# 1NC

### 1

#### The ISS isn’t outer space – this is clear

Hinterman 16 [Engineer & PhD in Astronautics-MIT. Eric Hinterman, Engineer, PhD in Astronautics-MIT, Is the International Space Station outside Earth's atmosphere?, 2016, <https://www.quora.com/Is-the-International-Space-Station-outside-Earths-atmosphere>]

As others have stated, the ISS is technically still within the Earth's atmosphere. Here is an illustration to help put it into perspective:

Chart, funnel chart

Description automatically generated

The ISS orbits at 400 km.

The Thermosphere ends at 690 km.

The exact altitude of the transition into outer space is not well defined, but it is generally understood to exist somewhere in the Exosphere. Therefore, we can comfortably say that the ISS orbits within the atmosphere because it resides in the thermosphere, which is below the exosphere.

#### Vote neg – limits and ground – negative DAs assume space, we do tons of stuff in the atmosphere, their interp makes the topic include every plane helicopter weapon and every other thing that occurs more than an inch off the ground, it makes the entire topic incoherent

#### Topicality is a voting issue that should be evaluated through competing interpretations – it tells the negative what they do and do not have to prepare for—there’s no way for the negative to know what constitutes a “reasonable interpretation” when we do prep – reasonability is arbitrary and causes a race to the bottom, proliferating abuse

#### No RVIs—it’s your burden to be topical.

## 2

#### Unpredictable shifts ruin biz con AND overall growth

Sarah Chaney Cambon 21, Reporter on The Wall Street Journal's Economics Team, BA in Business Journalism from the University of North Carolina-Chapel Hill, “Capital-Spending Surge Further Lifts Economic Recovery”, Wall Street Journal, 6/27/2021, https://www.wsj.com/articles/capital-spending-surge-further-lifts-economic-recovery-11624798800

Business investment is emerging as a powerful source of U.S. economic growth that will likely help sustain the recovery.

Companies are ramping up orders for computers, machinery and software as they grow more confident in the outlook.

Nonresidential fixed investment, a proxy for business spending, rose at a seasonally adjusted annual rate of 11.7% in the first quarter, led by growth in software and tech-equipment spending, according to the Commerce Department. Business investment also logged double-digit gains in the third and fourth quarters last year after falling during pandemic-related shutdowns. It is now higher than its pre-pandemic peak.

Orders for nondefense capital goods excluding aircraft, another measure for business investment, are near the highest levels for records tracing back to the 1990s, separate Commerce Department figures show.

“Business investment has really been an important engine powering the U.S. economic recovery,” said Robert Rosener, senior U.S. economist at Morgan Stanley. “In our outlook for the economy, it’s certainly one of the bright spots.”

Consumer spending, which accounts for about two-thirds of economic output, is driving the early stages of the recovery. Americans, flush with savings and government stimulus checks, are spending more on goods and services, which they shunned for much of the pandemic.

Robust capital investment will be key to ensuring that the recovery maintains strength after the spending boost from fiscal stimulus and business reopenings eventually fades, according to some economists.

Rising business investment helps fuel economic output. It also lifts worker productivity, or output per hour. That metric grew at a sluggish pace throughout the last economic expansion but is now showing signs of resurgence.

The recovery in business investment is shaping up to be much stronger than in the years following the 2007-09 recession. “The events especially in late ’08, early ’09 put a lot of businesses really close to the edge,” said Phil Suttle, founder of Suttle Economics. “I think a lot of them said, ‘We’ve just got to be really cautious for a long while.’”

Businesses appear to be less risk-averse now, he said.

After the financial crisis, businesses grew by adding workers, rather than investing in capital. Hiring was more attractive than capital spending because labor was abundant and relatively cheap. Now the supply of workers is tight. Companies are raising pay to lure employees. As a result, many firms have more incentive to grow by investing in capital.

Economists at Morgan Stanley predict that U.S. capital spending will rise to 116% of prerecession levels after three years. By comparison, investment took 10 years to reach those levels once the 2007-09 recession hit.

Company executives are increasingly confident in the economy’s trajectory. The Business Roundtable’s economic-outlook index—a composite of large companies’ plans for hiring and spending, as well as sales projections—increased by nine points in the second quarter to 116, just below 2018’s record high, according to a survey conducted between May 25 and June 9. In the second quarter, the share of companies planning to boost capital investment increased to 59% from 57% in the first.

“We’re seeing really strong reopening demand, and a lot of times capital investment follows that,” said Joe Song, senior U.S. economist at BofA Securities.

Mr. Song added that less uncertainty regarding trade tensions between the U.S. and China should further underpin business confidence and investment. “At the very least, businesses will understand the strategy that the Biden administration is trying to follow and will be able to plan around that,” he said.

#### It’s perception-based---the possibility that precedent could be applied crumbles confidence and spirals into global decline

Mohamed A. El-Erian 17, Chief Economic Adviser at Allianz, Chairman of US President Barack Obama’s Global Development Council, Former CEO of the Harvard Management Company and Deputy Director at the International Monetary Fund, “America’s Confidence Economy”, Project Syndicate, 3/20/2017, https://www.project-syndicate.org/commentary/trump-market-optimism-economic-growth-by-mohamed-a--el-erian-2017-03

The surge in business and consumer sentiment reflects an assumption that is deeply rooted in the American psyche: that deregulation and tax cuts always unleash transformative pro-growth entrepreneurship. (To some outside the US, it is an assumption that sometimes looks a lot like blind faith.)

Of course, sentiment can go in both directions. Just as a “pro-business” stance like Trump’s can boost confidence, perhaps even excessively, the perception that a leader is “anti-business” can cause confidence to fall. Because sentiment can influence actual behavior, these shifts can have far-reaching impacts.

In his groundbreaking General Theory of Employment, Interest, and Money, John Maynard Keynes referred to “animal spirits” as “the characteristic of human nature that a large proportion of our positive activities depend on spontaneous optimism, rather than mathematical expectations, whether moral or hedonistic or economic.” Jack Welch, who led General Electric for 20 years, is a case in point: he once stated that many of his own major business decisions had come “straight from the gut,” rather than from analytical models or detailed business forecasts.

But sentiment is not always an accurate gauge of actual economic developments and prospects. As the Nobel laureate Robert J. Shiller has shown, optimism can evolve into “irrational exuberance,” whereby investors take asset valuations to levels that are divorced from economic fundamentals. They may be able to keep those valuations inflated for quite a while, but there is only so far that sentiment can take companies and economies.

So far, the exuberant reaction of markets to Trump’s victory – all US stock indices have reached multiple record highs – has not been reflected in “hard data.” Moreover, economic forecasters have made only modest upward revisions to their growth projections.

It is not surprising that equity investors have responded to the surge in animal spirits by attempting to run ahead of a possible uptick in economic performance. After all, they are in the business of anticipating developments in the real economy and the corporate sector. In any case, they believe that they can quickly reverse their portfolio positions should their expectations change.

That is not the case for companies investing in new plants and equipment, which are less likely to change their behavior until announcements begin to be translated into real policies. But the longer they wait, the weaker the stimulus to economic activity and income, and the more consumers must rely on dissaving to translate their positive sentiment into actual purchases of goods and services.

It is in this context that the economy awaits a solid timeline for policy announcements to evolve into detailed design and durable implementation. While there is often some delay when political negotiations and trade-offs are involved, in this case, the sense of uncertainty may be heightened by policy-sequencing decisions. By deciding to begin with health-care reform – an inherently complicated and highly divisive issue in US politics – the Trump administration risks losing some of the political goodwill that could be needed to carry out the kinds of fiscal reform that markets are expecting.

Even if a bump in the economic data does arrive, it may not last, unless the Trump administration advances policies that enhance longer-term productivity, through, for example, education reform, apprenticeship programs, skills training, and labor retooling. The Trump administration would also have to refrain from pursuing protectionist trade measures that would disrupt the “spaghetti bowl” of cross-border value chains for both producers and consumers.

If improved confidence in the US economy does not translate into stronger hard data, unmet expectations for economic growth and corporate earnings could cause financial-market sentiment to slump, fueling market volatility and driving down asset prices. In such a scenario, the US engine could sputter, causing the entire global economy to suffer, especially if these economic challenges prompt the Trump administration to implement protectionist measures.

#### Decline cascades---nuclear war

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Various scholars and institutions regard global social instability as the greatest threat facing this decade. The catalyst has been postulated to be a Second Great Depression which, in turn, will have profound implications for global security and national integrity. This paper, written from a broad systems perspective, illustrates how emerging risks are getting more complex and intertwined; blurring boundaries between the economic, environmental, geopolitical, societal and technological taxonomy used by the World Economic Forum for its annual global risk forecasts. Tight couplings in our global systems have also enabled risks accrued in one area to snowball into a full-blown crisis elsewhere. The COVID-19 pandemic and its socioeconomic fallouts exemplify this systemic chain-reaction. Onceinexorable forces of globalization are rupturing as the current global system can no longer be sustained due to poor governance and runaway wealth fractionation. The coronavirus pandemic is also enabling Big Tech to expropriate the levers of governments and mass communications worldwide. This paper concludes by highlighting how this development poses a dilemma for security professionals.

Key Words: Global Systems, Emergence, VUCA, COVID-9, Social Instability, Big Tech, Great Reset

INTRODUCTION

The new decade is witnessing rising volatility across global systems. Pick any random “system” today and chart out its trajectory: Are our education systems becoming more robust and affordable? What about food security? Are our healthcare systems improving? Are our pension systems sound? Wherever one looks, there are dark clouds gathering on a global horizon marked by volatility, uncertainty, complexity and ambiguity (VUCA).

But what exactly is a global system? Our planet itself is an autonomous and selfsustaining mega-system, marked by periodic cycles and elemental vagaries. Human activities within however are not system isolates as our banking, utility, farming, healthcare and retail sectors etc. are increasingly entwined. Risks accrued in one system may cascade into an unforeseen crisis within and/or without (Choo, Smith & McCusker, 2007). Scholars call this phenomenon “emergence”; one where the behaviour of intersecting systems is determined by complex and largely invisible interactions at the substratum (Goldstein, 1999; Holland, 1998).

The ongoing COVID-19 pandemic is a case in point. While experts remain divided over the source and morphology of the virus, the contagion has ramified into a global health crisis and supply chain nightmare. It is also tilting the geopolitical balance. China is the largest exporter of intermediate products, and had generated nearly 20% of global imports in 2015 alone (Cousin, 2020). The pharmaceutical sector is particularly vulnerable. Nearly “85% of medicines in the U.S. strategic national stockpile” sources components from China (Owens, 2020).

An initial run on respiratory masks has now been eclipsed by rowdy queues at supermarkets and the bankruptcy of small businesses. The entire global population – save for major pockets such as Sweden, Belarus, Taiwan and Japan – have been subjected to cyclical lockdowns and quarantines. Never before in history have humans faced such a systemic, borderless calamity.

COVID-19 represents a classic emergent crisis that necessitates real-time response and adaptivity in a real-time world, particularly since the global Just-in-Time (JIT) production and delivery system serves as both an enabler and vector for transboundary risks. From a systems thinking perspective, emerging risk management should therefore address a whole spectrum of activity across the economic, environmental, geopolitical, societal and technological (EEGST) taxonomy. Every emerging threat can be slotted into this taxonomy – a reason why it is used by the World Economic Forum (WEF) for its annual global risk exercises (Maavak, 2019a). As traditional forces of globalization unravel, security professionals should take cognizance of emerging threats through a systems thinking approach.

METHODOLOGY

An EEGST sectional breakdown was adopted to illustrate a sampling of extreme risks facing the world for the 2020-2030 decade. The transcendental quality of emerging risks, as outlined on Figure 1, below, was primarily informed by the following pillars of systems thinking (Rickards, 2020):

• Diminishing diversity (or increasing homogeneity) of actors in the global system (Boli & Thomas, 1997; Meyer, 2000; Young et al, 2006);

• Interconnections in the global system (Homer-Dixon et al, 2015; Lee & Preston, 2012);

• Interactions of actors, events and components in the global system (Buldyrev et al, 2010; Bashan et al, 2013; Homer-Dixon et al, 2015); and

• Adaptive qualities in particular systems (Bodin & Norberg, 2005; Scheffer et al, 2012) Since scholastic material on this topic remains somewhat inchoate, this paper buttresses many of its contentions through secondary (i.e. news/institutional) sources.

ECONOMY

According to Professor Stanislaw Drozdz (2018) of the Polish Academy of Sciences, “a global financial crash of a previously unprecedented scale is highly probable” by the mid- 2020s. This will lead to a trickle-down meltdown, impacting all areas of human activity.

The economist John Mauldin (2018) similarly warns that the “2020s might be the worst decade in US history” and may lead to a Second Great Depression. Other forecasts are equally alarming. According to the International Institute of Finance, global debt may have surpassed $255 trillion by 2020 (IIF, 2019). Yet another study revealed that global debts and liabilities amounted to a staggering $2.5 quadrillion (Ausman, 2018). The reader should note that these figures were tabulated before the COVID-19 outbreak.

The IMF singles out widening income inequality as the trigger for the next Great Depression (Georgieva, 2020). The wealthiest 1% now own more than twice as much wealth as 6.9 billion people (Coffey et al, 2020) and this chasm is widening with each passing month. COVID-19 had, in fact, boosted global billionaire wealth to an unprecedented $10.2 trillion by July 2020 (UBS-PWC, 2020). Global GDP, worth $88 trillion in 2019, may have contracted by 5.2% in 2020 (World Bank, 2020).

As the Greek historian Plutarch warned in the 1st century AD: “An imbalance between rich and poor is the oldest and most fatal ailment of all republics” (Mauldin, 2014). The stability of a society, as Aristotle argued even earlier, depends on a robust middle element or middle class. At the rate the global middle class is facing catastrophic debt and unemployment levels, widespread social disaffection may morph into outright anarchy (Maavak, 2012; DCDC, 2007).

Economic stressors, in transcendent VUCA fashion, may also induce radical geopolitical realignments. Bullions now carry more weight than NATO’s security guarantees in Eastern Europe. After Poland repatriated 100 tons of gold from the Bank of England in 2019, Slovakia, Serbia and Hungary quickly followed suit.

According to former Slovak Premier Robert Fico, this erosion in regional trust was based on historical precedents – in particular the 1938 Munich Agreement which ceded Czechoslovakia’s Sudetenland to Nazi Germany. As Fico reiterated (Dudik & Tomek, 2019):

“You can hardly trust even the closest allies after the Munich Agreement… I guarantee that if something happens, we won’t see a single gram of this (offshore-held) gold. Let’s do it (repatriation) as quickly as possible.” (Parenthesis added by author).

President Aleksandar Vucic of Serbia (a non-NATO nation) justified his central bank’s gold-repatriation program by hinting at economic headwinds ahead: “We see in which direction the crisis in the world is moving” (Dudik & Tomek, 2019). Indeed, with two global Titanics – the United States and China – set on a collision course with a quadrillions-denominated iceberg in the middle, and a viral outbreak on its tip, the seismic ripples will be felt far, wide and for a considerable period.

A reality check is nonetheless needed here: Can additional bullions realistically circumvallate the economies of 80 million plus peoples in these Eastern European nations, worth a collective $1.8 trillion by purchasing power parity? Gold however is a potent psychological symbol as it represents national sovereignty and economic reassurance in a potentially hyperinflationary world. The portents are clear: The current global economic system will be weakened by rising nationalism and autarkic demands. Much uncertainty remains ahead. Mauldin (2018) proposes the introduction of Old Testament-style debt jubilees to facilitate gradual national recoveries. The World Economic Forum, on the other hand, has long proposed a “Great Reset” by 2030; a socialist utopia where “you’ll own nothing and you’ll be happy” (WEF, 2016).

In the final analysis, COVID-19 is not the root cause of the current global economic turmoil; it is merely an accelerant to a burning house of cards that was left smouldering since the 2008 Great Recession (Maavak, 2020a). We also see how the four main pillars of systems thinking (diversity, interconnectivity, interactivity and “adaptivity”) form the mise en scene in a VUCA decade.

ENVIRONMENTAL

What happens to the environment when our economies implode? Think of a debt-laden workforce at sensitive nuclear and chemical plants, along with a concomitant surge in industrial accidents? Economic stressors, workforce demoralization and rampant profiteering – rather than manmade climate change – arguably pose the biggest threats to the environment. In a WEF report, Buehler et al (2017) made the following pre-COVID-19 observation:

The ILO estimates that the annual cost to the global economy from accidents and work-related diseases alone is a staggering $3 trillion. Moreover, a recent report suggests the world’s 3.2 billion workers are increasingly unwell, with the vast majority facing significant economic insecurity: 77% work in part-time, temporary, “vulnerable” or unpaid jobs.

Shouldn’t this phenomenon be better categorized as a societal or economic risk rather than an environmental one? In line with the systems thinking approach, however, global risks can no longer be boxed into a taxonomical silo. Frazzled workforces may precipitate another Bhopal (1984), Chernobyl (1986), Deepwater Horizon (2010) or Flint water crisis (2014). These disasters were notably not the result of manmade climate change. Neither was the Fukushima nuclear disaster (2011) nor the Indian Ocean tsunami (2004). Indeed, the combustion of a long-overlooked cargo of 2,750 tonnes of ammonium nitrate had nearly levelled the city of Beirut, Lebanon, on Aug 4 2020. The explosion left 204 dead; 7,500 injured; US$15 billion in property damages; and an estimated 300,000 people homeless (Urbina, 2020). The environmental costs have yet to be adequately tabulated.

Environmental disasters are more attributable to Black Swan events, systems breakdowns and corporate greed rather than to mundane human activity.

Our JIT world aggravates the cascading potential of risks (Korowicz, 2012). Production and delivery delays, caused by the COVID-19 outbreak, will eventually require industrial overcompensation. This will further stress senior executives, workers, machines and a variety of computerized systems. The trickle-down effects will likely include substandard products, contaminated food and a general lowering in health and safety standards (Maavak, 2019a). Unpaid or demoralized sanitation workers may also resort to indiscriminate waste dumping. Many cities across the United States (and elsewhere in the world) are no longer recycling wastes due to prohibitive costs in the global corona-economy (Liacko, 2021).

Even in good times, strict protocols on waste disposals were routinely ignored. While Sweden championed the global climate change narrative, its clothing flagship H&M was busy covering up toxic effluences disgorged by vendors along the Citarum River in Java, Indonesia. As a result, countless children among 14 million Indonesians straddling the “world’s most polluted river” began to suffer from dermatitis, intestinal problems, developmental disorders, renal failure, chronic bronchitis and cancer (DW, 2020). It is also in cauldrons like the Citarum River where pathogens may mutate with emergent ramifications.

On an equally alarming note, depressed economic conditions have traditionally provided a waste disposal boon for organized crime elements. Throughout 1980s, the Calabriabased ‘Ndrangheta mafia – in collusion with governments in Europe and North America – began to dump radioactive wastes along the coast of Somalia. Reeling from pollution and revenue loss, Somali fisherman eventually resorted to mass piracy (Knaup, 2008).

The coast of Somalia is now a maritime hotspot, and exemplifies an entwined form of economic-environmental-geopolitical-societal emergence. In a VUCA world, indiscriminate waste dumping can unexpectedly morph into a Black Hawk Down incident. The laws of unintended consequences are governed by actors, interconnections, interactions and adaptations in a system under study – as outlined in the methodology section.

Environmentally-devastating industrial sabotages – whether by disgruntled workers, industrial competitors, ideological maniacs or terrorist groups – cannot be discounted in a VUCA world. Immiserated societies, in stark defiance of climate change diktats, may resort to dirty coal plants and wood stoves for survival. Interlinked ecosystems, particularly water resources, may be hijacked by nationalist sentiments. The environmental fallouts of critical infrastructure (CI) breakdowns loom like a Sword of Damocles over this decade.

GEOPOLITICAL

The primary catalyst behind WWII was the Great Depression. Since history often repeats itself, expect familiar bogeymen to reappear in societies roiling with impoverishment and ideological clefts. Anti-Semitism – a societal risk on its own – may reach alarming proportions in the West (Reuters, 2019), possibly forcing Israel to undertake reprisal operations inside allied nations. If that happens, how will affected nations react? Will security resources be reallocated to protect certain minorities (or the Top 1%) while larger segments of society are exposed to restive forces? Balloon effects like these present a classic VUCA problematic.

Contemporary geopolitical risks include a possible Iran-Israel war; US-China military confrontation over Taiwan or the South China Sea; North Korean proliferation of nuclear and missile technologies; an India-Pakistan nuclear war; an Iranian closure of the Straits of Hormuz; fundamentalist-driven implosion in the Islamic world; or a nuclear confrontation between NATO and Russia. Fears that the Jan 3 2020 assassination of Iranian Maj. Gen. Qasem Soleimani might lead to WWIII were grossly overblown. From a systems perspective, the killing of Soleimani did not fundamentally change the actor-interconnection-interaction adaptivity equation in the Middle East. Soleimani was simply a cog who got replaced.

## 3

#### States ought to extend the lifespan of the International Space Station, including continuing cyclical modernization and upgrades of the international space station to indefinitely extend its lifespan.

#### Solves without regulating private industry

Jean-Christophe Mauduit 17. The Fletcher School of Law and Diplomacy at Tufts University. “Collaboration around the International Space Station: science for diplomacy and its implication for U.S.-Russia and China relations.” https://swfound.org/media/205798/sais-conference-jcmauduit-paper.pdf

7. The stability of ISS on the political level

Despite the recent crisis and political skirmishes, the U.S. and Russia still maintained regular talks and diplomatic interactions around common space exploration. In March 2015, only a year after the derogatory comments by Russian Deputy Prime Minister Dmitry Rogozin, Igor Komarov, the current Head of Roscosmos, announced that the Russian space agency and NASA would extend the operation of ISS until 2020 and would be “working together on the program of a future space station” 55 . NASA Administrator Charles Bolden also said that there would also be a joint mission to Mars. Recent talks around a common Moon base, called “Luna 27”, also show E.U. interest and participation to the Russian collaboration proposal56 . On March 1 st 2016, Russian cosmonaut Mikhail Kornienko and American astronaut Scott Kelly, returned from their historic one year long stay aboard the ISS, a collaboration aimed at studying the effect of long-duration missions on the human body57 . To a certain extent it could also be argued that, when President G.W. Bush and his advisors took the initiative to retire the Space Shuttle program back in 2004, the U.S. administration knew it would imply relying on the Russians for sending astronauts in space and saw no issue with it. Furthermore, this dependency was not considered an issue of concern by the administrations in the following years, as the decommissioning of the program was kept on track (the Space Shuttle was eventually retired after the last flight of space shuttle Atlantis, on July 21st , 2011).

As can be seen through those examples, it is therefore reasonable to conclude that, even though politicians and diplomats made rash public statements, space collaboration between the U.S. and Russia remained tight at the level of space agency administrators, astronauts and scientists. If it is to be believed that during the Cold War, astronauts and cosmonauts as well as scientists from both sides of the superpowers could discuss freely enough to come up with diplomatic breakthroughs of such importance as the ASTP and later the ISS, it would be plausible to say that after more than 15 years of collaboration on the ISS, those same actors have forged even stronger links that potentially go well beyond the realm of politics. In a recent interview, NASA Administrator Charles Bolden said that “our relationship with Russia right now is tenuous. Our relationship with Roscosmos is beautiful. The way we cooperate with them, the way we train with them in Houston and Moscow and Star City, we launch out of Baikonur, that’s the model that you want for the future of humanity” 58 . U.S. astronaut Michael Hopkins also recently said that “the cooling relations between Moscow and Washington over Ukraine isn’t felt in space at all”. In turn, the Russian Commander of the ISS Expedition, Oleg Kotov, stated that “the people who work on this program – engineers, constructors, those, who manage the flights – are far from politics and work to achieve one common goal” 59.

What happens when such a highly visible and prestigious endeavor is carried out together by nations? Could it provide added diplomatic stability to the overall relationship?

8. International scientific collaboration around space: interlocked.

The longstanding ISS collaboration between the U.S. and Russia has led to the creation of solid ties between the two agencies and locked their respective scientists in an interdependent, collaborative relationship to the point of becoming an anchor point while geopolitical tensions run high. Indeed, once such a large and prestigious collaboration like the ISS has been started, it is difficult for a nation to unilaterally put an end to it, for several reasons. In their “Case for Managed International Cooperation in Space Exploration” 60 , Broniatowski et al. (2006) highlight that space collaboration saves money and that it generates diplomatic prestige as well as increases political stability.

One of the first reasons is indeed an economic one. After all, the cost of the Space Race had always been a problem for politicians at home, and one of the reason why they actively sought collaboration around space. As early as 1963, President Kennedy had already acknowledged this overlapping interest: “Why should the United States and the Soviet Union, in preparing for such expeditions, become involved in immense duplication of research, construction and expenditure?” 61 . The estimated price tag for the U.S. contribution to the ISS program is a total of $75 billion, of which $30.7 billion consists of Shuttle flights, a costly program62 . This undeniably requires sharing the cost burden among nations. Sharing knowledge and technology therefore also makes sense financially.

The ISS program, with its high visibility worldwide, carries undeniable diplomatic prestige; it is important for nations engaged in space collaboration to show the world that they are contributing to the greater good of humanity and showcase peaceful relationships. Disengaging from the ISS would be seen as an extreme move, one could argue even stronger than the current economic sanctions, and a country leaving the collaboration would suffer negative public repercussions. Storming out of a peaceful room where the greater good is being discussed is never perceived as wise. The continuation of the collaboration is therefore a mandatory act of public diplomacy. At a recent event (5 March 2013) discussing NASA’s role in diplomacy, Kent G. Bress, the Director of Aeronautics and Cross Agency Support Division at NASA’s Office of International and Interagency Relations, declared that “many NASA programs that start out by filling a mission requirement also aid in diplomatic relations, and eventually play a role in public diplomacy” 63 . It is also worthwhile to note that NASA’s main twitter account has more than 3.5 million followers, making it the second largest twitter feed after the White House. Hence space collaboration around the ISS is also a way to show that the disagreements could only be temporary, and that long-term investments in peaceful collaboration are worthwhile and durable, signifying that this “all-time low” is only a lull, and that there is hope for change if politics are reversed on Earth.

## 4

#### Bipartisan anti-china momentum ensures COMPETES passes now and maintains tech leadership, but its narrow

Sayers & Kanapathy 2/15 [ Eric Sayers, a senior vice president at Beacon Global Strategies, and Ivan, a vice president at Beacon Global Strategies, both guest contributors for Foreign Policy magazine “America is Showering China with New Restrctions” https://foreignpolicy.com/2022/02/15/us-china-economic-financial-decoupling-controls-restrictions-sanctions/]

In recent years, Washington’s China policies have expanded rapidly into technology sectors such as telecommunications, semiconductors, data security, and financial services. Growing bipartisan concern about Beijing’s actions and intentions have fueled these developments, with little difference between the Trump and Biden administrations or between the White House and Congress.

The result has been a flurry of new restrictions—including on exports, imports, direct investment, and financial securities—that are fundamentally reshaping the U.S.-China economic relationship. Cross-border business travel between the United States and China, essentially halted for the past two years due to the COVID-19 pandemic, is unlikely to fully rebound because of increased caution and suspicion on both sides of the Pacific.

At the same time as this more defensive approach to economic and technology competition with China has taken root, Congress has also gone on the offensive by moving to appropriate new funding to areas deemed critical to maintaining U.S. competitive advantages in technology, manufacturing, and defense. The current depth and breadth of these approaches were hard to imagine just a few years ago. The corporate sector, besides facing increased government action with respect to doing business with China, must also contend with shifting public opinion and increased investor scrutiny—for example, on human rights issues along companies’ supply lines in China. Looking ahead, 2022 promises a continuation of these trends, which will have far-reaching impacts across multiple business sectors.

In just the last three years, Washington has enacted a raft of policy changes and regulation related to economic competition with China. In early 2018, the Trump administration applied and expanded tariffs on Chinese goods in response to Beijing’s unfair practices, including industrial subsidies, forced technology transfer, and state-sponsored intellectual property theft. Leveraging new laws passed in 2018, Washington expanded the use of export controls in defense technology, imposed stricter vetting of foreign investments in strategic U.S. industries, and restricted the procurement of equipment and services from five Chinese information technology companies, the most prominent of which was Huawei.

The pace and scope of Washington’s policymaking have accelerated in ways not previously considered possible.

In addition, U.S. border agencies shifted their sights from primarily countering terrorists to screening for nontraditional intelligence collectors—for example, journalists, researchers, and businesspeople, who are frequently used by Beijing to gather information—as well as counterfeit goods and goods produced with forced labor. Using presidential emergency powers, the Trump administration also created regimes to remove untrusted contractors from U.S. IT infrastructure projects and block Americans from investing in companies that work with the Chinese military.

To Beijing’s consternation, the Biden administration has signaled its general agreement with all these approaches—and even expanded the investment ban to include Chinese surveillance technology companies. While close U.S. allies in Europe and Asia have been reluctant to impose a similarly broad sweep of policies, the Biden administration has achieved significant rhetorical alignment on defining the challenges posed by Beijing. Under pressure from the Trump administration, several U.S. allies turned away from Huawei, blocked inbound Chinese technology investments, and held up the shipment of critical semiconductor manufacturing equipment to China. However, Europe has yet to follow the United States in imposing real costs on China for its ongoing human rights violations, even though this is a declared point of convergence between the United States and the European Union.

For its part, Congress has passed a slew of China-related bills. Among other actions, legislators have reformed inbound investment screening, forced the delisting of Chinese stocks that do not comply with U.S. accounting practices, expanded requirements for the U.S. Defense Department to list Chinese companies assisting the People’s Liberation Army, strengthened sanctions authorities in response to atrocities in Xinjiang and repression in Hong Kong, presumed that all goods produced in Xinjiang are made with forced labor (and thus banned as imports), and prohibited the federal purchase of Chinese telecommunications equipment.

While Washington mainly focused on defensive measures in recent years, Congress began in 2020 to balance its approach with a more offensive agenda. Efforts to invest in semiconductor manufacturing, accelerate the adoption of 5G telecommunications capabilities, and reorganize the National Science Foundation to focus on increasing U.S competitiveness were all added to the Senate’s U.S. Innovation and Competition Act. The House of Representatives, in turn, recently passed a similar bill—the America COMPETES Act of 2022—so the prospects for final passage of a bipartisan competitiveness bill sometime this spring look strong.

This flurry of activity raises the question of what comes next. Looming issues such as rising inflation, possible new variants of COVID-19, and Russian aggression toward Ukraine could take Washington’s attention away from China policy, at least temporarily. At the same time, there is a strong bipartisan consensus—between the White House and Congress—on China. In particular, there are five policy areas where further action appears imminent this year.

#### **The plan creates a massive ideological battle over the private sector that derails the agenda**

Weeden 13 [Brian Weeden, Technical Advisor for Secure World Foundation, served 9 years on active duty as an officer in the United States Air Force working in space and (ICBM) operations, Vice-Chair of the World Economic Forum’s Global Agenda Council on Space Security, September 2013. “U.S.-China Cooperation in Space: Constraints, Possibilities, and Options.” https://www.files.ethz.ch/isn/170907/Anti-satellite\_Weapons.pdf]

There are also strong disadvantages working against human spaceflight as a feasible area of US-China cooperation. The political importance and prestige associated with human spaceflight is accompanied by elements of nationalism and protectionism. The Chinese technical community is justifiably proud about its accomplishments in human spaceflight, without what might be perceived as “help” from other countries, especially the United States. Some US legislators believe that the prestige of human spaceflight cooperation should not be offered until China has made tangible progress on areas such as human rights and freedom of religious practices. Large, collaborative human spaceflight programs are also likely to engender strong pushback from powerful constituencies. Some would oppose it on ideological grounds, including those who view human spaceflight as wasteful government spending on something that should be done by the private sector, with government funding better spent on tackling social problems such as education or poverty. Political leaders may be unwilling or unable to absorb this pressure, especially if it results in obstacles being created on other high-priority political initiatives.

#### The bill is uniquely key to solve Chinese and Russian tech supremacy

Seattle 2/16 [Seattle Times, leading newspaper serving the greater Seattle area. “Congress must unite behind China competitiveness bill” https://www.hawaiitribune-herald.com/2022/02/16/opinion/congress-must-unite-behind-china-competitiveness-bill/]

Under the shadow of growing tensions with Beijing, the U.S. House of Representatives has approved a bill that would help the United States remain economically competitive with China. It will now need to be reconciled with similar legislation that passed the Senate last year.

Congress must not allow partisan squabbles to scuttle this vital proposal.

Republicans, who supported the U.S. Senate’s United States Innovation and Competition Act, have so far turned their back on the House version, known as the America COMPETES Act, saying the bill includes unacceptable provisions related to labor, foreign policy and climate change.

While differences exist — and their merits are worth debating — both bills promise to fund the critical need to address supply-chain vulnerabilities and increase computer chip production in the U.S. They also include a major investment in ensuring America’s place as the leader in scientific research and innovation.

These similarities should be the focus, said U.S. Sen. Maria Cantwell, D-Wash., who heads the Senate Committee on Commerce, Science and Transportation. Both bills call for a $52 billion investment in the semiconductor industry, about $160 billion for research and development agencies such as the National Science Foundation and the Department of Energy, as well as funding to reduce STEM workforce gaps.

“This would be the largest five-year commitment to public R&D in our nation’s history,” Cantwell said. “We need it for the job growth. We need it to stay competitive.”

The legislation would also create some manufacturing jobs in the U.S., but the benefit to American workers may be strongest in improved protection from global market volatility, said Jeffrey Kucik, an associate professor at the University of Arizona.

“It’s about insulating the domestic market from unpredictable global forces,” he said. “Whether that’s the pandemic, or the Great Recession, or shocks associated with the escalation of the U.S.-China trade war.”

For their part, Chinese officials have repeatedly labeled these legislative efforts as the product of a “Cold War mentality.”

It was ironic, then, to see President Xi Jinping of China and Russian President Vladimir Putin warmly meet on the sidelines of the Winter Olympics in Beijing. Even more so was their joint statement, which sent a message of cooperation between the two countries not seen since Josef Stalin and Mao Zedong.

Their statement, which includes support for each other’s foreign policies, underlines the precarious situation surrounding existential threats to Ukraine and Taiwan. It also underlines the need for Congress to act.

#### Authoritarian tech lead is an S-Risk of irreversible, constant suffering. That outweighs extinction

Minardi 20 [Di Minardi, "The grim fate that could be ‘worse than extinction’", 10/15/20, https://www.bbc.com/future/article/20201014-totalitarian-world-in-chains-artificial-intelligence]

What would totalitarian governments of the past have looked like if they were never defeated? The Nazis operated with 20th Century technology and it still took a world war to stop them. How much more powerful – and permanent – could the Nazis have been if they had beat the US to the atomic bomb? Controlling the most advanced technology of the time could have solidified Nazi power and changed the course of history.

When we think of existential risks, events like nuclear war or asteroid impacts often come to mind. Yet there’s one future threat that is less well known – and while it doesn’t involve the extinction of our species, it could be just as bad.

It’s called the “world in chains” scenario, where, like the preceding thought experiment, a global totalitarian government uses a novel technology to lock a majority of the world into perpetual suffering. If it sounds grim, you’d be right. But is it likely? Researchers and philosophers are beginning to ponder how it might come about – and, more importantly, what we can do to avoid it.

Existential risks (x-risks) are disastrous because they lock humanity into a single fate, like the permanent collapse of civilisation or the extinction of our species. These catastrophes can have natural causes, like an asteroid impact or a supervolcano, or be human-made from sources like nuclear war or climate change. Allowing one to happen would be “an abject end to the human story" and would let down the hundreds of generations that came before us, says Haydn Belfield, academic project manager at the Centre for the Study of Existential Risk at the University of Cambridge.

Toby Ord, a senior research fellow at the Future of Humanity Institute (FHI) at Oxford University, believes that the odds of an existential catastrophe happening this century from natural causes are less than one in 2,000, because humans have survived for 2,000 centuries without one. However, when he adds the probability of human-made disasters, Ord believes the chances increase to a startling one in six. He refers to this century as “the precipice” because the risk of losing our future has never been so high.

Researchers at the Center on Long-Term Risk, a non-profit research institute in London, have expanded upon x-risks with the even-more-chilling prospect of suffering risks. These “s-risks” are defined as “suffering on an astronomical scale, vastly exceeding all suffering that has existed on Earth so far.” In these scenarios, life continues for billions of people, but the quality is so low and the outlook so bleak that dying out would be preferable. In short: a future with negative value is worse than one with no value at all.

This is where the “world in chains” scenario comes in. If a malevolent group or government suddenly gained world-dominating power through technology, and there was nothing to stand in its way, it could lead to an extended period of abject suffering and subjugation. A 2017 report on existential risks from the Global Priorities Project, in conjunction with FHI and the Ministry for Foreign Affairs of Finland, warned that “a long future under a particularly brutal global totalitarian state could arguably be worse than complete extinction”.

Singleton hypothesis

Though global totalitarianism is still a niche topic of study, researchers in the field of existential risk are increasingly turning their attention to its most likely cause: artificial intelligence.

In his “singleton hypothesis”, Nick Bostrom, director at Oxford’s FHI, has explained how a global government could form with AI or other powerful technologies – and why it might be impossible to overthrow. He writes that a world with “a single decision-making agency at the highest level” could occur if that agency “obtains a decisive lead through a technological breakthrough in artificial intelligence or molecular nanotechnology”. Once in charge, it would control advances in technology that prevent internal challenges, like surveillance or autonomous weapons, and, with this monopoly, remain perpetually stable.

If the singleton is totalitarian, life would be bleak. Even in the countries with the strictest regimes, news leaks in and out from other countries and people can escape. A global totalitarian rule would eliminate even these small seeds of hope. To be worse than extinction, “that would mean we feel absolutely no freedom, no privacy, no hope of escaping, no agency to control our lives at all", says Tucker Davey, a writer at the Future of Life Institute in Massachusetts, which focuses on existential risk research.

“In totalitarian regimes of the past, [there was] so much paranoia and psychological suffering because you just have no idea if you're going to get killed for saying the wrong thing,” he continues. “And now imagine that there's not even a question, every single thing you say is being reported and being analysed.”

“We may not yet have the technologies to do this,” Ord said in a recent interview, “but it looks like the kinds of technologies we’re developing make that easier and easier. And it seems plausible that this may become possible at some time in the next 100 years.”

AI and authoritarianism

Though life under a global totalitarian government is still an unlikely and far-future scenario, AI is already enabling authoritarianism in some countries and strengthening infrastructure that could be seized by an opportunistic despot in others.

“We've seen sort of a reckoning with the shift from very utopian visions of what technology might bring to much more sobering realities that are, in some respects, already quite dystopian,” says Elsa Kania, an adjunct senior fellow at the Center for New American Security, a bipartisan non-profit that develops national security and defence policies.

## Case

#### 2 Top-Level Issues that should render a Neg Ballot on Presumption –

#### 1] Companies will just build Space Stations that aren't explicitly meant to “replace the ISS” – there’s no Brightline or way to verify meaning the Plan effectively does nothing cause companies have incentives to be sketch.

#### 2] If Government’s hiring Private Companies isn’t private appropriation – then they can’t solve the ISS being replaced since the US is funding those Private Companies meaning it’s not Private entities.

#### Public control stuff doesn’t solve our offense – either the ISS is extended and collaborates with the commercial sector in which case all our ISS bad offense applies, or publicly owned commercial stations replace the ISS, which zeros all their ISS good offense

#### There’s no way multilateralism can be reinvigorated by one space station especially when everyone in the world literally despises Russia

#### ISS fails to spur Global Cooperation – it excluded China which causes shift to Chinese dominance ABSENT US replacements.

Young 19 (Makena Young, research associate with the Aerospace Security Project at the Center for Strategic and International Studies (CSIS). Prior to joining CSIS, Ms. Young worked for the Federal Aviation Administration as an aerospace engineer, focusing on automatic dependent surveillance-broadcast certification and integration in small aircraft.)(“Bad Idea: The Wolf Amendment (Limiting Collaboration with China in Space)”, December 4, 2019, https://defense360.csis.org/bad-idea-the-wolf-amendment-limiting-collaboration-with-china-in-space/)//ASMITH

In 2011, Representative Frank Wolf (R-VA) introduced what is now commonly referred to as the Wolf Amendment into the annual commerce, justice, and science (CJS) appropriations bill. This amendment limits U.S. government agencies, such as the National Aeronautics and Space Administration (NASA), from working with Chinese commercial or government agencies. Although Rep Wolf retired in 2014, the amendment has perpetuated and continues to be [included](https://appropriations.house.gov/sites/democrats.appropriations.house.gov/files/FY2020%20CJS%20Sub%20Markup%20Draft.pdf) in the annual CJS appropriations bill. Though the amendment does not prohibit all collaboration between the two countries, the result has proven to be a significant hindrance to bilateral civil space projects. Keeping the Wolf Amendment language is in every sense a bad idea: it does nothing to promote human rights and it hands China an opportunity to challenge NASA’s leadership in civil space exploration.

The [language](https://www.govinfo.gov/content/pkg/PLAW-112publ55/html/PLAW-112publ55.htm) of the Wolf Amendment says that no government funding for NASA, the White House’s Office of Science and Technology Policy (OSTP), or the National Space Council can be used to collaborate with, host, or coordinate bilaterally with China or Chinese-owned companies without certification from the Federal Bureau of Investigations (FBI). The FBI must certify that there is no risk of information sharing and that none of the Chinese officials involved have been determined by the United States to have direct involvement with violations of human rights. In a [2013 letter](https://www.theepochtimes.com/frank-wolfs-letter-on-nasa-controversy_312410.html) to former NASA Administrator Charles Bolden, Representative Wolf stated his “efforts to limit new collaboration with China until we see improvements in its human rights records.”

However, in the eight years since the first iteration of this amendment, the U.S. has not seen the desired changes in Chinese human rights policies that the Wolf Amendment was intended to spur. And during that time, China’s economy, global influence, and space capabilities have continued to grow. Being left out of U.S.-led international missions has not deterred China in space, but instead has pushed China to develop parallel capabilities on its own. Without a way to contribute to the International Space Station (ISS), China began development and testing its own modular space station. China launched the Tiangong-1 and Tiangong-2 [space laboratories](https://chinapower.csis.org/chinese-space-station/) in 2011 and 2016, respectively, as testbeds for a permanent space station. The China National Space Administration (CNSA) has announced that the permanent Chinese Space Station (CSS) should be fully operational by the year 2022.

With the ISS slated for retirement in 2024, other countries that want a long-term human presence in low Earth orbit may be lured into partnering with China on the CSS. Combined with a growing commercial space sector in China that promises to offer [frequent launches](https://www.technologyreview.com/s/612595/china-launched-more-rockets-into-orbit-in-2018-than-any-other-country/) at lucrative prices to foreign entities, China is positioning itself to be the partner nation of choice for future space exploration missions. As NASA enters into a new era of exploration with its Moon-to-Mars projects, it is [touting](https://twitter.com/JimBridenstine/status/1049063320668573696) international collaboration as an integral part of its plans. The [Artemis](https://www.nasa.gov/feature/nasa-gains-broad-international-support-for-artemis-program-at-iac) and [Lunar Gateway](https://www.geekwire.com/2019/worlds-space-agencies-focus-roles-gateway-moon-missions/) programs are working to establish partnerships with Canada, Australia, the European Space Agency, Japan, and possibly Russia. Closing China off from cooperating in these projects could be a strategic mistake.

Both NASA and CNSA share a common goal of exploring the moon for scientific purposes—as is evident by China’s Chang’e 4 rover that landed on the far side of the moon this year. NASA cooperated with CNSA to monitor the landing of the Chinese rover—the first major act of cooperation between the two space agencies in eight years. CNSA provided the planned location and time of the landing, and NASA observed the lander and shared the images that were produced. NASA was able to cooperate on this mission because it certified to Congress that this activity “[did not](https://www.scientificamerican.com/article/farside-politics-the-west-eyes-moon-cooperation-with-china/) pose a risk of resulting in the transfer of technology, data or other information…with China; and [did] not involve knowing interactions with officials who have been determined by the U.S. to have direct involvement with violations of human rights”. To ensure no private data sharing between the two nations, they agreed that any significant findings would be shared globally. This cooperation was a benefit for both space agencies, and although conducted as a one-time informal agreement, it could set precedent for continued cooperation between these two major space powers. Information sharing, even in small instances, can start to build confidence and trust and ultimately could be a tool used to prevent or de-escalate future conflicts in space.

Collaborating with non-allied countries in space is not a foreign concept for NASA. In the height of the Cold War, the U.S. and Soviet space agencies agreed to work together. President Eisenhower pursued these cooperative initiatives in early [letters](https://www.nasa.gov/50th/50th_magazine/coldWarCoOp.html) to Soviet leadership to showcase the peaceful uses of space. Collaborating on missions like the [Apollo-Soyuz](https://www.nasa.gov/apollo-soyuz/overview) test project and later the [Shuttle-Mir](https://www.nasa.gov/mission_pages/shuttle-mir/) program helped propel human space exploration and established a mutually beneficial area of cooperation and communication between the two rivals. This collaboration proved invaluable for both countries in understanding the capabilities and organization of each other’s civil space agencies, and it continues today on the ISS.

As China grows as a space power, U.S. cooperation in selected civil space projects could be one of the best ways to understand the goals and capabilities of the Chinese space agency. Moreover, it would establish avenues of communication and trust between the two nations that could be mutually beneficial in the future. The Wolf Amendment’s statutory exclusion of U.S. – Chinese bilateral cooperation in space has only incentivized China to accelerate its space development programs, creating a serious challenger to U.S. leadership in this vital domain of exploration. History has shown that when the U.S. cooperates with foreign competitors in civil space projects, it enhances NASA’s leadership role. The Wolf Amendment has neither discouraged Chinese space ambitions or altered China’s behavior on human rights—it has only muddled our relationship with China and created an opening for a challenger to NASA’s leadership role in space exploration. The provisions of the Wolf Amendment are not needed to protect technology transfer and only serve to stifle mutually beneficial cooperation for science and exploration. It is time to stop howling at the thought of cooperating with China for exploration missions to the Moon and revise the Wolf Amendment.

#### Ineffective laws.

Michael Williams 2021 [Filling the Void: Why Existing International Law is Not Suited to Mitigating Space Debris] [DS] [http://www.mjilonline.org/filling-the-void-why-existing-international-law-is-not-suited-to-mitigating-space-debris/]

Space and the sea have long been paralleled, each seen as a type of res communis. There has been a push to try to understand the former through a similar lens as the latter. Space, however, provides new and complex issues that do not lend themselves well to being approached through existing frameworks. One such issue forthcoming is addressing the fear of the Kessler syndrome[1]. The Kessler syndrome, also known as ablation cascade or collision cascading, is a theoretical scenario in which a high density of space debris pollution increases the density of space debris as objects collide. As objects collide, more objects are produced generating a positive feedback loop and the likelihood of collisions increases exponentially. The fear is that as the density of space debris in low earth orbits (LEO) is increased, our ability to access space is diminished. Rockets traversing in a LEO can be rendered inoperable, or even destroyed, by pieces of debris no larger than golf balls. This fear has risen drastically as states, such as China beginning in 2007, have begun testing anti-satellite missiles which turn one item of space debris into several thousands.[2] The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies applies international law to space, but current international law – absent a new treaty – is insufficient to address the Kessler syndrome.[3] As it currently stands, soft law, customary international law, and existing treaties do not sufficiently address the issue of space debris. The strongest argument for a soft law approach to space debris mitigation is the Space Debris Mitigation Guidelines, drafted by the Committee on the Peaceful Uses of Outer Space and endorsed by the United Nations General Assembly in 2007.[4] As part of these guidelines, member states are encouraged to utilize rockets that limit debris produced during normal operations and that any manmade object placed in LEO should only reside there so long as they remain operational and should be removed from orbit in a controlled fashion following termination of operation. As these requirements are all soft law, none of them are mandatory and member states are encouraged to comply on their own initiative. This approach fails to solve the issue for the same host of reasons that soft law has proven largely insufficient to address large scale tragedies of the common issues. Spacefaring member states have no incentive to comply, no penalty for noncompliance, and, perhaps more uniquely, the technology is still undeveloped that allows for full compliance. The recently signed Artemis Accords, however, holds that NASA and member states shall act in a manner that is consistent with the Space Debris Mitigation Guidelines, but it remains unclear to what extent member states will regulate the rapidly growing number of space fairing corporations.[5] Customary international law faces several hurdles when addressing this issue and ultimately stumbles, proving insufficient. When drafting the United Nations Convention on the Law of the Sea (UNCLOS), there were thousands of years of seafaring to look to for what the existing customary law was at that time.[6] This is not the case with spacefaring, and parallels that can be established – if any – do not provide a strong enough foundation to build on. The Debris Mitigation Guidelines could either be a codification of customary international law in 2007 or could have become customary international law through practice and opinio juris since endorsement. It is unlikely that it codified customary international law as there is such a short window of time and so few states participated in this process of space debris mitigation before 2007. Equally unlikely is that it has become customary international law since 2007. Customary international law requires the practice of states engaged in the action – a small number here – but there has been hardly any compliance with the guidelines beyond verbal promises and guarantees. There has been zero opinio juris on the subject, unsurprising given the lack of state practice. Even if we viewed the Debris Mitigation Guidelines as binding member states through customary international law, this would again fail to address the debris left in space by corporations. The Space Liability Convention, in conjunction with Article 31 of the Vienna Convention on the Law of Treaties, could be seen as addressing the issue of manmade space debris, but this stretches the bounds of treaty interpretation to its uttermost limits.[7] There has only been one claim under the Space Liability Convention so it can hardly be argued there is sufficient subsequent practice.[8] The definitions contained within the Space Liability Convention have, to some academics and scholars, been viewed as covering space debris. This interpretation is only possible due to the wide array of tracking of space debris and its origins.[9] Absent being able to understand where space debris originated it would be impossible to assign liability to the launching state or party. Even with tracking, fault-based liability hardly addresses space debris that is the result of a true accident. The Outer Space Treaty and the Registration Convention, the two other major treaties in the international space law regime create a patchwork framework that is nearly too vague to be usable.[10] To truly address this issue, and others, in this new frontier, a treaty of the magnitude of UNCLOS is needed. A treaty of this scale is necessary, compared to a mere framework convention, to protect the rights of all mankind, including nations who have not yet ventured into space. To truly address the issue, such a treaty would need to hold member states strictly liable for the acts committed by private entities within their borders. As with natural resources in the high seas, we cannot let the first nations to reach space pollute it beyond usability before other nations are able to partake as well. Space, and access to it, must be a resource for all mankind.

#### Answering Private Stations Bad – 1] We flip U/Q for “Unproven” since we obviously haven’t built one BUT the ISS is falling so there isn’t an alternative and 2] “Decades away” is power-tagged – it says “years” which matters because we have 6 years until the ISS is ending meaning this isn’t offense.

#### Won’t take Decades – they re-purpose useful ISS infrastructure – your 1AC Evidence

1AC Heilwell 12/03 Rebecca Heilweil, Updated 12-03-2021, "NASA gave Jeff Bezos money to build his office park in space", Vox, https://www.vox.com/recode/2021/10/27/22747509/blue-origin-orbital-reef-office-park-bezos, (Reporter for Open Sourced, covering emerging technologies, artificial intelligence, and logistics) //Miller

After more than two decades in orbit, NASA is preparing to retire the International Space Station. The habitable satellite only has permission to operate until 2024, and while it’s likely that the space station’s funding could be extended until 2028, NASA plans to decommission the ISS and find a replacement by the end of the decade. Cue Jeff Bezos. The billionaire’s spaceflight company, Blue Origin, has proposed a new commercial space station called Orbital Reef, which would provide a “mixed use business park” in space. This concept now has the support of NASA. The agency announced on Thursday that it would award Blue Origin and its partner companies $130 million to develop the space station, which NASA hopes will launch before 2030. With the help of several other companies, including Sierra Space and Boeing, Blue Origin plans to build a satellite that’s slightly smaller than the ISS and houses up to 10 people. The design includes desk space, computers, laboratories, a garden, and 3D printers. The goal, the company says, is to lease out office space to interested parties, including government agencies, researchers, tourism companies, and even movie production crews. Blue Origin’s plan is predicated on the idea that the end is coming for the ISS, which NASA is still figuring out how exactly to remove from orbit. While space stations have been helpful for space exploration, Blue Origin senior vice president Brent Sherwood argued in an October op-ed that private companies now have the capabilities to take over much of the burgeoning economy in low-Earth orbit, or LEO. Blue Origin is even building a space tug, a transport vehicle that moves cargo between different orbits, that could reportedly be used to salvage parts from the ISS and incorporate them into Orbital Reef’s systems. NASA doesn’t mind the corporate takeover of low-Earth orbit. The agency’s first space station, SkyLab, was only in orbit for a few months before NASA let the vehicle descend and decompose into the atmosphere. The space agency has been weighing defunding the ISS, which is full of aging hardware, for several years, and NASA’s investment in Orbital Reef is part of more than $400 million in funding that the agency has set aside to develop new, privately built and operated space stations through its Commercial LEO Destinations program. Eventually, NASA hopes that it can send its astronauts to these stations instead of paying to maintain the ISS. Overall, the plan could save the government more than $1 billion every year. “This is technology that is over 20 years old at this point. When you expose that infrastructure to radiation, solar weather ... things are going to break down,” Wendy Whitman Cobb, a professor at the US Air Force’s School of Air and Space Studies, told Recode. “Having these commercial space stations will be a way of America keeping their foot in low-Earth orbit while focusing more of their resources on moon and Mars exploration.” In the meantime, NASA is currently focusing on the Artemis program, an ambitious plan to establish a long-term human presence on the moon. The agency intends to send people to the moon for the first time in decades as soon as 2025, and hopes the project will eventually serve as a stepping stone to future exploration of Mars. Private companies, including Blue Origin, have desperately fought for a role in this prestigious mission, and especially a lucrative contract to develop pivotal moon landing technology. SpaceX won that contract earlier this year, prompting Bezos’s company to sue NASA and lobby the Senate to reverse the decision. Those efforts have yet to bear fruit, so Bezos now seems to be turning his attention back to the low-Earth orbit economy, where there are more customers and less competition from Elon Musk. “Most, if not all, of the problems or the challenges that need to be worked to have a commercial LEO destination have already been solved by the International Space Station program,” Sherwood, of Blue Origin, said in a Thursday press conference. “That’s the explanation for why we can develop a commercial space station for so much less than it cost NASA the first time.” But there’s reason to believe that the Orbital Reef project may not succeed in the near future — or at all. Blue Origin still hasn’t launched humans into orbit, a feat SpaceX achieved last month during the Inspiration4 mission. Blue Origin also lists its New Glenn reusable launch system and Boeing’s Starliner crew vehicle as pivotal parts of the Orbital Reef plan, but both vehicles have yet to conduct a problem-free spaceflight. Blue Origin isn’t the only company vying to replace the ISS. NASA has also awarded funding to two other space station concepts, which were selected from 11 proposals sent to the agency’s Commercial LEO Destinations program. NASA awarded $160 million to a company called Nanoracks, which is developing a space station called Starlab in partnership with its majority owner Voyager Space and Lockheed Martin. Starlab will house up to four people at any one time, and will include a specialized research laboratory. Northrop Grumman, an aerospace company that frequently collaborates with NASA, will also receive $125.6 million to develop its space station concept, which is designed to house four astronauts and last at least 15 years. At the same time, NASA has already agreed to pay the space company Axiom Space $140 million to help build at least one module, or detachable space station component, that will be conjoined to the ISS. That module will eventually be spun out and attached to several other modules to form a separate, fully functional space station when the ISS winds down operations. That approach is supposed to make it easier to transfer the hardware that’s currently aboard the ISS onto a new vehicle. A NASA spokesperson has described the current moment as “a renaissance for human spaceflight.” In an October statement, the spokesperson said, “As more people fly to space and do more things during their spaceflights, it attracts even more people to do more activities in low-Earth orbit and reflects the growing market we envisioned when we began NASA’s Commercial Crew Program 10 years ago.” For NASA, it’s also critical that at least one of these companies succeeds, and it’s possible that more than one is ultimately launched into orbit. After all, time is running out on the ISS, where malfunctions and outdated technology and equipment are common. Without private companies stepping in to build an alternative, the US government risks a future where it has a human presence on the moon and Earth, and nowhere in the middle.

#### No resiliency –

#### 1] ISS failure inevitable.

Foust 21 Jeff Foust 12-1-2021 "NASA inspector general warns of space station gap" <https://spacenews.com/nasa-inspector-general-warns-of-space-station-gap/> (Jeff Foust writes about space policy, commercial space, and related topics for SpaceNews. He earned a Ph.D. in planetary sciences from the Massachusetts Institute of Technology and a bachelor’s degree with honors in geophysics and planetary science from the California Institute of Technology.)//Elmer

WASHINGTON — Concerns about the long-term viability of some existing International Space Station modules and the potential of delays in development of commercial space stations heighten the risk of a gap in low Earth orbit destinations, a new report warns. The Nov. 30 report by NASA’s Office of Inspector General (OIG) said that any gap in LEO destinations between the retirement of the ISS and beginning of operation of commercial stations would heighten risk for future human missions beyond Earth orbit by halting research and threaten the collapse of the LEO commercial space economy. NASA’s current plans call for operating the ISS through the end of the decade, pending a formal authorization from Congress and approvals from international partners. At the same time, NASA is working to support development of commercial stations with the goal of having at least one in service in 2028, enabling a two-year transition before the ISS is retired. One threat to that schedule, the report concluded, is the health of the ISS itself. It noted in particular air leaks in the Zvezda service module, the third-oldest module and in orbit since 2000. Those leaks were first detected in September 2019 and, at one point, caused the rate of air loss on the station to increase by a factor of five to 1.35 kilograms per day. Those leaks were traced to a transfer tunnel between the module and a docking port, but repair work to seal a crack found there did not solve the problem, with the air loss rate still double the baseline rate of about 0.27 kilograms per day. “This elevated rate suggests that additional undiscovered leaks may still exist in the Service Module Transfer Tunnel,” the OIG report concluded. While efforts to locate the source of the leaks in that module continue, the report said that the cause of the cracks remains unclear, other than that impacts by micrometeoroids and orbital debris had been ruled out. “Potential causes of the cracks and leaks being explored include fatigue, internal damage, external damage, and material defects,” it stated. Those cracks are in a “low stress part” of the module, the report added, heightening concerns. “Notably, based on the models and design mission dynamic loads NASA used to characterize the structure, the cracks should not have occurred,” the OIG stated. “NASA engineers are also reviewing whether the analysis of other segments may need to be updated based on these observations because until the root cause of the cracks is identified the situation raises potential implications for the Station’s long-term structural health.” In an agency response included in the report, Kathy Lueders, NASA associate administrator for space operations, said that NASA and Roscosmos are continuing to study the cracks, including work on the station itself as well as ground-based testing. Preliminary results of that investigation should be done by the end of March, she said. At worst, that tunnel could be sealed off, halting the overall loss of air but also losing access to that docking port. Lueders said with that work to address the Zvezda air leak, “NASA is confident in moving forward with plans to extend the ISS, noting that we will continue to monitor and evaluate ISS health as we go forward.” The OIG report also raised questions about the ability of commercial stations to be ready by the end of the decade. NASA’s LEO commercialization efforts “show promise,” the report said, but highlighted issues about the viability of commercial markets for such stations, costs to develop those facilities, uncertain NASA funding, schedules and requirements. The report was particularly skeptical about schedules. “In our judgment, even if early design maturation is achieved in 2025 — a challenging prospect in itself — a commercial platform is not likely to be ready until well after 2030,” it stated, noting it took eight years for the commercial crew program to go from early design maturation to first crewed flight. “We found that commercial partners agree that NASA’s current timeframe to design and build a human-rated destination platform is unrealistic.” That means further extensions of the ISS beyond 2030 may be needed to avoid a gap, assuming the station is technically able to continue operations into the next decade. “However, the Agency faces significant challenges with executing its commercialization plan by 2028 or even 2030 — meaning that without further extension of the ISS, a gap in availability of a low Earth orbit destination is likely,” the report concluded.

#### 2] Leaks make failure likely now rather than later – independently means countries leave wrecking Multilat.

BBC 21 9-1-2021 "International Space Station facing irreparable failures, Russia warns" <https://www.bbc.com/news/world-europe-58408911#:~:text=International%20Space%20Station%20facing%20irreparable%20failures%2C%20Russia%20warns,-1%20September%202021&text=The%20International%20Space%20Station%20(ISS,a%20Russian%20official%20has%20warned.&text=Russia%20has%20often%20raised%20concerns,leave%20the%20ISS%20after%202025>. //Elmer

The International Space Station (ISS) could suffer "irreparable" failures due to outdated equipment and hardware, a Russian official has warned. At least 80 percent of in-flight systems on the Russian segment of the ISS had passed their expiry date, Vladimir Solovyov told state media. He also said small cracks had been discovered that could worsen over time. Russia has often raised concerns over hardware and has suggested it could leave the ISS after 2025. The station was built in 1998 as part of a joint project between Russia, America, Canada, Japan and several European countries and was originally designed for a 15-year lifespan. Mr Solovyov, the chief engineer at the space company Energia, which is the leading developer of Russia's section of the ISS, said: "Literally a day after the [in-flight] systems are fully exhausted, irreparable failures may begin." He warned last year that much of the equipment on the station was starting to age and would soon need to be replaced. The former cosmonaut also announced that "superficial" cracks had been discovered on Russia's Zarya cargo module. Launched in 1998, it is one of the oldest modules of the ISS and is now primarily used for storage. "This is bad and suggests that the fissures will begin to spread over time," Mr Solovyov told the RIA news agency. In April, Russia's Deputy Prime Minister Yuri Borisov told state TV that aging metal on the station could "lead to irreversible consequences - to catastrophe. We mustn't let that happen". And Roscosmos, the Russian space agency, said last year that structural fatigue meant the ISS would not be capable of operating beyond 2030.

#### 3] The Line about “Good years Left” is citing the Boeing ISS Manager who is the contractor for the ISS - obviously biased.

#### No “counter heg pushes”

Shifrinson 19 [Joshua Shifrinson is an Assistant Professor of International Relations with the Pardee School of Global Affairs at Boston University. Should the United States Fear China’s Rise? Winter 2019. www.bu.edu/pardeeschool/files/2019/01/Winter-2019\_Shifrinson\_0.pdf]

In short, limited predation—not an overt and outright push to overtake and challenge the United States—is the name of China’s current and highly rational game. As significantly, it appears Chinese leaders are aware of the structural logic of the situation. Despite ongoing debate over the extent to which China has departed from its long-standing “hide strength, bide time” strategy first formulated by Deng Xiaoping in favor a more assertive course seeking to increase Chinese influence in world affairs, Chinese leaders and China watchers have been at pains to point out that Chinese strategy still seeks to avoid provoking conflict with the United States.49 As one analyst notes, China’s decision to carve out a more prominent role for itself in world politics has been coupled with an effort to reassure and engage the United States so as to avoid unneeded competition while facilitating stability.50 Chinese leaders echo these themes, with one senior official noting in 2014 that Chinese policy focused on “properly addressing] conflicts and differences through dialogue and cooperation instead of confrontational approaches.”51 Xi Jinping himself has underlined these currents, arguing even before taking office that U.S.-Chinese relations should be premised on “preventing conflict and confrontation,” and more recently vowing that “China will promote coordination and cooperation with other major countries.”52 Ultimately, as one scholar observes, there is “hardly evidence that [... China has] begun to focus on hegemonic competition.”53 Put another way, China’s leaders appear aware of the risks of taking an overly confrontational stance toward a still-potent United States and have scoped Chinese ambitions accordingly.

#### Space not k2 heg

Cheng 17 [Dean Cheng, Senior Research Fellow, Asian Studies Center, Davis Institute for National Security and Foreign Policy Heritage. The U.S.-Japan Alliance and Deterring Gray Zone Coercion in the Maritime, Cyber, and Space Domains. Chapter 6. Space Deterrence, the U.S.-Japan Alliance, and Asian Security: A U.S. Perspective. Rand Corporation. 2017]

But while there may be clashes in space, the actual source of any Sino-American conflict will remain earthbound, most likely stemming from tensions associated with the situation in the East China Sea, the Taiwan Strait, or the South China Sea. This suggests that U.S. and allied decisionmakers (both in Asia and Europe) should be focusing on deterring aggression in general, rather than concentrating primarily on trying to forestall actions in space. Indeed, there is little evidence that Chinese military planners are contemplating a conflict limited to space. While there may be actions against space systems, Chinese writings suggest that they would either be limited in nature, as part of a signaling and coercive effort, or else would be integrated with broader terrestrial military operations.

#### No heg impact

Fettweis 17 [Christopher Fettweis, associate professor of political science at Tulane University. Unipolarity, Hegemony, and the New Peace. May 8, 2017. http://www.tandfonline.com/doi/pdf/10.1080/09636412.2017.1306394?needAccess=true]

After three years in the White House, Ronald Reagan had learned something surprising: “Many people at the top of the Soviet hierarchy were genuinely afraid of America and Americans,” he wrote in his autobiography. He continued: “Perhaps this shouldn’t have surprised me, but it did … I’d always felt that from our deeds it must be clear to anyone that Americans were a moral people who starting at the birth of our nation had always used our power only as a force for good in the world…. During my first years in Washington, I think many of us took it for granted that the Russians, like ourselves, considered it unthinkable that the United States would launch a first strike against them.” 100 Reagan is certainly not alone in believing in the essential benevolent image of his nation. While it is common for actors to attribute negative motivations to the behavior of others, it is exceedingly difficult for them to accept that anyone could interpret their actions in negative ways. Leaders are well aware of their own motives and tend to assume that their peaceful intentions are obvious and transparent.

Both strains of the hegemonic-stability explanation assume not only that US power is benevolent, but that others perceive it that way. Hegemonic stability depends on the perceptions of other states to be successful; it has no hope to succeed if it encounters resistance from the less powerful members of the system, or even if they simply refuse to follow the rules. Relatively small police forces require the general cooperation of large communities to have any chance of establishing order. They must perceive the sheriff as just, rational, and essentially nonthreatening. The lack of balancing behavior in the system, which has been puzzling to many realists, seems to support the notion of widespread perceptions of benevolent hegemony.101 Were they threatened by the order constructed by the United States, the argument goes, smaller states would react in ways that reflected their fears. Since internal and external balancing accompanied previous attempts to achieve hegemony, the absence of such behavior today suggests that something is different about the US version.

Hegemonic-stability theorists purport to understand the perceptions of others, at times better than those others understand themselves. Complain as they may at times, other countries know that the United States is acting in the common interest. Objections to unipolarity, though widespread, are not “very seriously intended,” wrote Kagan, since “the truth about America’s dominant role in the world is known to most observers. And the truth is that the benevolent hegemony exercised by the United States is good for a vast portion of the world’s population.” 102 In the 1990s, Russian protests regarding NATO expansion—though nearly universal—were not taken seriously, since US planners believed the alliance’s benevolent intentions were apparent to all. Sagacious Russians understood that expansion would actually be beneficial, since it would bring stability to their western border.103 President Clinton and Secretary of State Warren Christopher were caught off guard by the hostility of their counterparts regarding the issue at a summit in Budapest in December 1994.104 Despite warnings from the vast majority of academic and policy experts about the likely Russian reaction and overall wisdom of expansion itself, the administration failed to anticipate Moscow’s position.105 The Russians did not seem to believe American assurances that expansion would actually be good for them. The United States overestimated the degree to which others saw it as benevolent.

Once again, the culture of the United States might make its leaders more vulnerable to this misperception. The need for positive self-regard appears to be particularly strong in North American societies compared to elsewhere.106 Western egos tend to be gratified through self-promotion rather than humility, and independence rather than interdependence. Americans are more likely to feel good if they are unique rather than a good cog in society’s wheel, and uniquely good. The need to be perceived as benevolent, though universal, may well exert stronger encouragement for US observers to project their perceptions onto others.

The United States almost certainly frightens others more than its leaders perceive. A quarter of the 68,000 respondents to a 2013 Gallup poll in sixty-five countries identified the United States as the “greatest threat to world peace,” which was more than three times the total for the second-place country (Pakistan).107 The international community always has to worry about the potential for police brutality, even if it occurs rarely. Such ungratefulness tends to come as a surprise to US leaders. In 2003, Condoleezza Rice was dismayed to discover resistance to US initiatives in Iraq: “There were times,” she said later, “that it appeared that American power was seen to be more dangerous than, perhaps, Saddam Hussein.” 108 Both liberals and neoconservatives probably exaggerate the extent to which US hegemony is everywhere secretly welcomed; it is not just petulant resentment, but understandable disagreement with US policies, that motivates counterhegemonic beliefs and behavior.

To review, assuming for a moment that US leaders are subject to the same forces that affect every human being, they overestimate the amount of control they have