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#### Space Commercialization drives Tech Innovation in the Status Quo – it provides a unique impetus.

Hampson 17 Joshua Hampson 1-25-2017 “The Future of Space Commercialization” <https://republicans-science.house.gov/sites/republicans.science.house.gov/files/documents/TheFutureofSpaceCommercializationFinal.pdf> (Security Studies Fellow at the Niskanen Center)//Elmer

The size of the space economy is far larger than many may think. In 2015 alone, the global market amounted to $323 billion. Commercial infrastructure and systems accounted for 76 percent of that 9 total, with satellite television the largest subsection at $95 billion. The global space launch market’s 10 11 share of that total came in at $6 billion dollars. It can be hard to disaggregate how space benefits 12 particular national economies, but in 2009 (the last available report), the Federal Aviation Administration (FAA) estimated that commercial space transportation and enabled industries generated $208.3 billion in economic activity in the United States alone. Space is not just about 13 satellite television and global transportation; while not commercial, GPS satellites also underpin personal navigation, such as smartphone GPS use, and timing data used for Internet coordination.14 Without that data, there could be problems for a range of Internet and cloud-based services.15 There is also room for growth. The FAA has noted that while the commercial launch sector has not grown dramatically in the last decade, there are indications that there is latent demand. This 16 demand may catalyze an increase in launches and growth of the wider space economy in the next decade. The Satellite Industry Association’s 2015 report highlighted that their section of the space economy outgrew both the American and global economies. The FAA anticipates that growth to 17 continue, with expectations that small payload launch will be a particular industry driver.18 In the future, emerging space industries may contribute even more the American economy. Space tourism and resource recovery—e.g., mining on planets, moons , and asteroids—in particular may become large parts of that industry. Of course, their viability rests on a range of factors, including costs, future regulation, international problems, and assumptions about technological development. However, there is increasing optimism in these areas of economic production. But the space economy is not just about what happens in orbit, or how that alters life on the ground. The growth of this economy can also contribute to new innovations across all walks of life. Technological Innovation Innovation is generally hard to predict; some new technologies seem to come out of nowhere and others only take off when paired with a new application. It is difficult to predict the future, but it is reasonable to expect that a growing space economy would open opportunities for technological and organizational innovation. In terms of technology, the difficult environment of outer space helps incentivize progress along the margins. Because each object launched into orbit costs a significant amount of money—at the moment between $27,000 and $43,000 per pound, though that will likely drop in the future —each 19 reduction in payload size saves money or means more can be launched. At the same time, the ability to fit more capability into a smaller satellite opens outer space to actors that previously were priced out of the market. This is one of the reasons why small, affordable satellites are increasingly pursued by companies or organizations that cannot afford to launch larger traditional satellites. These small 20 satellites also provide non-traditional launchers, such as engineering students or prototypers, the opportunity to learn about satellite production and test new technologies before working on a full-sized satellite. That expansion of developers, experimenters, and testers cannot but help increase innovation opportunities. Technological developments from outer space have been applied to terrestrial life since the earliest days of space exploration. The National Aeronautics and Space Administration (NASA) maintains a website that lists technologies that have spun off from such research projects. Lightweight 21 nanotubes, useful in protecting astronauts during space exploration, are now being tested for applications in emergency response gear and electrical insulation. The need for certainty about the resiliency of materials used in space led to the development of an analytics tool useful across a range of industries. Temper foam, the material used in memory-foam pillows, was developed for NASA for seat covers. As more companies pursue their own space goals, more innovations will likely come from the commercial sector. Outer space is not just a catalyst for technological development. Satellite constellations and their unique line-of-sight vantage point can provide new perspectives to old industries. Deploying satellites into low-Earth orbit, as Facebook wants to do, can connect large, previously-unreached swathes of 22 humanity to the Internet. Remote sensing technology could change how whole industries operate, such as crop monitoring, herd management, crisis response, and land evaluation, among others. 23 While satellites cannot provide all essential information for some of these industries, they can fill in some useful gaps and work as part of a wider system of tools. Space infrastructure, in helping to change how people connect and perceive Earth, could help spark innovations on the ground as well. These innovations, changes to global networks, and new opportunities could lead to wider economic growth.

#### Strong Innovation solves Extinction.

Matthews 18 Dylan Matthews 10-26-2018 “How to help people millions of years from now” <https://www.vox.com/future-perfect/2018/10/26/18023366/far-future-effective-altruism-existential-risk-doing-good> (Co-founder of Vox, citing Nick Beckstead @ Rutgers University)//Re-cut by Elmer

If you care about improving human lives, you should overwhelmingly care about those quadrillions of lives rather than the comparatively small number of people alive today. The 7.6 billion people now living, after all, amount to less than 0.003 percent of the population that will live in the future. It’s reasonable to suggest that those quadrillions of future people have, accordingly, hundreds of thousands of times more moral weight than those of us living here today do. That’s the basic argument behind Nick Beckstead’s 2013 Rutgers philosophy dissertation, “On the overwhelming importance of shaping the far future.” It’s a glorious mindfuck of a thesis, not least because Beckstead shows very convincingly that this is a conclusion any plausible moral view would reach. It’s not just something that weird utilitarians have to deal with. And Beckstead, to his considerable credit, walks the walk on this. He works at the Open Philanthropy Project on grants relating to the far future and runs a charitable fund for donors who want to prioritize the far future. And arguments from him and others have turned “long-termism” into a very vibrant, important strand of the effective altruism community. But what does prioritizing the far future even mean? The most literal thing it could mean is preventing human extinction, to ensure that the species persists as long as possible. For the long-term-focused effective altruists I know, that typically means identifying concrete threats to humanity’s continued existence — like unfriendly artificial intelligence, or a pandemic, or global warming/out of control geoengineering — and engaging in activities to prevent that specific eventuality. But in a set of slides he made in 2013, Beckstead makes a compelling case that while that’s certainly part of what caring about the far future entails, approaches that address specific threats to humanity (which he calls “targeted” approaches to the far future) have to complement “broad” approaches, where instead of trying to predict what’s going to kill us all, you just generally try to keep civilization running as best it can, so that it is, as a whole, well-equipped to deal with potential extinction events in the future, not just in 2030 or 2040 but in 3500 or 95000 or even 37 million. In other words, caring about the far future doesn’t mean just paying attention to low-probability risks of total annihilation; it also means acting on pressing needs now. For example: We’re going to be better prepared to prevent extinction from AI or a supervirus or global warming if society as a whole makes a lot of scientific progress. And a significant bottleneck there is that the vast majority of humanity doesn’t get high-enough-quality education to engage in scientific research, if they want to, which reduces the **odds that we have enough trained scientists to come up with the breakthroughs** we need as a civilization to survive and thrive. So maybe one of the best things we can do for the far future is to improve school systems — here and now — to harness the group economist Raj Chetty calls “lost Einsteins” (potential innovators who are thwarted by poverty and inequality in rich countries) and, more importantly, the hundreds of millions of kids in developing countries dealing with even worse education systems than those in depressed communities in the rich world. What if living ethically for the far future means living ethically now? Beckstead mentions some other broad, or very broad, ideas (these are all his descriptions): Help make computers faster so that people everywhere can work more efficiently Change intellectual property law so that technological innovation can happen more quickly Advocate for open borders so that people from poorly governed countries can move to better-governed countries and be more productive Meta-research: improve incentives and norms in academic work to better advance human knowledge Improve education Advocate for political party X to make future people have values more like political party X ”If you look at these areas (economic growth and technological progress, access to information, individual capability, social coordination, motives) a lot of everyday good works contribute,” Beckstead writes. “An implication of this is that a lot of everyday good works are good from a broad perspective, even though hardly anyone thinks explicitly in terms of far future standards.” Look at those examples again: It’s just a list of what normal altruistically motivated people, not effective altruism folks, generally do. Charities in the US love talking about the lost opportunities for innovation that poverty creates. Lots of smart people who want to make a difference become scientists, or try to work as teachers or on improving education policy, and lord knows there are plenty of people who become political party operatives out of a conviction that the moral consequences of the party’s platform are good. All of which is to say: Maybe effective altruists aren’t that special, or at least maybe we don’t have access to that many specific and weird conclusions about how best to help the world. If the far future is what matters, and generally trying to make the world work better is among the best ways to help the far future, then effective altruism just becomes plain ol’ do-goodery.

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#### CP: For States should all space commercial space stations that replace the International Space Station, States should establish regulatory regimes that mandate

#### international cooperation and intergovernmental agreements

#### four memoranda of understanding between other cooperating space agencies

#### bilateral implementing arrangements between space agencies

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#### [States] should enter into a prior and binding consultation with the North Atlantic Treaty Organization over a proposal to declare the appropriation of outer space by private entities via commercial space stations that replace the International Space Station unjust. [States] will support the proposal and adopt the results of consultation.

#### NATO says yes – appropriation is bad, and NATO is uniquely defensive and cooperative with I-Law.

Peace In Space 21 Peace In Space. March 25, 2021. “NATO Secretary General Stoltenberg: no weapons In space” [NATO Secretary General Stoltenberg: no weapons In space – Peace In Space](https://peaceinspace.com/2019/12/nato-secretary-general-stoltenberg-no-weapons-in-space/) Accessed 12-9 // gord0

In a November 20 speech to [NATO ministers in Brussels](https://peaceinspace.com/2019/12/10/nato-foreign-ministers-officially-recognise-space-as-an-operational-domain/), NATO Secretary General Jens Stoltenberg stated that while the organization’s security presence in space is vital, “NATO has no intention to put weapons in space — we are a defensive alliance.”

NATO members will continue to use space for observation and surveillance purposes, but will remain fully in line with international law, he said. “This approach can allow NATO planners to make requests for allies to provide capabilities and services, such as hours of satellite communications.”

“We are proud of NATO’s historic decision to recognise space as an operational domain, alongside air, land, sea and cyber. Space is part of our daily lives. It is also essential to the Alliance’s deterrence and defence, from navigation to intelligence to missile detection.” — [NATO Secretary General Jens Stoltenberg](https://www.nato.int/cps/en/natohq/who_is_who_49999.htm)

Observation and surveillance purposes

Stoltenberg further explained that NATO’s coordinated approach involves three strategic issues: relations with Russia, the rise of China, and arms control. “Making space an operational domain will help us ensure that all aspects are taken into account to ensure the success of our missions.”

NATO members will continue to use space for observation and surveillance purposes, but will remain “fully in line with international law,” he added. This approach “can allow NATO planners to make requests for allies to provide capabilities and services, such as hours of satellite communications.”

Stoltenberg noted that NATO keeps at the leading edge of technology with a “one billion dollar investment in eyes in the sky, AWACS surveillance aircraft. This modernization will ensure the fleet’s service to 2035 and provide the best possible intelligence, surveillance and reconnaissance.”

#### Consultation over space strengthens NATO legitimacy and operations – communication, positioning, missile warning and counter space ops

Louisa Remuss 10 Nina-Louisa Remuss holds a M. Litt, in International Security Studies from the University of St. Andrews and a B.A. in European Studies from the University of Maastricht. October, 2010. “NATO and Space: Why is Space Relevant for NATO?” [NATO and Space: Why is Space Relevant for NATO? (ethz.ch)](https://www.files.ethz.ch/isn/124749/ESPI_Perspectives_40.pdf) Page 2-3 Accessed 12-9 // gord0

The increasing reliance on space applications and the emerging global challenges and threats, place new demands on space capabilities.5 Given today’s multi-polar world, security providers face a very different security and threat environment than during the Cold War. At the same time, during the Cold War, the U.S. and the Soviet Union had agreed not to attack each other’s space assets, which provided for a certain degree of transparency given that both were the sole actors in space. Characterizing conflicts as fundamentally unpredictable, NATO’s Allied Joint Doctrine stresses the added value of using technology. Accordingly, NATO’s operations are already dependent on space applications as NATO comes to rely on it for global situational awareness, decision superiority and precision engagement. In spite of NATO’s dependence on space operations, the Alliance is still missing a holistic approach to the subject. Space applications can be understood as force multipliers or enablers. The following section will rely on the EU’s experiences and will give four examples of areas where this is the case: in external security missions, in damage and impact assessment during post-crisis management, in the fight against piracy and in providing internal security, i.e. against nontraditional threats such as terrorism, natural disasters etc. In External Security Missions European Union external security missions, such as the EU Military Crisis Management Operations EUFOR Chad / RCA (from French: Central African Republic) rely on satellites for secure communications between the Operations Headquarters (OHQ) and units deployed on the field, as well as on satellite imagery for mapping in support of their mission, especially considering the local absence of terrestrial communications infrastructure and the large dimensions of the theatre of operations. NATO is relying on space applications to support its ISAF operations in Afghanistan. These range from communications, position, navigation and timing, environmental sensing, missile warning, personnel recover and infrared remote sensing, to counter space operations. Space capabilities are however not fully integrated and utilised as a result of, first the lack of NATO strategy to space applications, second the resulting limited exposure of space capabilities prior to the deployment and third the limited number of personnel among the ISAF staff with space expertise.

#### NATO is a force multiplier – solves a slew of existential threats

Burns 18 Nicholas Burns 7-11-2018 “What America Gets Out of NATO” <https://www.nytimes.com/2018/07/11/opinion/what-america-gets-out-of-nato.html> (former under-secretary of state and ambassador to NATO and teaches diplomacy and international relations at Harvard)//Elmer

None of this, of course, is likely to disturb Mr. Trump, who remains steadfast in his belief that whatever benefits the United States gained from the trans-Atlantic alliance in the past, the country no longer profits. But he’s wrong — there are compelling reasons that NATO in particular will be a distinct advantage for America’s security far into the future. First, NATO’s formidable conventional and nuclear forces are the most effective way to **protect North America and Europe** — the **heart of the democratic world** — from attack. Threats to our collective security have not vanished in the 21st century. Mr. Putin remains a determined adversary preying on Eastern Europe and American elections. **NATO is a force multiplier**: The United States has allies who will stand by us, while Russia has none. And while it’s true that most of America’s NATO allies need to increase their defense spending under the treaty, they’re not freeloaders: The United States has **relied on NATO allies to strike back against Al Qaeda in Afghanistan and the Islamic State in the Middle East**. European troops have replaced American soldiers in peacekeeping missions in Bosnia and contribute the large majority in Kosovo. Our NATO allies are also getting better about contributing their fair share. They have increased their defense spending by a total of more than $87 billion since Mr. Putin annexed Crimea in 2014. Fourteen more allies will reach NATO’s military spending target — 2 percent of gross domestic product — by 2024. Mr. Trump would be smart to claim credit for this at this week’s summit. A second reason for maintaining the trans-Atlantic alliance is America’s economic future. The European Union is our country’s largest trade partner, and its largest investor. The United States and the European Union are the world’s two largest economies, and can steer global trade to their advantage if they stick together. More than four million Americans work for European companies in the United States. Forty-five of the 50 states export more to Europe than to China. Mr. Trump is right that the two sides are also economic competitors, and trade disputes are inevitable. His predecessors kept this tension in balance lest there be damaging consequences for American businesses, workers and farmers — a good reminder for Mr. Trump, whose ill-conceived trade war with Canada and Europe risks harming the American economy. Third, future American leaders will find Europe is our most capable and willing partner in tackling the biggest threats to global security: **climate change; drug and cybercrime cartels; terrorism; pandemics and mass migration from Africa and the Middle East**. And America’s **NATO allies will continue to be indispensable in safeguarding democracy** and freedom, under assault by Russia and China.

### Space Stations

#### Uncontrollable arms race is inevitable – Russian ASATs now despite the ISS

#### Space exploration fails without private sector leadership.

WAMU 20 [(interviewing Ariel Ekblaw, founder and lead of MIT Media Lab’s Space Exploration Initiative and Charles Bolden, NASA administrator from 2009-2017) “How Private Companies Are Changing The Future Of Space Exploration,” February 6, 2020, https://wamu.org/story/20/02/06/how-private-companies-are-changing-the-future-of-space-exploration/] TDI

How Private Companies Are Changing The Future Of Space Exploration LISTEN SpaceX founder Elon Musk addresses the media alongside NASA Administrator Jim Bridenstine, and astronauts Doug Hurley and Bob Behnken, during a press conference announcing new developments of the Crew Dragon reusable spacecraft, at SpaceX headquarters in Hawthorne, California on October 10, 2019. (Philip Pacheco / AFP) Private companies like SpaceX are testing vehicles for manned space missions. We’ll peer out into the near future and next steps in human space exploration. Guests Ariel Ekblaw, founder and lead of MIT Media Lab’s Space Exploration Initiative. (@ariel\_ekblaw) Charles Bolden, NASA administrator from 2009-2017, and a former astronaut and Marine Corps general. (@cboldenjr) Interview Highlights American astronaut Christina Koch broke the record for the longest-ever space flight by a woman today. Where is human space exploration going next? Ariel Ekblaw: “It’s a huge milestone. Part of her story around the spacesuit, and the sizing of the spacesuits, and the all-female spacewalk is something that we pay a lot of attention to at our group at M.I.T. And then being able to be in space for that length of time provides an invaluable sense of knowledge of what is the human lived experience of space. “How might we better design for her comfort to delight her in space? To now, thanks to standing on the shoulders of groups like NASA and Charlie’s work, think about not just a survivalist mode for space exploration, but what are the artifacts, and the tools, and the experiences that we could design for Christine in the future? Given her experience of this 300-plus-day journey and stay to really delight her for her experience in space exploration. And in the future, scale that to space tourists and others besides astronauts.” On how close we are to regular space tourism Ariel Ekblaw: “I would say we’re both close — we’re dangerously close — and yet so far away. So companies like Blue Origin and Virgin Galactic are racing to be able to send some of the first space tourists into low Earth orbit on some of their crafts, in either this year, or upcoming years. With Axiom and the announcement from NASA about the first commercial space station to be attached to the International Space Station. “We’re beginning to build up that infrastructure that could support real space tourism. There are still, as I’m sure Charlie can also speak to, large unanswered questions about how do you prepare someone if not off the street — A space enthusiast — for the experience of space when they’re not necessarily going to have the same in-depth, extensive training as a NASA astronaut? How do we keep them safe? How do we handle mental health? How do we prepare them for both the excitement and the responsibility that they might have as a member of a crew in a resource constrained environment?” On whether people who aren’t trained as astronauts should be able to go into space Charles Bolden: “Yes, without a doubt. … They’ve got to have some training. But I would say it depends on what the flight is going to be. I haven’t had a chance to talk to Beth Moses from Virgin Galactic. But Beth would be — she’s not a normal person off the street, because she’s the astronaut training officer at Blue Origin. But Beth had an opportunity to fly, and she didn’t go through years of training. You know, I think there’s some fundamental things that you teach someone about mobility. And, ‘don’t touch that.’ And you let them go.” On whether it’s possible to go to Mars without commercial interest involved Ariel Ekblaw: “I think it’s critical to have both. As Charlie and Dava Newman — another colleague of mine — have shown: the path from moon to Mars is going to be a public-private partnership path. And we need the capability that private brings and the inspiration that NASA and that the governments can still bring to the task.” On what it’s like to go to space Charles Bolden: “It’s much more spectacular than the pictures portray. We have great cameras nowadays. They’re better and better than they ever were before, but they just cannot capture what the human eye sees. God’s camera is pretty awesome. The ability to play around with Newton’s law, the fact that, you know, because gravity is overcome by the speed at which you’re going around the planet allows us to seem like we’re floating. And that’s a lot of fun to get to play with. You know, a body at rest stays at rest, a body in motion stays in motion. And for every action, there’s an equal and opposite reaction. It makes all that stuff that you learned in middle school, if you learned it, or if you avoided it, it brings it to life for you. So that’s incredible.” From The Reading List Wall Street Journal: “Space Is Poised for Explosive Growth. Let’s Get It Right.” — “In the 19th century, urban planners wrangled the chaotic metropolises of Paris and New York into “planned cities,” turning warrens of streets into orderly grids, building sewage systems and transit lines, and allowing for new types of architecture, such as apartment buildings. Today, we face a similar inflection point in developing the nearest reaches of space. “The next decade is set to bring explosive commercial growth and more private industry players to low-earth orbit, the area spanning 100 to 1,240 miles above the planet’s surface. SpaceX has proposed a satellite-based internet, and Planet is growing its fleet of Earth-imaging satellites. NASA plans a transition towards commercial management of the international space station. Several startups are developing low-earth orbit advertisements—logos or other designs, visible in the night sky, made from tiny, reflective satellites. Entrepreneurs are making plans for space hotels. “Before we let rampant development go unchecked, we should consider how these efforts might conflict with or complement each other. We still have the chance to intentionally design humanity’s first ‘planned orbit.’” MIT Media Lab: “Democratizing Access to Space” — “The Space Exploration Initiative’s founding mission is to rigorously, vigorously build out the technologies of our sci-fi space future while keeping our innovations and team as open and accessible as possible. When we say we’re ‘democratizing access to space exploration,’ what do we mean? In the context of our blue sky goal — to realize an inclusive, impactful — we approach democratization in four core ways. We are: “1. Democratizing access by inviting and uniting new disciplines in our creative practice] “2. Democratizing access by designing space tools, products, and experiences for all of us, not just the pinnacle of human talent embodied by astronauts. “3. Democratizing access by developing hands-on, widely accessible opportunities to shape the technologies of our space future. “4. Democratizing access through the celebration of new narratives through which we can tell the story of Space Exploration, writ large.” The Verge: “This was the decade the commercial spaceflight industry leapt forward” — “Two years into the decade, on May 25th, 2012, a small teardrop-shaped capsule arrived at the International Space Station, packed with cargo and supplies for the crew living on board. Its resupply mission at the ISS wasn’t remarkable, but the vehicle itself was unique: it was a Dragon cargo capsule, owned and operated by a private company called SpaceX. “Before 2012, only vehicles operated by governments had ever visited the ISS. The Dragon was the first commercial vehicle to dock with the station. The milestone was a crowning achievement for the commercial industry, which has permanently altered the spaceflight sector over the last 10 years. “This decade, the space industry has seen a shift in the way it does business, with newer players looking to capitalize on different markets and more ambitious projects. The result has been an explosion of growth within the commercial sector. It’s allowing for easier access to space than ever before, with both positive and negative results. Such growth is providing the commercial space industry with lots of momentum coming into the 2020s, but it’s unclear if this pace is something that can be kept up.” Axios: “NASA’s murky commercial space future” — “NASA’s plans to create a robust economy in low-Earth orbit where private spaceflight companies can flourish could eventually leave the agency’s astronauts stranded on Earth with nowhere to go. “Why it matters: NASA hopes to play a lead role in developing a private spaceflight economy, including private sector astronauts. The agency sees this as a way to free it up to focus on farther afield goals like bringing humans back to the Moon and, eventually, to Mars.

#### Space commercialization is a strong constraint on conflict – solves space war

Wendy N. Whitman **Cobb 20**, is currently an associate professor of strategy and security studies at the US Air Force's School of Advanced Air and Space Studies, 7-21-2020, "Privatizing Peace: How Commerce Can Reduce Conflict in Space," Routledge & CRC Press, <https://www.routledge.com/Privatizing-Peace-How-Commerce-Can-Reduce-Conflict-in-Space/Cobb/p/book/9780367337834> // AAli

By the end of the twentieth century, scholars zeroed in on the democratic peace theory which attempts to explain why democracies do not go to war with other democracies and why, in some analyses, they seem to be more prone to peace in general than non-democracies. Similar to the golden arches, what is it about democracy that seems to induce such peacefulness? Academics have proposed everything from the nature of mediating institutions to the restraint of public opinion, to trade relations. While these variations will be explored further in Chapter 3, of interest here are the versions that focus explicitly on trade, commercial ties, and capitalism. Along these lines, Erik Gartzke argues, "peace ensues when states lack differences worthy of costly conflict."31 If the costs of conflict are too high, then states should be more unlikely to engage in it. To this end, economic globalization can provide the means through which costs are raised. “The integration of world markets not only facilitates commerce, but also creates new interests inimical to war. Financial interdependence ensures that damage inflicted on one economy travels through the global system, afflicting even aggressors."32 Focusing his analysis primarily on the influence of capitalism, Gartzke's findings suggest that states with markets more closely tied to the global economy are far less likely to experience a militarized dispute.

In thinking about the space environment today, there are obvious principles of capitalism at work. However, China, a major spacefaring state that has been making capitalist reforms, arguably remains far from a true capitalist country. This is especially true in their space industry which is heavily subsidized by the state and almost wholly integrated with China's military.34 Many other states continue to subsidize space activities heavily as well. A better approach through which to examine conflict in space is presented by an offshoot of the capitalist peace which is termed the commercial peace. The commercial peace thesis emphasizes the role of trade and the connections made through it to explain a lack of conflict. Han Dorussen and Hugh Ward write:

Trade is important not only because it creates an economic interest in peace but also because trade generates 'connections' between people that promote communication and understanding.... Based on these ideas, the flow of goods between countries creates a network of ties and communication links. If two countries are more embedded in this network, their relations should be more

peaceful 35

Given the interconnectedness of the global economy to space-based assets, a version of the commercial peace thesis can be used to argue that the chance of conflict in space is less than is commonly understood or recognized precisely because of the extent to which the global economy has become dependent on space-based assets.

To understand this argument, consider a scenario in which Russia, in preparation for a new assault on Eastern Europe, attacks a key US military satellite with the purpose of disrupting and disabling military communications in Europe. This action would conceivably enable the Russians to undertake their attack under more favorable conditions and prevent a quicker response from America and its allies. However, if the satellite was attacked via an ASAT that kinetically destroyed the US satellite, the debris cloud created from the attack could have disastrous consequences beyond military communications Much like the movie Gravity, the debris cloud could cause a chain reaction, hitting and ~~disabling~~ dismantling other satellites that would in turn disrupt civilian communications, business transactions, and perhaps even Russian military satellites. The economic effects of lost satellites would not be restricted to one country alone; the global economic consequences in terms of lost property (satellites), lost transactions, and financial havoc would echo throughout the world, including in Russia itself. Finally, the attack on one satellite could even ultimately endanger the ISS and its inhabitants, several of which are Russians. Destruction of the ISS would negate billions of dollars in investment from not just Russia, but other countries that have participated in it including Japan, Italy, and Canada. Therefore, an attack on a US military satellite would not just be an attack on one but an attack on all.

While the previous scenario highlights several reasons why it would not be in Russia's best interest to attack a US satellite, this book argues that the economic argument is both the strongest and the most restraining especially as space becomes more congested, competitive, contested, and commercialized. The emergence of private space companies enhances this argument. "In the commercial sector, companies need

reliability and legal enforcement mechanisms if they are going to operate profitably in a shared environment."36 In order to foster the growing area of space commercialization, companies must be assured that the activities they undertake in space will be protected in some way or, at a minimum, allowed to proceed to the extent where they can reap the profit. This could be done through international organizations that would provide some sort of space traffic control, but the likelihood of a major international breakthrough on rules regarding space is unlikely in the near term. Therefore, actors must rely on the protections afforded them by an increasingly globalized economy that is ever more dependent on space-based assets.

### Heg Good

#### Unipolarity is unsustainable—COVID, widespread support for multilateralism, and Trump prove. China will welcome multipolarity, but continued American pursuit guarantees lash-out and conflict.

Byun 7/7 [See-Won Byun, San Fransisco State University, See-Won Byun’s research and teaching focus on the politics of China, international relations of East Asia, and international relations theory. Her research examines China’s political economy and global integration, interdependence and security in Asia, and national identity politics in Asian relations. Before joining SF State, she was a Visiting Assistant Professor of Politics at Bates College. She received a Ph.D. in political science and M.A. in international affairs from The George Washington University, M.A. in international studies from Yonsei University and B.A. in economics from Brown University.) “Chinese Views of Hegemony and Multilateralism in the Biden Era” THE ASAN FORUM, November-December 2021, Open Forum, 7/7/2021] RM

Multilateralism was the driving theme of Xi Jinping’s 2021 World Economic Forum (WEF) speech in January, advancing his message there four years ago supporting economic globalization. Addressing post-pandemic global challenges, Xi insisted that “multilateralism should not be used as pretext for acts of unilateralism.” In addition, “differences in history, culture and social system should not be an excuse for antagonism or confrontation, but rather an incentive for cooperation.”1 Emphasizing a universal rules-based global governance system, Xi told Boao Forum partners in April, “what we need in today’s world is justice, not hegemony.” He reminded neighbors, “however strong it may grow, China will never seek hegemony, expansion, or a sphere of influence.”2 The Chinese state media contextualized President Joe Biden’s first overseas visit to Europe in June: “**the old international order in the post-World War II era led by the US has become increasingly unsustainable** and a new world order is far from being established, with the global system shifting from unipolar to multipolar.”3 **How do Chinese perceptions of the changing world order inform our understanding of Beijing’s external orientation in the Biden era?**

The Biden leadership extends Washington’s policy trajectory by identifying “a more assertive and authoritarian China” as “the only competitor potentially capable of combining its economic, diplomatic, military and technological power to mount a sustained challenge to a stable and open international system.”4 As Chinese observers point out, despite some openings for cooperation, Biden’s China policy leans toward “strategic competition and even confrontation.”5 Rejecting Trump’s unilateralism and explicit attacks on the Chinese Communist Party (CCP), Biden has chosen alternative tools of multilateralism and engagement with allies for the continued goal of constraining China’s influence. The first US-China talks in March displayed mounting frictions over human rights, Taiwan, cybersecurity, and “economic coercion toward our allies” according to Tony Blinken.6 The US Senate’s 2021 Strategic Competition Act in April signaled bipartisan consensus on a more aggressive China strategy,7 reinforcing debate on China’s response to a changing “hegemonic order.”8

This article assesses Chinese interpretations of the international order in the Biden era, focusing on views of hegemony and multilateralism. It first places these debates within China’s post-Cold War international relations discourse based on Wang Jisi’s review of Chinese worldviews in the 1990s and more recent conceptualization of “two orders” framing US-China relations. Second, it assesses current narratives on hegemony and multilateralism using Chinese academic publications in the first half of 2021. Third, it identifies how these views manifest in US-China interactions under the Biden administration. The concluding section considers prospects for Beijing and Washington’s respective agendas for global engagement.

Views of the Post-Cold War International Order

Conventional structural perspectives frame mainstream Chinese views of the “international order” (国际秩序), as “the most global, long-term, and strategic issue in world politics.”9 Official narratives reject hegemony and favor multilateralism in line with a post-Cold War shift to a multipolar order. In Xi’s post-pandemic world, “there is no fundamental change in the trend toward a multi-polar world; **economic globalization is showing renewed resilience; and the call for upholding multilateralism and enhancing communication and coordination has grown stronger.”**10 As Xi defined it in January, “multilateralism is about having international affairs addressed through consultation and the future of the world decided by everyone working together.”11 Interpretations of hegemony in this changing structural context have expanded from a primarily military focus to broader forms of expansionist behavior for regional or global dominance. From a Chinese official’s perspective, US “hegemonism” means “not occupying land but promoting its own system and ideology, in an attempt to meet its own national interests through domination of the world.”12 According to Yang Jiechi, **multilateralism today prevails over recent pressures of “unilateralism and bullying,” “populism and de-globalization,” and “ideological confrontation**.” In China’s pursuit of multilateral diplomacy, “we oppose hegemony and power politics, and oppose any practice of unilateralism in the name of multilateralism.”13

Despite such official claims, China’s multilateralism remains described as “strategic” and “opportunistic.”14 Yang Jiechi made clear in February, “we will resolutely defend our national interests and dignity at multilateral fora when our core and major interests are at stake.”15 Skeptics view China’s multilateral diplomacy as part of counter-hegemonic strategies.16 The “new Chinese multilateralism” that emerged by the 2000s “has to be understood with its combination with multipolarism, the two being used together as a double-track strategy to deal with the United States…and to shape China’s desired future structure of world politics.”17 Xi’s push for global governance reform “is directly linked to counterbalancing the dominance of a liberal-based international order.”18 Especially at the regional level, China-led multilateralism “is an interim arrangement in China’s drive to acquire regional and global dominance.”19

Hegemony and Multipolar Order

Chinese assessments of hegemony and multilateralism have evolved with perceptions of the changing world order. **Studies of the post-Cold War order identify a long-term shift to “multipolarization” and persistent threat of “hegemonism,” with a growing emphasis on sovereignty and non-interference in internal affairs.20 As Jiang Zemin indicated in 1997, while “the pattern of the world is moving in the direction of multipolarization,” “hegemonism and power politics continue to be the main source of threat to world peace and stability**.”21 Academic interpretations of such trends vary in terms of the dimensions and distribution of global power. But this multipolar transition is commonly linked to perceived changes in US power since the 1990s, when “one superpower, several great powers” characterized the international structure according to Chinese official assessments. Views of multipolarization not only assume more global resistance to US demands, but also disagreement within the West favoring alignment with Chinese worldviews.

From a historical cyclical perspective, power, interests, and rules shape the international order’s formation, involving “long-term competition and short-term compromise in the pursuit of common values.”22 **Uncertainty over the postwar liberal international order’s future has grown with the clear fragmentation of Western power.** China’s position in the existing order is viewed through the lens of US hegemony as the “peak form of Western historical hegemony.”23 US political elites advanced the “hegemonic” Bretton Woods system representing their preferences, successfully managing a domestic isolationist tradition and foreign resistance. **With the decline in US relative power, US policy shifted from “accepting” China into this dominant order to “rejecting” it.24 In particular, the United States can no longer accept a rising China as a strategic partner or member of the international system since “democratic discipline” has failed there**.25 China’s market transition from 1978 drove both US-China conciliation and eventual discord as China advanced its own economic and political agenda.

“Two Orders” in US-China Relations

Views of US hegemony have varied with shifts in US-China relations since the 1972 Shanghai Communique, which promised that “neither should seek hegemony in the Asia-Pacific region and each is opposed to efforts by any other country or group of countries to establish such hegemony.”26 While Chinese concerns in the 1990s centered on external threats to Taiwan, domestic political stability, and ethnic minority regions, the scope of contention now extends to economic and technological competition. In addition, the transition from Deng’s “keeping a low profile” principle to Xi’s “striving for achievement” shifts China’s external focus from primarily economic gains to political support, raising questions about the normative dimensions of Chinese grand strategy.27

US-China debates in an evolving world order are primarily about rulemaking. “Two orders” form Wang Jisi’s view of current US-China relations, including the CCP-led domestic order challenged by the United States, and the US-led international order challenged by China. With increased interdependence, the United States frowns on the CCP leadership’s rulemaking at home not just for ideological reasons, but more importantly for the implications for US material interests. Conversely, US rulemaking at the global level threatens Chinese interests. **The US quest to “promote global democracy” defies China’s insistence on non-interference and the “democratization of international relations” granting the developing “global majority” a bigger voice**.28 Yang Jiechi told Blinken in March, “it is important for the United States to change its own image and to stop advancing its own democracy in the rest of the world.”29

As Wang Jisi argues, “in Sino-US competition and cooperation today, almost everything is connected to the issue of rules.”30 This issue will be the biggest point of future contention, not because the United States fears being displaced by China economically, but because “they are concerned about how they will manage once they have been overtaken.”31 As Wang asked in 1997, “what will China do in global and regional affairs when its international status is enhanced, economic growth sustained, military capabilities improved, and political stability ensured?”32 Current assessments of hegemony and multilateralism offer tentative answers.

Current Views of Hegemony and Multilateralism

A general decline in Chinese academic interest in hegemony over the past two decades has accompanied a growth in interest in multilateralism, at a notably faster rate since 2016. Journal articles with the keyword “hegemonism” (霸权主义) fell in volume by 83 percent in 2000-2016, and became outnumbered by those with “multilateralism” (多边主义) from 2005 during the Hu Jintao administration.33 In both cases, the number of articles more than doubled in 2016-2019. But in 2019-2020, studies on hegemonism declined by 20 percent while those on multilateralism grew by another 49 percent. **While the multilateralism literature amounted to 10 percent of hegemonism studies in 2000 by publication volume, by 2020 it was almost five times greater.**

A perceived structural shift to a multipolarity contextualizes these trends. From the perspective of China’s international relations theorists like Qin Yaqing, one of the biggest changes in the past century is the end of not just US global hegemony but also hegemony itself as a world order. The current transition to a more pluralistic world of “inclusive multilateralism” points to “a multipolar power structure, multilevel institutional arrangements, and multidimensional ideas**.**”34 An alternative “one world, two systems” bipolar order lacks the material and institutional conditions for its formation, as well as US and Chinese support. In this changing external environment, **China’s participation in global governance has progressed in four stages since the PRC’s founding in 1949: 1) “anti-hegemonic governance” under Mao’s revolutionary diplomacy, 2) “active integration” after reform and opening, 3) “constructive participation,” and 4) the current phase of proposing “Chinese solutions.”35 As Chen Zhimin and Zhang Xueying indicate, China’s global role has shifted from a “revolutionary order-challenger” to a “reformist order shaper.”36 According to Yang Jiechi, Xi’s WEF speech this year embodied the need to “contribute China’s wisdom, visions and solutions.”37**

US-China power politics is a defining feature of the 21st century international order.38 Bilateral relations since diplomatic normalization in 1978 have evolved from “strategic coordination” to “strategic competition” under the Trump administration.39 **Relations have fluctuated with neoliberalism’s rise and fall in the West**. The 2008 financial crisis marked the most recent neoliberal crisis and decline in the US-China power gap, compelling new models for bilateral relations since the Obama administration.40 The competitive direction of US China policy is clear in the post-2008 trend of US economic strategy. According to Chen Yu, **bipartisan consensus emerged that “the US economic approach to China does not embed China in the hegemonic system under US leadership,” and instead facilitates** China’s rapid growth as a “revisionist” challenger to the US hegemonic order.41

**China’s international relations journals at the start of 2021 recognize a critical transition in the US-led liberal international order.** Current uncertainty surrounds a new phase of industrial and technological development, intensified major-power competition, globalization backlash, and vast repercussions of the COVID-19 pandemic**. “Unilateralism, protectionism, and hegemony” present major external threats to the international order.42 Xi Jinping’s project of national revival enters a new stage in 2021, marking the 100th anniversary of the CCP’s founding and start of China’s 14th Five Year Plan (2021-2025).**

Post-Pandemic Debates: National Strategy, Global Governance, and Regional Order

**Two shocks to the global economy in 2020 frame current academic debates: the US “global trade war” to maintain “economic hegemony” while withdrawing from multilateralism, and COVID-19**.43 As the biggest global non-traditional security shock in a century, **COVID-19 catalyzed long-term changes in international strategic relations and US global leadership, placing multilateralism and global governance in a new external setting.**44 **Under the dual impacts of global health and economic crises, “the international order’s reform and reconstruction is imminent.”45 Specifically, while the United States has become the biggest destructive force by evading its global responsibilities, China has emerged as the biggest stabilizing force by assuming such obligations in line with its capabilities.** Current uncertainties reinforce the question of whether unilateralism or multilateralism will prevail. Xi Jinping’s WEF remarks this year favoring multilateralism intensified domestic debate on China’s strategic orientation, the ideological and practical dimensions of global governance reform, and the changing East Asian regional order.46

The historical pattern of the rise of great powers points to four strategic options: 1) protective unilateralism, 2) confrontational unilateralism, 3) centralized multilateralism, and 4) spontaneous multilateralism.47 In China’s case, its distinct advantages and constraints require building centralized multilateral networks in developing regions and a “virtuous economic cycle of internal-external linkages,” as Xi’s Belt and Road Initiative (BRI) currently embodies. As National Development and Reform Commission researchers anticipate, post-pandemic uncertainties will drive China’s continued pursuit of such integration between domestic and international development.48 Other assessments are largely inward looking, proposing change in China’s development model given anti-globalization forces of trade protectionism, shrinking global industrial chains, and multilateralism’s reversal. Such proposals emphasize the expansion of domestic consumer markets, industrial investment, and indigenous technological innovation, as China’s current Five-Year Plan outlines.49

At the global level, the dispute over international rulemaking is a competition between Western and Chinese “legal discourse power,” as shown in enduring South China Sea disputes and recent human rights issues surrounding Beijing’s 2020 Hong Kong National Security Law. In the reshaping of rules, non-binding “soft law” not only has significant meaning but also drives the development of “hard law,” promoting multilateralism’s persistence.50 The debate on relative discourse power in commercial and maritime disputes has sharpened since COVID-19, focused increasingly on reconciling domestic and international legal systems.51 **According to Wang Lin, safeguarding national security requires opposing “Western legal hegemony” and a “colonialist legal mentality” in favor of “socialist law with Chinese characteristics.”52 From a cultural perspective of modernization, by promoting the expansion of individual values and decline of social justice, capitalism generates disorder in the form of great-power hegemonism.53**

As Xi Jinping warned in Davos, avoiding such a scenario requires a UN-centered global governance system “based on the rules and consensus reached among us, not on the order given by one or the few.”54 China supported the creation of the UN’s “Friends of Neutrality Group for Peace, Security, and Development” last year as a platform for “like-minded partners,”55 exemplifying its commitment to multilateralism unlike the United States. As Yang Jin argues, “contrary to insisting on neutrality, the US repeatedly interferes in internal affairs of other countries…In recent days, it has been working hard to build an anti-China coalition to contain China.” Such behavior shows that “Washington is motivated by the desire to maintain its global hegemony and interests, and implement its “America First” policy.”56

The irrelevance of Cold War-style alignments is most notable in Chinese visions of the changing regional order. East Asia’s transformation from the “hub and spoke” system of US alliances to a “multinodal” one generated a structural discrepancy between the US bilateral model and the region’s multilateral orientation.57 The alliance system’s growing ineffectiveness in responding to regional security threats underscores the need to rebuild an Asian order in line with this multipolar shift. Multilateralism’s rise is clear in the economic domain, where trade protectionism and COVID-19 accelerated the Regional Comprehensive Economic Partnership (RCEP)’s signing in November 2020. As Chinese leaders claimed, the free trade deal was the biggest “victory for multilateralism” and regional economic integration since the 1990s, and a major opening for advancing China’s domestic reforms and global development model.58

#### American pressure on China causes lash out, but current international pressure results in internal reform and prevents conflict.

Babones 21 [Salvatore Babones is a Foreign Policy columnist and an adjunct scholar at the Centre for Independent Studies in Sydney, China Is Losing Influence—and That Makes It Dangerous, Foreign Policy, 3-3-2021, Accessible Online at https://foreignpolicy.com/2021/03/03/china-losing-influence-biden-should-do-nothing/] DL 3-9-2021

Over the last two decades, China has moved from the periphery to the very center of the world’s international relations. Given that China’s economy is now more than five times as large as it was at the turn of the millennium, that transition is hardly surprising. But many of China’s new international relationships, initially hopeful, have now turned hostile. China still has some down-at-the-heel allies, such as Pakistan and North Korea, but it is increasingly isolated from the developed countries that alone can facilitate its continued economic growth.

For China, that means trouble. Its promises are no longer taken seriously, and its propaganda falls on deaf ears. Many of its Belt and Road Initiative projects have ground to a halt. Virtually no one supports its nine-dash line in the South China Sea, and Western countries have been lining up to offer immigration pathways to professionals fleeing Hong Kong after Beijing’s takeover last year. Many countries have banned China’s Huawei and ZTE from their telecommunications networks. And India, Vietnam, Taiwan, South Korea, and Japan are all modernizing their armed forces in response to potential Chinese threats.

Under these circumstances, the best thing that U.S. President Joe Biden can do to stem the rising tide of Chinese expansionism is … nothing. China’s red tide is already rolling out all on its own. Biden can afford to pursue a policy of “masterly inactivity,” relying on China’s own aggressive foreign policy to further isolate the country from the rest of the world. Instead of increasing the pressure on China, now is the time for him to lighten up a bit.

The worst thing Biden could do is put so much pressure on China that its leaders lash out because they feel they have nothing to lose. That was arguably what happened in 1941, when the United States successfully countered Japanese expansionism with military aid to China, a trade embargo, and the freezing of Japanese assets in the U.S. banking system. Japan wasn’t on the rise in 1941; it was on the wane. Bogged down in China, checked by the Soviet Union in a little-remembered conflict in Mongolia, and increasingly squeezed by U.S. economic sanctions, Japan’s leaders recklessly sought a kantai kessen (“decisive battle”) with a naval strike at Pearl Harbor. They saw no other way to forestall a long, smothering defeat.

Of course, what Japan’s leaders got instead was a decisive, blood-soaked defeat. But today, no one except the hardest of hard-liners wants to see China defeated. That kind of language makes no practical sense. Short of a world war, there is no way for anyone outside China to dislodge Chinese Communist Party leadership from its headquarters in central Beijing. A more sensible goal for the United States and its allies would be to see China return to the slow liberalization trajectory it was arguably following before President Xi Jinping took power as the party’s leader at the end of 2012. And that’s a goal that China must be convinced to choose for itself.

As long as China’s leaders remain convinced that all of their problems stem from Washington’s ill will, reform is unlikely. Today, they seem to completely buy into their own narrative that the United States is a petulant former superpower too proud to gracefully stand aside while China takes its rightful place at the top of the world. But as China finds itself at odds with more and more countries, often with no connection to U.S. pressure, its leaders may eventually get the message. Whatever the future of their relationship with the United States, the other countries of the world have their own reservations about Chinese hegemony.

Biden can afford to pursue a policy of “masterly inactivity,” relying on China’s own aggressive foreign policy to further isolate it from the rest of the world.

Australia’s fight with China over the former’s efforts to restrict foreign influence, Japan’s standoff with China over the Senkaku Islands, India’s actual battle with China in Ladakh—none of these were prompted by U.S. arrogance. Nor was the South China Sea dispute, which pits China against no fewer than five of its Southeast Asian neighbors. Beyond its immediate region, China is now also arguing with European countries over human rights, with Latin American countries over illegal fishing, and with African countries over development debts. At some point, it must dawn on China’s leadership that these problems have little or nothing to do with the United States, and everything to do with their own provocative behavior.

The most effective way the Biden administration can help drive home that message is to mind its own business. Each of these countries has its own reasons to be unhappy with China. They don’t need U.S. encouragement, and it would only muddy the waters to offer support. For all Biden’s talk of working with allies and U.S. Secretary of State Antony Blinken’s pledge to hold China “accountable for its abuses of the international system,” they should resist the temptation to try to solve other countries’ China problems. The truest love the United States can offer the world on China right now is the tough love of encouraging other countries to stand up for themselves.

Biden shouldn’t try to out-Trump former President Donald Trump by showing he is even tougher on China. If Biden really wants to differentiate his China policy, he should sit back and let history take its course. While keeping sensible restrictions on Chinese access to U.S. advanced technologies, he should consider pulling back in areas where the Trump administration arguably overreached. A good first step might be to reverse the steel and aluminum tariffs aimed at China that have hurt friendly countries such as Japan and Taiwan. He could also lift Trump’s visa limitations on members of the Chinese Communist Party, which are almost entirely symbolic and nearly impossible to enforce. Such measures would establish a more conciliatory tone in U.S.-Chinese relations without relieving any of the pressure Beijing faces for reform.

But whatever else Biden does, his top priority should be a negative one: Don’t give China’s leaders any reason to panic, any legitimate grounds for self-defense, or any cause that might justify war. That is simultaneously the best way to keep U.S. allies onside and the best way to hasten China’s fall. The first because Washington’s position is strongest when allies need U.S. support, not when they have it. The second because the Chinese regime can’t be brought down by the United States; it can only be dismantled from within.

Politically and temperamentally, the hardest thing for any U.S. president to do is nothing. The extraordinary power concentrated in the president’s hands generates extraordinary temptation to use it, and there are many stirring arguments for decisive leadership. But in the current situation, decisive leadership can only disrupt an already benign policy environment. China’s only hope for victory in the current situation is to provoke a crisis—and then benefit from the ensuing disorder. Biden’s number one job is to make sure the crisis doesn’t occur.

#### No heg impact and retrenchment’s stabilizing – prefer cross-regional estimates and new statistics.

Fettweis 18—Associate professor of political science at Tulane University [Christopher J., 2018, *Psychology of a Superpower: Security and Dominance in U.S. Foreign Policy*, Chapter 1: Unipolarity and the System, pgs 28-34, Columbia University Press, Accessed through the Wake Forest Library]

Even the most ardent supporters of the hegemonic-stability explanation do not contend that U.S. influence extends equally to all corners of the globe. The United States has concentrated its policing in what George Kennan used to call the "strong points," or most important parts of the world: Western Europe, the Pacific Rim, and the Persian Gulf.70 By doing so, Washington may well have contributed more to great-power peace than to the overall global decline in warfare. If the former phe-nomenon contributed to the latter, by essentially providing a behavioral model for weaker states to emulate, then perhaps this lends some sup-port to the hegemonic-stability case.71 In general, Washington has shown less interest in the affairs of the global South since the end of the Cold War, and the level of violence in almost all regions has declined. The United States intervenes far less in the political and military affairs of Latin America compared to any time in the twentieth century, for instance, and the states of the region are more peaceful. Warfare in Africa is at an all-time low, as noted above, as is relative U.S. interest outside of counterterrorism and security assistance. Regional peace and stability exist where there is active U.S. intervention, in other words, as well as where there is not. No direct relationship seems to exist across regions. The U.S. sheriff certainly appears to have enforced rules upon the great powers. Since we do not have a "control" Europe, however, one without the presence of U.S. troops and alliance commitments, it is dif-ficult to know what is causing those states to behave. In much of the rest of the world, the United States has not been especially eager to enforce any particular rules. Even rather incontrovertible evidence of genocide has not been enough to inspire action. Washington's intervention choices have at best been erratic: crises in Libya and Kosovo inspired responses, but much more blood flowed uninterrupted in Rwanda, Dar-fur, Congo, Sri Lanka, and Syria. When U.S. intervention has occurred, its wisdom and efficacy have not been encouraging. The security situation in the Persian Gulf and broader Middle East, to cite the most obvious example, would be better off if U.S. troops had stayed home.72 In recent years, substantial hard-power investments (Somalia, Afghanistan, Iraq), moderate intervention (Libya), and reliance on diplomacy (Syria) have been equally ineffective in stabilizing states torn by conflict. The region may well be essentially unpacifiable and immune to outside policing. At the very least, it seems hard to make the case that the U.S. presence has improved matters. In this strong point, unipolarity has failed to bring peace. To say that the United States has not always been successful in impos-ing peace on willing combatants would be to understate. The fruitless effort to encourage the various combatants in Syria to stop killing one another is a prominent example, and there are others. The United States also took the peacemaking lead during one of the rare interstate conflicts of the New Peace era, the war between Eritrea and Ethiopia. A high-level U.S. delegation containing former and future national-security advisors (Anthony Lake and Susan Rice) made a half-dozen trips to the region, but it was unable to prevent either the outbreak or recurrence of the con-flict. Lake and his team shuttled back and forth between the capitals with some frequency, and President Clinton made repeated phone calls to the leaders of the respective countries, offering to hold peace talks in the United States, all to no avail.73 The war did not end until the Ethiopians essentially won in late 2000. The globocop was irrelevant. The Horn of Africa is hardly the only region where states are free to fight one another today without fear of serious U.S. involvement. Since they are choosing not to do so with increasing frequency, something else is probably affecting their calculations. Stability exists even in those places where the potential for intervention by the sheriff is minimal. Hegemonic stability can only take credit for influencing those decisions that would have ended in war without the presence, whether physical or psychological, of the United States. It seems hard to make the case that the relative peace that has descended on so many regions is primar-ily attributable to the kind of heavy hand of the neoconservative levia- than or that of its lighter, more liberal cousin. Something else appears to be at work. CONFLICT AND U.S. CHOICES If U.S. power is the only thing holding back the forces of global chaos, then we would expect to see some variation in violence as the relative capabilities of the United States wax and wane. During the 1990s, the United States cut back on defense by about 25 percent, spending $100 billion less in real terms in 1998 than it did in 1990.74 To those believers in the neoconservative version of hegemonic stability, this irresponsible "peace dividend" endangered both national and global security. "No serious analyst of American military capabilities doubts that the defense budget has been cut much too far to meet America's responsibilities to itself and to world peace," argued Kristol and Kagan at the time.75 The world grew dramatically more peaceful while the United States cut its forces, however, and it stayed just as peaceful even as spending rebounded after the 9/11 terrorist attacks. The incidence and magnitude of global conflict declined while the military budget was cut under President Clin-ton, kept declining (though more slowly) as the Bush administration ramped it back up, and stayed steady as Obama cut back again. U.S. mili-tary spending has varied during the New Peace from a low in constant dollars of less than $400 billion to a high of more than $700 billion, but war does not seem to have noticed. The same nonrelationship exists between other potential proxy mea-surements for U.S. power and conflict. No connections exist between warfare and fluctuations in U.S. GDP, or alliance commitments, or for-ward military presence. Europe experienced very little fighting when there were 300,000 American troops stationed there, for example, and very little after 90 percent of those troops were removed. It is hard to find much correlation between U.S. actions and systemic stability. Noth-ing the United States actually does seems to matter to the New Peace. Absolute military spending might not be as important as relative. Although Washington cut back on spending during the 1990s, its advan-tage over all possible rivals never wavered. The United States has accounted for between 35 and 41 percent of global military spending every year since the collapse of the Soviet Union.76 Perhaps perceptions of U.S. power, as well as its willingness to use it, keep the peace. Fluc-tuations in its enormous defense budget might be unimportant com-pared to how the United States chooses to employ that budget. In other words, perhaps the grand strategy of the United States, rather than its absolute capability, is decisive in maintaining stability. Perceptions of U.S. power and the strength of its hegemony are to some degree functions of its willingness to use that power. A strong United States that chose to stand on the sidelines during crises would not encourage or enforce international cooperation. If indeed U.S. stra-tegic choices are directly related to international stability, then variation in its choices ought to have consequences for levels of conflict. A restrained United States would presumably be less likely to play the role of sheriff than one following a more activist approach. Indeed, hege-monic-stability theorists warn that following a grand strategy that did not make global policing a priority would court disaster. The "present danger" about which Kristol, Kagan, and their fellow travelers warned is that the United States "will shrink its responsibilities and—in a fit of absentmindedness, or parsimony, or indifference—allow the interna-tional order that it created and sustains to collapse."77 The Pulitzer Prize—winning journalist Brett Stephens predicted that an insufficiently activist U.S. grand strategy would result in "global pandemonium." 78 Liberals fear restraint as well and also warn that a militarized version of primacy would also be counterproductive in the long run. Washing-ton can undermine its creation over time through thoughtless unilat-eral actions that violate its own rules. Many liberals predicted that the invasion of Iraq and its general contempt for international institutions and law would call the legitimacy of the order into question. Ikenberry worried that Bush's "geostrategic wrecking ball" would lead to a more hostile, divided, and dangerous world.79 Thus while all hegemonic- stability theorists expect a rise of chaos during a restrained presidency, liberals also have grave concerns regarding primacy. If either version is correct—that global stability is provided by U.S. hegemony—then maintaining that stability through a grand strategy based on either primacy (to neoconservatives) or "deep engagement" (to liberals) is clearly wise.80 If, however, U.S. actions are only tangentially related to the outbreak of the New Peace or if any of the other proposed explanations are decisive, then the United States could retrench with-out fear of negative consequences. The grand strategy of the United States is therefore crucial to theo-ries of hegemonic stability. And, once again, there is no evidence that U.S. choices matter much. Although few observers would agree on the details, most would probably acknowledge that post—Cold War grand strategies of American presidents have differed in some important ways. As it happens, each administration is a reasonable representation of one the four ideal types of grand strategy laid out by Posen and Ross in 1996.81 Under George H.W. Bush, the United States followed the path of "selective engagement," which is sometimes referred to as "balance-of- power realism"; Bill Clinton's grand strategy looks a great deal like what Posen and Ross call "cooperative security" and others call "liberal inter- nationalism"; George W. Bush, especially in his first term, forged a strat-egy that was as close to "primacy" as any president is likely to get; and Barack Obama, despite some early flirtation with liberalism, followed a restrained realist path, which Posen and Ross label "neoisolationism" but its proponents refer to as "strategic restraint."82 In the lingo of political science, we have substantial variation in the independent variable, more than enough to determine its effect on the phenomenon under consider-ation. The result is clear (see table 1.1). Armed-conflict levels fell steadily throughout the post—Cold War era, irrespective of the grand strategic path Washington chose. Neither the primacy of George W. Bush nor the restraint of Barack Obama had much effect on the level of global violence. Despite continued warnings (and the high-profile mess in Syria), the world has not experienced an increase in violence while U.S. behavior became more restrained. Once again, if the grand strategy of the United States is responsible for the New Peace, it is leaving no trace in the evidence. If a correlation did exist between U.S. actions and international stabil-ity, if other states had reacted differently to fluctuations in U.S. military spending or grand strategy, then surely hegemonic-stability theorists would argue that their expectations had been fulfilled. Many liberals were on the lookout for chaos while George W. Bush was in the White House, just as neoconservatives have been quick to identify apparent worldwide catastrophe under President Obama.83 If increases in vio-lence would have been evidence for the wisdom of hegemonic strate-gies, then logical consistency demands that the lack thereof should at least pose a problem. As it stands, the only evidence we have regarding the relationship between U.S. power and international stability suggests that the two are unrelated. The rest of the world appears quite capable and willing to operate effectively without the presence of a global police~~man~~. Those who think otherwise base their view on faith alone. Hegemonic stability is a belief, in other words, rather than an estab-lished fact, and as such it deserves a different kind of examination.

#### Clinging causes great power war.

Layne 18—University Distinguished Professor of International Affairs and Robert M. Gates Chair in National Security at the Bush School of Government and Public Service at Texas A&M University, Ph.D. in Political Science from the University of California, Berkeley [Christopher, January 2018, “The US–Chinese power shift and the end of the Pax Americana”, International Affairs, Volume 94, Issue 1, pgs 89-111]

The fate of international orders is closely linked to power transition dynamics. Throughout modern international history the prevailing international order has reflected the balance of power that existed at the time of its creation. When that balance changes sufficiently, the old order will be replaced by a new one. Viewed from this perspective, what are the Pax Americana's prospects? How will China's rise, and America's decline, affect the international order in the years ahead? The surprising answer given by top US security studies scholars is: ‘Not much.’ The United States, so the argument goes, can ‘lock in’ the Pax Americana's essential features, including its rules, norms and institutions.65 John Ikenberry, Stephen Brooks and William Wohlforth are the leading proponents of the lock-in thesis. Ikenberry was the first to set out the concept, arguing in After victory that a hegemon, by building an institutionalized, rules-based international order, ‘can lock-in favorable arrangements that continue beyond the zenith of its power’.66 In other words, the international order can remain intact even after the hegemonic power that created it has lost its pre-eminent position in the international political system. On this point, Ikenberry echoes Robert Keohane's argument in After hegemony that, once a liberal international order has been established by a hegemonic power, if the hegemon declines it is possible for a small group of Great Powers to take the place of the former hegemon and collectively manage the international system.67 That is, under certain conditions ‘hegemonic stability’ can exist even if there is no hegemonic power. In Liberal Leviathan, Ikenberry built on this logic to argue that, even if the Pax Americana were to wither completely, the LRBIO would nevertheless survive. As Ikenberry put it: ‘America's position in the global system may decline but the international order it leads can remain the dominating logic of the twenty-first century.’68 Ikenberry's view seems to have evolved, however. In jointly authored articles in International Security and Foreign Affairs, Brooks, Ikenberry and Wohlforth embrace hegemonic stability theory.69 That is, they contend that, like all international orders, the post-1945 international order does, in fact, require a hegemonic power to maintain it—and not just any hegemon, but the United States. The logic of their argument is that the LRBIO and the Pax Americana are one and the same, and that US pre-eminence is a necessary condition for the LRBIO. According to them, the United States must exercise ‘global leadership’—the US foreign policy establishment's code phrase for hegemony—by acting as a security provider and geopolitical stabilizer; by maintaining an open, liberal international economy; and by promoting global cooperation through upholding and revising the post-1945 liberal order—which is both ‘institutional and normative’—created by the Pax Americana.70 They also claim that the post-1945 Pax Americana ‘allows the United States to … wrap its hegemonic rule in a rules-based order’.71 This helps to conceal the actual motives of self-interest and realpolitik that underlie American hegemony. Read together, the International Security and Foreign Affairs articles by Brooks, Ikenberry and Wohlforth make clear the authors' view that the post-1945 LRBIO is inextricably linked to US hegemony; that is, to the Pax Americana. This is in keeping with the common understanding of hegemonic stability theory. As they see it, the post-1945 international order based on American pre-eminence ‘has served the US well for the past six decades and there is no reason to give it up now’.72 The argument has special force given that, according to the—correct—logic of their argument (and of hegemonic stability theory), if American hegemony goes, the LRBIO goes with it. In their preference for maintaining the post-1945 hegemonic American international order, Brooks, Ikenberry and Wohlforth echo the renowned late nineteenth-century British statesman Lord Salisbury. Presiding over a hegemonic Britain that was already perceptibly declining, he famously said: ‘Whatever happens will be for the worse. Therefore, it is in our interest that as little should happen as possible.’ The post-1945 international order is (or was) a concrete manifestation of America's hegemonic status. So, of course, the US foreign policy establishment wants as little change as possible in international politics. Why would it wish otherwise, when change would inevitably be both the cause and effect of diminishing American power and influence? The United States has every incentive for wanting to prolong the post-1945 international order. After all, for most of the last 70 years or so, the US has occupied the geopolitical penthouse (‘when America ruled the world’). From that lofty height, however, the only direction it can go is down. The lock-in strategy is seductive because it holds out (or appears to hold out) the possibility that the United States can preserve the status quo—the post-1945 international order—even as the geopolitical status quo of American hegemony is changing. Lock-in is attractive—superficially—because it assumes that China's rise will not effect a major change in the international system. Specifically, lock-in holds that China's rise can be managed by integrating it into the post-1945 international order, and ensuring that the exercise of Chinese power takes place within that order's rules and institutions.73 By doing so, it is claimed, the United States can offset its declining power and ‘ensure the international order it leads can remain the dominating logic of the twenty-first century’.74 Lock-in assumes that China has no interest in overturning—or significantly modifying—the post-1945 international order in which it rose and became wealthy. Certainly, China did rise within the Pax Americana's LRBIO. However, China did not rise to preserve that American-dominated order. For some three decades (beginning with Deng Xiaoping's economic reforms) China took a low profile in international politics, and avoided confrontation both with the United States and with its regional neighbours. Integration into the open international economy spurred China's rapid growth. China's self-described ‘peaceful rise’ followed the script written by Deng Xiaoping: ‘Lie low. Hide your capabilities. Bide your time.’ However, the fact that China bandwagoned with the United States in joining the international economic order did not mean that its longer-term intention was—or is—to preserve the post-1945 international order. In joining the liberal economic order, Beijing's goal was not simply to get rich; by integrating itself into the post-1945 international order, China was able to avoid conflict with the United States until it became wealthy enough to acquire the military capabilities necessary to compete with America for regional hegemony in east Asia.75 Judging from Xi Jinping's policy pronouncements, China's days of biding its time and hiding its capabilities are over. Lock-in proponents argue that even as the Sino-American military and economic balance continues to tilt increasingly in Beijing's favour, the post-1945 international order's rules, institutions and norms will offset America's loss of hard power. There is historical evidence that suggests this is wishful thinking. Take the case of Britain after the Second World War. Despite the dramatic weakening of Britain's economic and financial clout caused by its efforts in the two world wars, after 1945 British leaders believed that the United Kingdom could remain one of three major world powers. In pursuit of this goal, they formulated their own version of lock-in. As the historian John Darwin puts it, officials in London thought that by transforming the Commonwealth, Britain could transition ‘from an empire of rule to an empire of influence’.76 Specifically, they believed that ‘free from the authoritarian, acquisitive and exploitative traditions of the old version of empire’, the reconfigured Commonwealth ‘would make the British connection voluntary, democratic, and mutually beneficial’.77 The reformed Commonwealth therefore would serve as the institutional instrument of continuing British world power, within which shared values and norms would bind Britain's former colonies and dominions to London's leadership.78 The reasons why British policy-makers bought into this vision sound an awful lot like the reasons why the present-day American proponents of lock-in think it will preserve the United States' global leadership even as its hard power erodes. Lock-in did not work for Britain following the Second World War, and there is scant reason to think it will work for the United States in the coming years of the twenty-first century. The lock-in strategy also assumes that if the Pax Americana's institutions are reformed, Beijing (and other non-western emerging powers) will find it more attractive to remain in the post-1945 international order than to overturn it. That assumption, however, is logically flawed: achieving lock-in by reforming the existing international order presumes that the United States can have its cake (preserving the Pax Americana) and eat it too (reforming the current international system's legacy institutions). But, as we all know, when the cake is eaten, it's gone. Reform—at least, any kind of reform that would appeal to China—would mean the United States yielding significant power in international institutions to accommodate Beijing. However, doing so would reduce US ability to shape outcomes, diminish Washington's voice in international institutions, and impose constraints on US autonomy in foreign and domestic policy.79 As University of Birmingham lecturer Sevasti-Eleni Vezirgiannidou observes with respect to institutional reform: ‘It is questionable whether this will really preserve US influence or rather, on the contrary, diminish it, as the United States will have to share power in a reformed order and thus will be restricted in its ability to act unilaterally.’80 The US foreign policy establishment may talk the talk of reforming the international order (and the institutions that underpin it), but it is doubtful it will walk the walk with respect to reform, because that would mean accepting a downsized American role in international politics. On the contrary, Washington's opposition to the AIIB indicates that the United States is not prepared to see its influence in the international order diminished. And, with respect to reforming the post-1945 international order to accommodate the reality of a risen China, this is the nub of the problem: instead of preserving the Pax Americana, reform would lead to changes in the international order that would undermine it. Of course, regardless of whether there is institutional reform, the coming decades are likely to witness major changes in the international order irrespective of America's preferences. What will happen to the international order as China continues to rise, and America's relative power continues to decline? As Yogi Berra, the greatest of all American philosophers (immortalized in baseball's Hall of Fame), said: ‘Making predictions is hard. Especially about the future.’ However, one thing seems pretty certain: China is not on the verge of either of ruling the world, or becoming a global hegemon comparable to the United States after the Second World War; not yet, anyway. Thus, for the next several decades (at least) it will be neither China's world nor America's: international leadership will be contested.81 During this period, China can be expected to act pretty much as one would expect any Great Power to act while making the shift from rising to risen: it will use its newfound power to seek a much greater voice in managing—and shaping—the international order, and its underlying norms. For example, China will want others to acknowledge its ‘core interests’, including respect for its territorial integrity and its sovereignty. Beijing has expanded the geographic scope of its core interests beyond Tibet and Taiwan to include the South and East China Seas and Xinjiang. And, reflecting its insistence that states should refrain from intervening in others' internal affairs, preservation of its political, economic and social systems also has been defined as a core interest.82 During the period of contested international leadership there is unlikely to be wholesale abandonment of the post-1945 international institutions. For example, as one of the five permanent members of the UN Security Council, Beijing is an acknowledged part of the Great Power club. Similarly, we should not expect to see a dramatic overhaul of the international economic system. As the world's top-ranking exporter and trading state, China benefits hugely from economic openness. However, the state plays a much greater role in China's economy than it does in the United States and Europe. Beijing will want rules that protect its semi-mercantilist economic policies and also ensure that its state-owned industries are not disadvantaged. Beijing will continue pressing for an even greater voice, both for itself and for the developing world, in institutions such as the IMF and World Bank (unless or until they are superseded by new ‘made in China’ institutions). In this respect, China will position itself as the developing world's champion—a role for which it is well suited. Like many nations in the developing world—but unlike the United States—China has been a victim of western Great Power policies of imperialism and colonialism. As such, China has a claim to prominence in constructing a new international order that reflects the values of the developing world rather than those of the United States and the West.83 Even though the international economy will remain (more or less) open, in other respects the international system is likely to become much less liberal politically. The Chinese Communist Party's 19th Congress demonstrated that China is not converging with the West: it is not going to become a democracy any time soon—if ever. Consequently, as China's role in shaping the international agenda increases, democracy and human rights will become less salient. China will almost certainly try to change the norms that favour democracy promotion, ‘humanitarian’ intervention, human rights and the Responsibility to Protect. Beijing will resist norms that divide states into two camps, ranging democratic ‘good guys’ against non-democratic ‘bad guys’.84 Instead, it will offer its policy of ‘market authoritarianism’ to developing states as a better model of political, social and economic development than the US model based on the Washington Consensus. As its power continues to increase, China will seek to recast the world order in a way that not only advances its interests but also acknowledges both its enhanced power and its claims to status and prestige equal to those of the declining hegemon.85 For now, Beijing is (mostly) ‘working within the system’ to revise the post-1945 international order while simultaneously laying the groundwork for an alternative international order that eventually could displace the Pax Americana. As a 2007 report by the Center for a New American Security concluded: Rather than seeking to weaken or confront the United States directly, Chinese leaders are pursuing a subtle, multifaceted, long-term grand strategy that aims to derive as many benefits as possible from the existing international system while accumulating the economic wherewithal, military strength, and soft power resources to reinforce China's emerging position as at least a regional great power.86 Even as it stays within the post-1945 international order, Beijing is not doing so to preserve it. In this sense, as Martin Jacques has observed, China is playing a double game. It is operating ‘both within and outside the existing international system while at the same time, in effect, sponsoring a new China-centric international system which will exist alongside the present system and probably slowly begin to usurp it’.87 The creation of the AIIB, which Beijing intends should ultimately eclipse the IMF and World Bank, is a good example of this strategy. American scholars and policy-makers believe that a lock-in strategy can be employed to head off any Chinese attempt to create a new international order, or to create a parallel order. They believe this because they have imbued the concept of a ‘rules-based, institutionalized, liberal international order’ with a talismanic quality. In so doing they have air-brushed Great Power politics out of the picture. As they see it, rules and institutions are politically neutral and, ipso facto, beneficial for all. Hence, they can be an effective substitute for declining hard power. However, rather than existing separately from the balance of power, rules, norms and institutions reflect it. Hence the world is no more likely to continue upholding the Pax Americana once US power declines than Britain's dominions and former colonies were inclined to perpetuate the empire after the Second World War. The fate of the Pax Americana, and that of the international order, will be determined by the outcome of the Sino-American rivalry. As the British scholar E. H. Carr observed, a rules-based international order ‘cannot be understood independently of the political foundation on which it rests and the political interests which it serves’.88 The post-Second World War international order is an American order that privileges US interests.89 Even the discourse of ‘liberal order’ cannot disguise this fact. Today, the ground is shifting beneath the Pax Americana's foundations. Those who believe that lock-in can work view international politics as being, in essence, geopolitically antiseptic. For them, Great Power competition and conflict are transcended by international institutions, rules and norms. This is not how the real world works, however.90 Great Power politics is about power. Rules and institutions do not exist in a vacuum, hermetically sealed off from Great Power politics. Nor are they neutral. Rather, they reflect the distribution of power in the international system. In international politics, who rules makes the rules. In his classic study of international relations between the world wars, The Twenty years' crisis, Carr analysed the political crisis of the 1930s caused by the breakdown of the post-First World War order symbolized by the Versailles Treaty.91 The Versailles system cracked, Carr argued, because of the widening gap between the order it represented and the actual distribution of power in Europe. Carr used the events of the 1930s to make a larger geopolitical point. International orders reflect the balance of power that exists at time of their creation. Over time, however, the relative power of states changes, and eventually the international order no longer reflects the actual distribution of power between or among the leading Great Powers. When that happens, the legitimacy of the prevailing order is called into question, and it will be challenged by the rising power(s). When the balance of power swings—or is perceived to swing—in its direction, a rising power becomes increasingly dissatisfied with the international order, and seeks to revise it. The challenger wants to change the rules embodied in the existing international order—rules written, of course, by the once dominant but now declining Great Power that created it. It also wants the allocation of prestige and status changed to reflect its newly acquired power. The incumbent hegemon, of course, wants to preserve the existing international order as is—an order that it midwifed to advance, and consolidate, its own interests. The E. H. Carr Moment presents the incumbent hegemon with a choice. It can dig in its heels and try to preserve the prevailing order—and its privileged position therein; or it can accede to the rising challenger's demands for revision. If it chooses the former course of action, it runs the risk of war with the dissatisfied challenger. If it chooses the latter,

it must come to terms with the reality of its decline, and the end of its hegemonic position. The E. H. Carr Moment is where the geopolitical rubber meets the road: the status quo power(s) must choose between accommodating or opposing the revisionist demands of the rising power(s). Liberal internationalists such as John Ikenberry argue that China will not challenge the current international order, even as the distribution of power continues to shift in its favour. This is a doubtful proposition. The geopolitical question—the E. H. Carr Moment—of our time is whether the declining hegemon in east Asia, the United States, will try to preserve a status quo that is becoming increasingly out of sync with the shifting distribution of power, or whether it can reconcile itself to a rising China's revisionist demands that the international order in east Asia be realigned to reflect the emerging power realities. Unless the United States can adjust gracefully to this tectonic geopolitical shift, the chances of a Sino-American war are high—as they always are during power transitions.92 However, whether change comes peacefully or violently, the Pax Americana's days are numbered.

### 1NC – OFF

#### The US commercial space industry is booming – private space companies are driving innovation.

**Lindzon 2/23** [(Jared Lindzon, A FREELANCE JOURNALIST AND PUBLIC SPEAKER BORN, RAISED AND BASED IN TORONTO, CANADA. LINDZON'S WRITING FOCUSES ON THE FUTURE OF WORK AND TALENT AS IT RELATES TO TECHNOLOGICAL INNOVATION) "How Jeff Bezos and Elon Musk are ushering in a new era of space startups," Fast Company, 2/23/21, <https://www.fastcompany.com/90606811/jeff-bezos-blue-origin-elon-musk-spaces-space>] TDI

In early February, Jeff Bezos, the founder of Amazon and one of the planet’s wealthiest entrepreneurs, dropped the bombshell announcement that he would be stepping down as CEO to free up more time for his other passions. Though Bezos listed a few targets for his creativity and energy—The Washington Post and philanthropy through the Bezos Earth Fund and Bezos Day One Fund—one of the highest-potential areas is his renewed commitment and focus on his suborbital spaceflight project, Blue Origin.

Before space became a frontier for innovation and development for privately held companies, opportunities were limited to nation states and the private defense contractors who supported them. In recent years, however, billionaires such as Bezos, Elon Musk, and Richard Branson have lowered the barrier to entry. Since the launch of its first rocket, Falcon 1, in September of 2008, Musk’s commercial space transportation company SpaceX has gradually but significantly reduced the cost and complexity of innovation beyond the Earth’s atmosphere. With Bezos’s announcement, many in the space sector are excited by the prospect of those barriers being lowered even further, creating a new wave of innovation in its wake.

“What I want to achieve with Blue Origin is to build the heavy-lifting infrastructure that allows for the kind of dynamic, entrepreneurial explosion of thousands of companies in space that I have witnessed over the last 21 years on the internet,” Bezos said during the Vanity Fair New Establishment Summit in 2016.

During the event, Bezos explained how the creation of Amazon was only possible thanks to the billions of dollars spent on critical infrastructure—such as the postal service, electronic payment systems, and the internet itself—in the decades prior.

“On the internet today, two kids in their dorm room can reinvent an industry, because the heavy-lifting infrastructure is in place for that,” he continued. “Two kids in their dorm room can’t do anything interesting in space. . . . I’m using my Amazon winnings to do a new piece of heavy-lifting infrastructure, which is low-cost access to space.”

In the less than 20 years since the launch of SpaceX’s first rocket, space has gone from a domain reserved for nation states and the world’s wealthiest individuals to everyday innovators and entrepreneurs. Today, building a space startup isn’t rocket science.

THE NEXT FRONTIER FOR ENTREPRENEURSHIP

According to the latest Space Investment Quarterly report published by Space Capital, the fourth quarter of 2020 saw a record $5.7 billion invested into 80 space-related companies, bringing the year’s total capital investments in space innovation to more than $25 billion. Overall, more than $177 billion of equity investments have been made in 1,343 individual companies in the space economy over the past 10 years.

“It’s kind of crazy how quickly things have picked up; 10 years ago when SpaceX launched their first customer they removed the barriers to entry, and we’ve seen all this innovation and capital flood in,” says Chad Anderson, the managing partner of Space Capital. “We’re on an exponential curve here. Every week that goes by we’re picking up the pace.”

#### The plan creates a restriction that encourages companies to move their operations to states with lower standards

Albert 14 [(Caley Albert, J.D. Loyola Marymount University) “Liability in International Law and the Ramifications on Commercial Space Launches and Space Tourism,” Loyola of Los Angeles International and Comparative Law Review, 11/1/14, <https://digitalcommons.lmu.edu/cgi/viewcontent.cgi?article=1708&context=ilr>] TDI

A parallel can be drawn here between the commercial space industry and the maritime law concept of the Flag of Convenience. The term has evolved over time, but in this day and age, it is commonly used to mean the owner of a vessel does not want to create an obligation with a country with stricter standards for registry; hence, the owner will register strictly for economic reasons with a country that has a more convenient registry.133 By flying a Flag of Convenience, ship owners are able to avoid taxation on earnings of ships registered under these flags, and in some cases, they can also receive relief from stricter crew standards and corresponding operating costs.134 A Flag of Convenience is flown by a vessel that is registered in one state, which the vessel has little if any connection to, when in reality the vessel is owned and operated from another state.135 This way the vessel avoids any unfavorable economic requirements from its true home state.136 In this sense, “flag shopping” is similar to “launch forum shopping,” similar in that Flags of Convenience are utilized for economic reasons, such as to avoid high taxes and compliance with certain restrictive international conventions, commercial space companies will forum shop when choosing which country to launch from. As of today, there has yet to be a catastrophic commercial launch incident, so for now commercial space companies do not have an incentive to forum shop, but if there is, the indemnification policies described above may lead companies to seek out countries that provide more coverage so they pay less in the event something goes wrong. This comparison to Flags of Convenience brings up two separate yet equally important issues. First, launch companies may try to follow the Flags of Convenience model and soon catch on to the wisdom of their maritime predecessors by “registering” in countries with more favorable conditions. Of course, in this case the concern is not with registration so much as launching. If launch companies follow the Flags of Convenience model, they will seek out the most convenient state for launch, most likely the state that provides the most liability coverage and has the least safety precautions. Launching from states with low safety standards increases the potential for catastrophic launch events. This, in turn, will place states that are potentially incapable of paying for damages from launch disasters in a position they would not normally assume if these commercial companies had not been drawn to their shores with the promise of more favorable regulations. Second, launch customers may also seek out companies located in states with lower cost liability regimes (lower insurance policy limits) since those companies will presumably charge less to launch their payloads. In this scenario, instead of the launch companies seeking out states with lower liability caps and softer regulations, the launch customers themselves will seek companies located in states with lowcost liability regimes. Here, the effect will be the same as above. Under the Liability Convention, the launching state will be liable for any damage caused by a vehicle launched from within its borders; hence, if customers start engaging in “launch forum shopping,” states will be incentivized to put in place low-cost liability regimes, which in turn will increase the states’ potential payout in the event of a catastrophic launch incident. Looking at the indemnification program the United States has in place in comparison to other countries, it is possible to see how either launch companies or launch customers could engage in “launch forum shopping” when a catastrophic launch incident ever occur. It is also important to keep in mind that various factors go into where a company or customer decides to launch from. A state’s indemnification program is just one factor in this decision. With this in mind, it is clear that if a launch incident did occur in the United States, the commercial launch company would be liable for much more than it would in another country. For instance, why would a commercial space company launch in the United States, where it would be liable up to $500 million and the additional costs that the government would not cover? The argument can be made that a catastrophic space incident has yet to occur, and even if it did, it is unlikely to cost above the $2.7 billion covered by the United States government. **Other states like Russia or France, which has the two-tier liability system, would simply cover all claims above the initial insurance, which is much lower than the $500 million mark required by the United States.** In that case, the commercial company would never have to pay more than the initial liability insurance. If there ever is a catastrophic commercial space incident in the future, it is easy to see why commercial companies or launch customers might be drawn to “launch forum shop” outside the United States.

#### Maintaining US space dominance requires a homegrown commercial space industry – private companies offshoring gives China the advantage they need

**Cahan and Sadat 1/6** [(Bruce Cahan, J.D) (Dr. Mir Sadat, ) "US Space Policies for the New Space Age: Competing on the Final Economic Frontier," based on Proceedings from State of the Space Industrial Base 2020 Sponsored by United States Space Force, Defense Innovation Unit, United States Air Force Research Laboratory, 1/6/21, <https://www.politico.com/f/?id=00000177-9349-d713-a777-d7cfce4b0000>] TDI

Today, China’s commercial space sector is in its infancy but is set to grow with continued national and provincial support, which have been rapidly increasing over the past three years.64 Since 2004, the United States and China accounted for 74% of the $135.2 billion venture capital (VC) invested in commercial space. 65 The early 2020s are pivotal, as it would be far cheaper for China and Chinese commercial space firms to acquire space technologies from the United States or allied nation companies seeking revenues or facing cashflow constraints, than to build the companies and their teams and technologies from scratch in China. The tight coupling of Chinese military goals and an economy organized to achieve those goals magnifies the economic threats and market disruptions that the United States must immediately address, in order for DoD and national security operations to rely on US commercial space capabilities.

3. ISSUES AND CHALLENGES

Peaceful Uses of Space and Space Exploration Space has been primarily a shared, not a warfighting, domain.67 With each passing second of Planck time,68 space enables a modern way of life, provides instantaneous global imagery, assures telecommunications, and captures humanity’s imagination for civil space exploration. As a result, space is a burgeoning marketplace and territory for commercial ventures and investors. Strengthening the US commercial space industrial base is vital to and beyond US national security. Civil space activities are a source of US “soft power” in global commerce, cooperation, and investment. 69 The civil space sector, led by NASA, is fundamental to America’s national security. 70 NASA is on an ambitious critical path to return to the Moon by 2024,71 along with developing the capabilities and infrastructure for a sustained lunar presence. NASA’s lunar plans provide a lunar staging area for missions to Mars and beyond. They offer a strategic and economic presence for the United States on the Moon. Congress, the White House, DoD, and NASA must recognize that economic and strategic dominance in service of national security requires catalyzing and accelerating growth of a vibrant, private US industrial and cultural expansion into the Solar System. Human visitation and eventual settlement beyond the Earth require sustaining visionary leaders, aided by, and aiding, US national security. A recurring theme in US policy is “maintaining and advancing United States dominance and strategic leadership in space” because US global competitors and adversaries are competent and capable of outpacing American space capabilities. 72 The stakes are high: At this historic moment, there is a real race for dominance over cislunar access and resources.   
Regulations Should Foster US Commercial Space as a National Asset   
Leveraging the reimagination and disruption of terrestrial industries, the US commercial space industry is pushing the frontiers of the United States and global space economics and capabilities. A pre-COVID19 assessment by the US Chamber of Commerce projected that the US space market will increase from approximately $385 billion in 2020, to at least $1.5 trillion by 2040. 73 This projection represents a seven percent (7%) annual compound average growth rate (CAGR), driven largely by expanded business opportunities in Low Earth Orbit (LEO). Total addressable market (TAM) for US commercial space companies could be far larger were they to have federal and financial support for initiating cislunar space operations and opportunities. Recent advancements in commercial space technologies and business models have driven down costs and unlocked new areas of economic growth and space capabilities that outpace and de-risk acquiring capabilities through traditional US government economic development, research and development (R&D), procurement and regulatory policies and processes. US regulations must ensure that US companies lead in commercial space. In specific, technological advances that lower access costs and expand space mission capabilities, content, continuity, and redundancies must be fully supported by or incorporated into US government programs, budgets, requirements, and acquisition processes. Until commercial space offerings are fully incorporated, and federal acquisition policies and personnel commit to innovation, US government fiscal buying power, intelligence and program support will lag and remain inadequate in comparison to US private sector companies and the nation’s global competitors and adversaries in space.

Addressing COVID-19’s Impact on US Commercial Space The COVID-19 pandemic damaged and still challenges the US space industrial base. US domestic investors’ funding of space R&D remains inconsistent across the lifecycle of New Space companies and the spectrum of technologies necessary to grow the space economy. To date, public R&D, government procurements and visionary space entrepreneurs have played a major role in establishing and funding the New Space industrial base. In the last five years, $11 billion of private capital has been invested.74 Traditional private investors may become reluctant to fund space technologies due to perceptions of higher risk over longer time horizons before receiving profitable returns on their capital. Institutional and long-horizon investors who manage patient capital have an appetite for illiquid, but higher yielding, terrestrial alternative asset investments such as commodities, private equity limited partnerships and real estate.75 The COVID-19 pandemic has created economic uncertainties making the New Space’s funding model unreliable. COVID-19 significantly impacted venture capital (VC)-backed companies: the pace of VC space investments fell 85% between April - June, as compared to January – March, in 2020. 76 Pre-COVID-19, the New Space industrial base confronted multiple challenges in raising later stages of venture capital such as (1) the lag between having an early-stage startup with an idea and commercializing a viable revenue-generating product, (2) the lack of market liquidity for founder and private equity space investments to attract and retain talented teams, and (3) the lack of a market to re-sell contracts for space goods and services when customers buy more capacity than needed. Even prior to the COVID-19 pandemic, federal financing of US R&D was at a historically minor level, as compared to businesses and universities.77 US government support for basic research has steadily declined as a percent of GDP. The federal government will experience near- to medium-term budget constraints.78 The vibrant venture community in the United States has taken up a portion of this slack by increasing R&D investment in later-stage and applied research. However, founding teams and VC financing rely on government to fund earlier R&D for basic science and engineering. Therefore, government must resume the sustainable and impactful past levels of support for basic research, an essential role in the space economy’s public-private partnership that ensures US leadership in space.

Space as Existential Terrain for National Security  
  
In this Digital Era, space integrates and drives all elements of US national security. The Cold War may be over, but since the early 2010s, a renewed era of great power competition has emerged across terrestrial land, air, sea, and cyber domains. This competition extends into space, where a great game ensues.79 Space is no longer an uncontested or sanctuary domain. Competent and capable global competitors and peer adversaries are challenging US military, commercial, and civil space interests. The United States, along with its allies and partners, has had to accept and anticipate that space may be a warfighting domain, as suggested primarily by Russian and Chinese counter-space capabilities, military operations, and declarative statements. On December 20, 2019, the bipartisan National Defense Authorization Act (NDAA) for Fiscal Year 202080 authorized the creation of the US Space Force, under the Department of the Air Force, to secure US national interests in an increasingly contested domain.81 Back in October 1775, the Continental Congress established the US Navy to ensure that commercial and government fleets could freely navigate the Atlantic coastline - today, that includes the South China Sea. Likewise, the USSF’s mission is to ensure unfettered access to and the freedom to operate in space. The 2017 National Security Strategy considers space to be a “priority domain.”82 Freedom of navigation is a sovereign right that nations have fought to achieve and defend. 83 The USSF’s main role is to organize, train and equip, as well as to protecting US space interests and supporting terrestrial and joint warfighters (e.g., US Space Command). Thus, USSF must secure US national interests in space, whether military, commercial, scientific, civil, or enhancing US competitiveness for cislunar leadership.