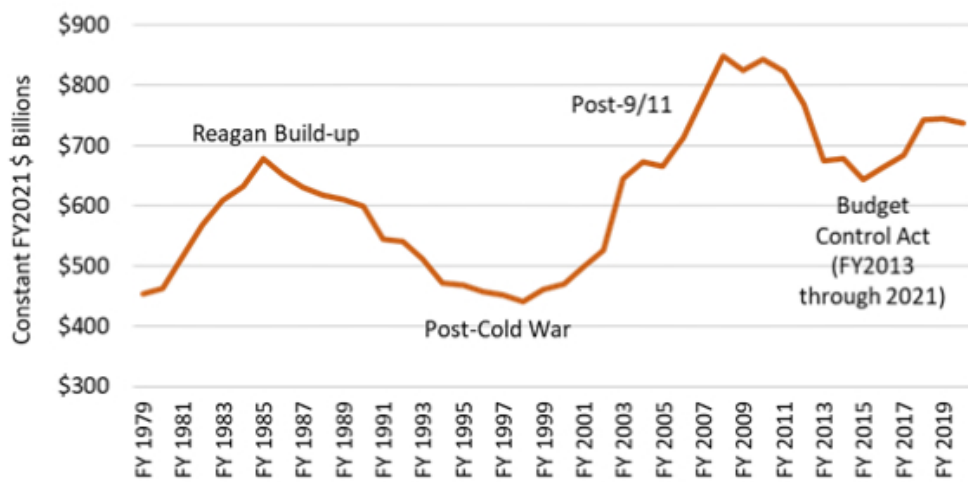
¹ <https://warontherocks.com/2021/01/the-u-s-defense-industry-in-a-new-era/>

Current Situation

Military-Industrial Complex

The military-industrial complex refers to the complicated environment of defense firms, manufacturing companies, public officials, and military voices that collaborate and work together to protect our national security. The term also includes ancillary players like PR and marketing firms, lobbyists, and even law firms that are kept on retainer by some of the bigger players in the field.

Figure 1: Growth and Decline in the Defense Department Budget



The defense industry has generally responded to periods of budget contraction by consolidating to fewer large players. Periods of upturn often prompt investment in new technologies that are critical to emerging requirements. How will industry respond to a period of flat budgets? Source: *Fiscal Year 2021 Department of Defense Greenbook*.

Defense is Going Global

Defense spending has been largely localized with a few superpowers over the last two decades. That is changing with new geopolitical threats and the desire for security and prosperity in all continents and across the globe.

The European Market has seen huge investments in defense spending due to the perceived threat of a historically aggressive Russian Federation. The Russian Federation has instilled a sense of urgency in modernizing security technologies for neighboring European states including Poland, Bulgaria, Latvia, and Lithuania. Naval tensions between Greece and Turkey, largely over oil drilling rights and the legitimacy of Cyprus, open up an interesting naval geopolitical flashpoint.

In the East Asian Market, the Chinese demand for defense contracts has only continued to grow, even as other spending areas have leveled off. China is aggressively pursuing a next generation nuclear stockpile that can rival those of any superpower and has invested large amounts of money into R&D for both their nuclear stockpile and for the naval forces. Conflict regions within China have largely quieted, particularly in Hong Kong and the Xinjiang region. However, there

is a big risk of a geopolitical flare in the region, particularly with the instability happening in Myanmar.

MINT Region

The MINT Region is a group of four countries: Mexico, Indonesia, Nigeria, and Turkey. They have often been overshadowed by the BRIC Countries (Brazil, Russia, India, and China) as engines of global growth. Particularly within the defense industry however, many experts expect the MINT region to become the new epicenter of future defense markets.² Defense spending in the region is expected to grow by about \$20 Billion USD in the next three years according to one ASDReports forecast.

Rise of New Tech and the Death of Regulation

Private capital pouring into the defense industry has changed the name of the game. Space X, General Atomics and Sierra Nevada are a few examples of private companies that have entered the defense sectors and created their own technology outside of direct government direction. This influx of private capital and private players means that newer technology can be developed faster than ever before. This also means that if these new players don't follow the right ethical and safety practices there could be catastrophic economic, reputational and security fallouts.

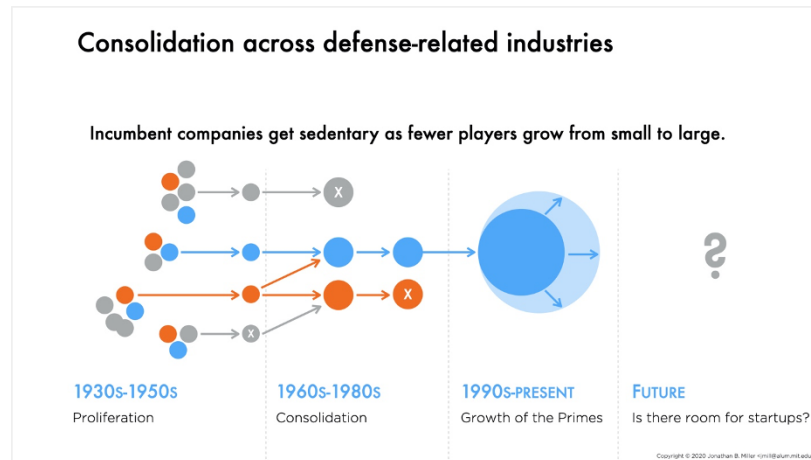
Even existing defense behemoths, like Raytheon and Lockheed Martin, are making inroads in the opposite direction. They are moving to become both commercial and defense players, playing in both markets as it were. While this provides dual revenue and some risk mitigation for these companies, critics say that it could bring in some conflicts of interests.

Consolidation of the Market

In the 1930's the defense industry was a highly fragmented market with hundreds of players. The Cold War era prompted a wave of consolidations and mergers that has continued through to the present day. In the latest Bloomberg defense industry rankings, the top 10 players made up almost half of the whole market, while the biggest defense firm Lockheed Martin had \$75 million in contracts, more than the next three biggest companies combined.³ This consolidation has meant that big players have more money to invest in research and development (R&D) which could help speed the rise of new technologies. Still some cynics say that the consolidation has hurt innovation in the field and that the biggest companies aren't investing in R&D, instead simply sending the money back to their shareholders. Some experts say that even with the consolidation of the biggest players, there has been a wave of new startups that have been hyperfocused on new technologies and are ready to create upsets in the market.

²<https://www.asdreports.com/news-2240/mint-defense-industry-expected-become-one-most-attractive-defense-markets>

³ https://assets.bbhub.io/bna/sites/3/2021/06/BGOV200_Federal-Industry-Leaders-2020.pdf



Opportunities and Challenges

Historically the defense industry has enjoyed a good relationship with both Democratic and Republican U.S. administrations. For example, though many expected Biden to be more dovish and less friendly to the defense industry, in December 2021, he authorized a 5 percent increase to the annual defense bill. This increase was larger than what congress even asked for. There are a lot of reasons for our popularity on Capitol Hill and in statehouses. The defense industry provides well-paying, highly centralized, and visible job opportunities and economic growth. National security is a hot-button issue that people care about in the ballot box. Our adversaries, Russia and China, have embarked on a spree of military spending that demands reciprocation. All of this and more has meant that the U.S. has looked to increase military spending rather than decrease it.

Of course that doesn't mean that we as an industry can expect the good times to last indefinitely. There is a small but strong wing of isolationist sentiment in both parties and in the populace that seeks to pull back on military spending, ceding valuable technological progress to our geopolitical rivals. A particularly dangerous threat by these caucuses is to crack down on industry lobbying. Lobbying is one of the best tactics we have to build relationships in Capitol Hill and any regulatory crackdown might damage our valuable ties to Congress and to the administration.

Journalists and government watchdogs are more eager than ever to scrutinize lobbying efforts and political campaign donations. Social media companies have taken a lot of the brunt of public criticism, but members of the defense industry are certainly not invulnerable. Thinking of how our actions could be perceived by the media or by the broader public is critically important at this moment in time.

The United States Department of Defense Overview and Structure

The United States Department of Defense (DOD) is composed of the Department of the Navy, the Department of the Air Force and the Department of the Army under the purview of Secretary of Defense Lloyd Austin. The annual budget for 2021 was \$706 billion, giving it the most funding of any military in the world.

- Department of the Navy: This is composed of the Navy, Marine Corps, and Coast Guard, and is headed by the Secretary of the Navy (SECNAV). The Navy has 261 commissioned ships and over 400,000 active personnel. Recently the U.S. entered a trilateral security partnership AUKUS with Australia and the UK that has a main goal of containing Chinese naval power in the South China Sea and Beyond.
- Department of the Air Force: The Department of the Air Force is home to the United States Air Force and the newly formed U.S. Space Force. The Space Force, established as a part of the National Defense Authorization Act in 2019, was an accomplishment of President Trump. The mission statement of the Space Force is to “provide freedom of operation for the United States in, from, and to space” and “provide prompt and sustained space operations.” With only 2,500 personnel and 77 spacecraft, it is the smallest branch of the military.
- Department of the Army: The U.S. Army currently has 479,000 active personnel. There are currently thousands of troops deployed all over the world, ranging from Somalia to Iraq.

Key Terms

- Research and Development (R&D)
- National Defense Authorization Act (NDAA)
- National Oceanic and Air Administration (NOAA)
- Department of Defense (DOD)
- National Aeronautics and Space Administration (NASA)
- Military Industrial Complex
- Executive Order 13490 – Obama Administration Rules on Ethics
- House Committee on Armed Services (HASC)
- Senate Committee on Armed Services (SASC)
- Intercontinental Ballistic Missiles (IBM)
- Lloyd Austin – Secretary of Defense⁴
- AUKUS – Australia, UK, and US Tri-lateral security partnership that aims to take up the security challenges in the Indo-Pacific
- NSA – National Security Agency
- EMEA – Europe, Middle East, and Africa

⁴ ¹ <https://slotkin.house.gov/media/press-releases/members-send-letter-secretary-defense-designee-lloyd-austin> 1

- APAC – Asia Pacific Regions
- Air Force Next Generation Air Dominance

Discussion Questions

- Drones and unmanned aerial vehicles can be highly effective in both military and non-military uses across the industry. Drones are much cheaper than other alternatives and often involve less risk for operators involved. That being said, while the U.S. Military and the DOD continues to tout the use of “targeted and signature strikes” in limited situations, groups like the ACLU have drawn negative attention to the practice. There have been an estimation of more than 2,000 civilians killed by drone strikes in Afghanistan, Pakistan, Somalia, and Yemen. How should the defense industry, lawmakers, and the military reform the drone practice to ensure we limit civilian casualties?
- How will the rush of tech companies and startups into the defense industry field change the status quo? Are there ethical or security concerns associated with these new entrants that don’t have the same restrictions as those under traditional government contracts?
- Will the globalization of defense industries cause any conflicts of interests if a geopolitical crisis arises? How can the defense industry best handle potential conflicts of interests? Should this Forum work on creating new industry-standard ethics rules and, if so, how would we best encourage compliance?
- Moving forward, how should the United States prioritize military spending in different areas, taking in consideration the rise of new threats arising from new technological advancements? Should, and if so to what extent, the government collaborate with private companies to make sure to utilize top technologies in the defense industry?

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Working with non-state actors and controversial state actors - collaborating within the defense industry to establish ethical industry practices and navigating the difficult issue of neutrality

Background

Although theoretically, according to the constitution, a president cannot declare war as a part of checks and balances, a growing amount of precedents of executive actions over time regarding security has given the president a great amount of military power. Even without declaring war, the United States has participated in plenty of conflicts after World War II, sometimes involving proxy warfare, whereby the U.S. indirectly participates by supplying troops and weaponry to another actor in a conflict.

Starting in 1969, as an executive action initially kept from the American public until it was leaked by the press, Nixon started bombing Cambodia even though it was neutral in the Vietnam War, which actually helped the Khmer Rouge communists by pushing more Cambodians into extremism and launching their regime under which around a third of their people would perish in a widespread famine and genocide. Five years earlier, the U.S. similarly bombed Laos, another neutral party, causing massive destruction. Such actions motivated congress to pass the War Powers Act of 1973.⁵ Nonetheless, in practice, the executive still carries a great deal of discretion and power when it comes to executing the president's will. In 2019, then-President Donald Trump entered an arms deal with Saudi Arabia worth around eight billion dollars. Certain skeptics were outraged by this, another action carried out over Congress' head, and considered this deal as related to human rights abuses perpetrated by the Saudis in Yemen, specifically air strikes that killed civilians.⁶

Whether it be directly taking military action or propping up other actors with funds, supplies, or troops, the United States arguably has a history of controversy. The challenges behind this include the struggle to cap or at least check presidential power, which, on the other hand, may also create new problems in a global climate where technologies can rapidly increase the speed of warfare and time needed to respond. Also included is the result of the military-industrial complex in which the defense industry is economically motivated to lobby and influence politicians in a way to maintain the need for the production of weaponry.

Current Situation

Non-state actors, to an ever-increasing extent, are becoming more and more relevant in foreign affairs and national defense. They potentially include non-governmental organizations (NGOs), transnational advocacy networks (TANs), corporations, and individuals. These institutions and

⁵ <https://www.history.com/news/nixon-war-powers-act-vietnam-war-cambodia>

⁶ <https://www.pbs.org/wgbh/frontline/article/saudi-arabia-arms-deal-trump-what-to-know/>

actors may play important roles in the defense industry, contributing to issues relevant to security, developing new defense technologies, potentially acting as watchdogs to controversial practices within the industry, and more.

As a world leader and rightfully the leading country in military armament, the United States must not only consider improving its reputation around its involvement in the defense industry but also act as a role model for other countries to follow. Namely, companies involved in security, government officials, and experts must make a commitment towards maintaining certain standards and ethical practices as members of the industry in order to minimize human rights abuses, boost national security, keep national threats limited, and better our enemies.

The idea of creating common standards and working towards a better image around the defense industry is no new endeavor. In the 1980s, under the Reagan administration, the President's Blue Ribbon Commission on Defense Management was formed to suggest reforms. As a result, by the late 1980s, the Defense Industry Initiative was established, whereby defense companies agreed to certain principles. Last updated in 2010, these principles include:⁷

“(1) We shall act honestly in all business dealings with the U.S. government, protect taxpayer resources, and provide high-quality products and services for the men and women of the U.S. Armed Forces.

(2) We shall promote the highest ethical values as expressed in our written codes of business conduct, nurture an ethical culture through communications, training, and other means, and comply with and honor all governing laws and regulations.

(3) We shall establish and sustain effective business ethics and compliance programs that reflect our commitment to self-governance, and shall encourage employees to report suspected misconduct, forbid retaliation for such reporting, and ensure the existence of a process for mandatory and voluntary disclosures of violations of relevant laws and regulations.

(4) We shall share best practices with respect to business ethics and compliance, and participate in the annual DII Best Practices Forum.

(5) We shall be accountable to the public, through regular sharing and reporting of signatory activities in public fora, including www.dii.org. These reports will describe members' efforts to build and sustain a strong culture of business ethics and compliance.”

These principles were created with the help of 18 major companies, and today the number of participating businesses includes representatives from 80 companies including Boeing, IBM, Lockheed Martin, General Electric, among many others.⁸ The National Defense Industrial Association has a similar mission, but instead of having members commit to a list of principles,

⁷https://higherlogicdownload.s3.amazonaws.com/DII/03bf5a26-f29f-4c59-bee9-16be73aa4985/UploadedFiles/ZXJqEK2RTrWeDjdYOtQA_DII%20principles.pdf

⁸<https://www.dii.org/about/about-dii#:~:text=Our%20Principles,the%20highest%20standards%20of%20ethics.&text=Our%20member%20commit%20to%20honesty,customer%20in%20which%20we%20serve>

acts as an educational organization focused on sharing best practices and communication, including a greater participation of 1,570 corporate and 63,000 individual members.⁹

Key Terms

- War Powers Act of 1973
- Non-Governmental Organizations (NGOs)
- Transnational Advocacy Networks (TANs)
- President's Blue Ribbon Commission on Defense Management
- Defense Industry Initiative
- National Defense Industrial Association

Discussion Questions

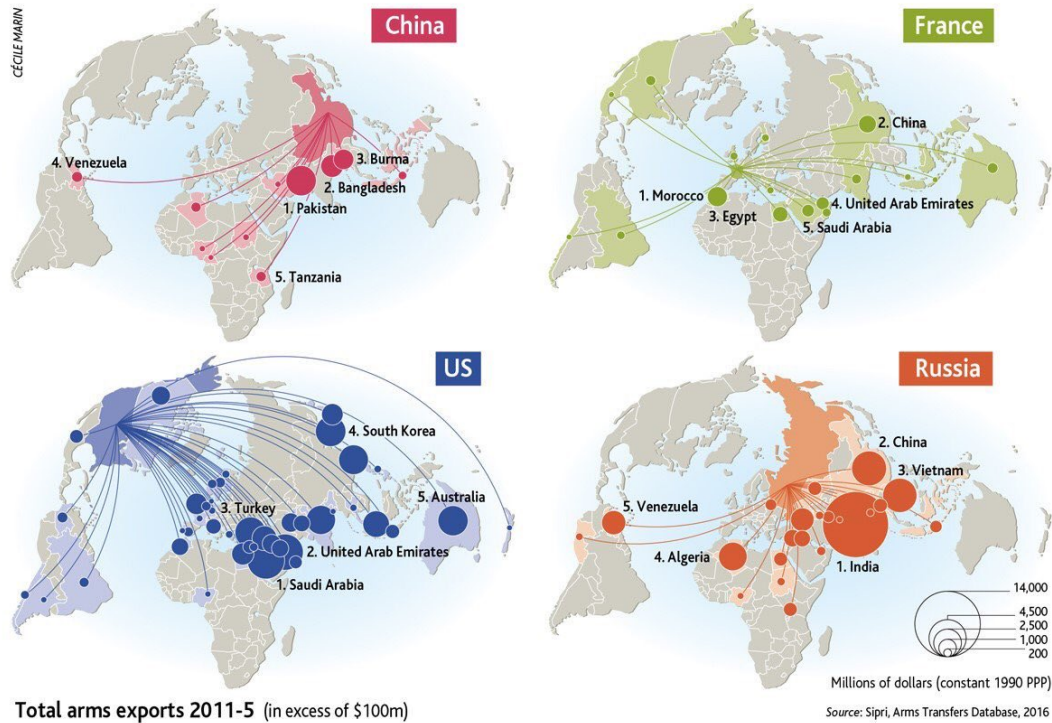
- Should the DLF promote more specific and stronger ethical standards to encourage defense companies to commit to?
- Countries have increasingly pivoted to Private Military Contractors and use covert non-traditional military forces (e.g., cyber-hacking resources) to exert influence in other countries. This raises the issue of when does aggression cross the line into actual conflict, which dictates certain actions that we as an industry must then take to remain ethical and in good standing with the U.S. government. How should we as an industry handle this?
- Should we as an industry encourage globalization of defense funding? On one hand, globalization can increase profits and reduce risk. If this last year has shown anything, it's that supply chains can be crazy, and by having international sales, companies like Raytheon or Lockheed Martin can avoid those logistical issues. On the other hand, increasing our international defense sales can come with tricky considerations, especially when selling to potential geopolitical rivals or countries that are facing potential civil instability.
- What is the right policy regarding arms sales blacklisting? Is there a right policy or should every case be considered on a case by case basis.
- Certain groups have expressed concern regarding the supposed failure of checks and balances regarding the president's military control. Should there be more restraints on the head of government or would such efforts hinder the ability for the government to intervene militarily when needed, especially in a moment of crisis?

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The new frontier of space: R&D, industry collaboration, and working with countries to promote a new space age

Background

October 4th, 1957 was the launch of the former Soviet Union's Sputnik I, the first-ever satellite to successfully launch and achieve low Earth orbit. Sputnik's launch catalyzed the Space Race, a decades-long period of competitive innovation in space flight between the United States and the Soviet Union.

Since then, humanity has achieved incredible feats in spaceflight. Numerous humans from various nations have since stepped foot on the moon. The International Space Station maintains a continuous human presence in space for the advancement of space research and humanity as a whole. And even private organizations (e.g. Lockheed Martin, Boeing, SpaceX) dedicate resources to research to the colonization of Mars.

However, as the documentation of spaceflight research becomes more readily accessible to the scientific community at-large, new opportunities regarding the weaponization of outer space are becoming increasingly tenable for entities that wish to pursue it.

Current Situation

In recent years, the exploration of space has become more and more accessible, including to non-state actors like with Elon Musk's SpaceX and Jeffrey Bezos' Blue Origin. What this has proven is that we cannot approach the topic of space and relevant technologies in a one-dimensional lens whereby only state governments and their respective space departments are relevant. It is more important than ever that non-state organizations and private corporations as well as government officials have a voice in conversations around policy, research, and industry collaboration.

Beyond exploration, space holds special significance in science and the economy in a variety of ways. This includes the critical use of satellites and access to certain materials. Nonetheless, the benefits of the growing space sector face certain challenges. For example, as mentioned in a report by the OECD, sharing information between countries is a major challenge, noting that there is a "lack of internationally comparable economic data as well as methodological issues, such as lengthy time lags between initial investments and realized outcomes, and impacts that are difficult to quantify."¹⁰ In order to move forward towards a new space age, improved communication and cooperation between countries as well as between government and non-state actors is crucial. The Defense Leadership Forum provides a platform where such can take place.

¹⁰ <https://www.oecd.org/sti/inno/space-forum/measuring-economic-impact-space-sector.pdf>

Key Terms

- Asteroid Mining
- Planetary Resources / Deep State Industries Companies
- Space Sustainability:
 - Space Junk
 - Orbital Crowding
 - Space Security
- US Space Force
- PLA Strategic Support Force Systems Department
- French Space Command
- Iranian Space Command
- Russian Space Forces
- North American Aerospace Defense Command
- NATO Space Center
- United Nations Office for Outer Space Affairs
- Outer Space Treaty
- Agreement on the Rescue of Astronauts, the Return of Astronauts, and the return of Objects launched into Outer Space Agreement
- Convention on International Liability for Damage caused by Space Objects
- Convention on Registration of Objects Launched into Space
- Agreement Governing the Activities of States on Moon and other Celestial Bodies
- Space - Space Weapons - weapons used in outer space to attack other systems in space
- Earth-to-Space weapons (anti-satellite weapons) - weapons launched from earth's surface that attack systems in space
- Space-to-Earth weapons - any weapon in orbit around the earth, prohibited by the Outer Space Treaty

Discussion Questions

- As aerospace technology advances, we will see an increase in rocket-powered aircraft capable of exiting the Earth's stratosphere. Currently, airspaces are defined as the space

controlled by nations within the atmosphere. This means that extra-atmospherical rockets technically reside in a gray zone of ownership. How should the Defense Leadership Forum avoid any misunderstandings or escalation of conflict from this legal gray zone?

- Many of the great advances in space have taken place through government programs or through government contracts. Increasingly, we have seen a small but notable shift of rocket programs funded through private ventures without the help of government assistance. What opportunities and risks do these solely private-venture endeavors hold?
- Space as the new frontier holds many resources. For example, “Last year, NASA awarded contracts to four companies to extract small amounts of lunar regolith by 2024, effectively beginning the era of commercial space mining.”¹¹ How can we ensure the wealth is spread equitably and benefits the whole populace?
- Cybersecurity has become common lingo for our computers, homes, and even energy grids because of a rise in cyberattacks. Space will likely become the next frontier for cyberattacks. In one particularly ominous foreshadowing, the recently-created U.S. Space Force uncovered a Raspberry Pi stealing sensitive information from their satellite network. It had remained undiscovered for 10 months. How can we best protect our future space revolution from hackers, espionage, and general cyber-aggression before we see the next Stuxnet crisis?

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