## AC – Policy

### AC – Plan

#### Plan: The appropriation of outer space by private entities in The People's Republic of China is unjust.

### AC – Advantage

#### 1] China’s dependent on private companies for space expansion, satellite deployment, and mining

Fernandez 21 — (Ray Fernandez, Writer at ScreenRant, “Hundreds Chinese Companies Called To Boost Space “, ScreenRant, 11-27-2021, Available Online at https://screenrant.com/chinese-companies-boost-space-development/, accessed 1-11-2022, HKR-AR)

In a new move to boost space development, China has opened up space to private companies. China's space program is heavily linked with the military and wrapped up in secrecy. However, recent Chinese space accomplishments, rovers on the Moon and Mars, new satellites and new space stations were primarily developed by government efforts.

The U.S. brought in the private sector as a strategy to boost its space program and develop expensive and ambitious new projects. Now China is doing the same. The last time China used national private companies to increase development was when it declared Artificial Intelligence a national priority. Fast forward a few years, Chinese AI dominates globally.

At the 7th China (International) Commercial Aerospace Forum, national private companies presented many new and ambitious projects, including spaceplanes, space resources, a massive constellation of satellites and more. One of the companies at the event was the space giant China Aerospace Science and Industry Corp. (CASIC). The Ministry of Science and Technology, China National Space Administration, and other government arms sponsored and supervised the event.

CASIC said that the Xingyun constellation — made up of 80 satellites is moving full speed ahead. The corporation announced that the intelligent space satellite production factory was operating. They are now launching rockets from their own rocket park in the city of Wuhan. Today the rocket park and smart sat factory produce 20 solid-fuel launches and 100 satellites per year but plans to increase capacities are on their way. CASIC is also working on the Tengyun spaceplane, recently flight-testing an advanced turbine-based combined cycle engine in the Gobi desert.

CASIC is not the only private company developing space planes in China. The China Aerospace Science and Technology Corp. and iSpace also presented their plans for space planes and space crafts. iSpace has designed two missions to the Moon, which they assure will be the first commercial missions to the natural satellite. China is getting some **inspiration from U.S. companies**. Local companies in China are looking into space tourism with suborbital and orbital flights. And Deep Blue Aerospace is developing a reusable launcher that looks very much like the Heavy Falcon of SpaceX.

The event's **main themes** were IoT space networks, multi-purpose satellite constellations, **space** resources (mining) and taking the Chinese space sector to a new level with private participation. While the U.S. has its eye on Chinese military space vehicles, it may have overlooked and underestimated the impact that the Chinese private sector will have. Hundreds of new companies have responded to the government's call to "start a new journey for commercial aerospace" in China. It is only a matter of time until their full power and capabilities are unleashed into space.

#### 2] Xi commitments, manufacturing capacity, and FDI make the CCP’s private sector integral to 21st century space competition

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Until recently, China’s space activity has been overwhelmingly dominated by two state-owned enterprises: the China Aerospace Science & Industry Corporation Limited (CASIC) and the China Aerospace Science and Technology Corporation (CASC). A few private space firms have been allowed to operate in the country for a while: for example, there’s the China Great Wall Industry Corporation Limited (in reality a subsidiary of CASC), which has provided commercial launches since it was established in 1980. But for the most part, China’s commercial space industry has been nonexistent. Satellites were expensive to build and launch, and they were too heavy and large for anything but the biggest rockets to actually deliver to orbit. The costs involved were too much for anything but national budgets to handle.

That all changed this past decade as the costs of making satellites and launching rockets plunged. In 2014, a year after Xi Jinping took over as the new leader of China, the Chinese government decided to treat civil space development as a key area of innovation, as it had already begun doing with AI and solar power. It issued a policy directive called Document 60 that year to enable large private investment in companies interested in participating in the space industry.

“Xi’s goal was that if China has to become a critical player in technology, including in civil space and aerospace, it was critical to develop a space ecosystem that includes the private sector,” says Namrata Goswami, a geopolitics expert based in Montgomery, Alabama, who’s been studying China’s space program for many years. “He was taking a cue from the American private sector to encourage innovation from a talent pool that extended beyond state-funded organizations.”

As a result, there are now 78 commercial space companies operating in China, according to a 2019 report by the Institute for Defense Analyses. More than half have been founded since 2014, and the vast majority focus on satellite manufacturing and launch services.

For example, Galactic Energy, founded in February 2018, is building its Ceres rocket to offer rapid launch service for single payloads, while its Pallas rocket is being built to deploy entire constellations. Rival company i-Space, formed in 2016, became the first commercial Chinese company to make it to space with its Hyperbola-1 in July 2019. It wants to pursue reusable first-stage boosters that can land vertically, like those from SpaceX. So does LinkSpace (founded in 2014), although it also hopes to use rockets to deliver packages from one terrestrial location to another.

Spacety, founded in 2016, wants to turn around customer orders to build and launch its small satellites in just six months. In December it launched a miniaturized version of a satellite that uses 2D radar images to build 3D reconstructions of terrestrial landscapes. Weeks later, it released the first images taken by the satellite, Hisea-1, featuring three-meter resolution. Spacety wants to launch a constellation of these satellites to offer high-quality imaging at low cost.

To a large extent, China is following the same blueprint drawn up by the US: using government contracts and subsidies to give these companies a foot up. US firms like SpaceX benefited greatly from NASA contracts that paid out millions to build and test rockets and space vehicles for delivering cargo to the International Space Station. With that experience under its belt, SpaceX was able to attract more customers with greater confidence.

Venture capital is another tried-and-true route. The IDA report estimates that VC funding for Chinese space companies was up to $516 million in 2018—far shy of the $2.2 billion American companies raised, but nothing to scoff at for an industry that really only began seven years ago. At least 42 companies had no known government funding.

And much of the government support these companies do receive doesn’t have a federal origin, but a provincial one. “[These companies] are drawing high-tech development to these local communities,” says Hines. “And in return, they’re given more autonomy by the local government.” While most have headquarters in Beijing, many keep facilities in Shenzhen, Chongqing, and other areas that might draw talent from local universities.

There’s also one advantage specific to China: manufacturing. “What is the best country to trust for manufacturing needs?” asks James Zheng, the CEO of Spacety’s Luxembourg headquarters. “It’s China. It’s the manufacturing center of the world.” Zheng believes the country is in a better position than any other to take advantage of the space industry’s new need for mass production of satellites and rockets alike.

Making friends

The most critical strategic reason to encourage a private space sector is to create opportunities for international collaboration—particularly to attract customers wary of being seen to mix with the Chinese government. (US agencies and government contractors, for example, are barred from working with any groups the regime funds.) Document 60 and others issued by China’s National Development and Reform Commission were aimed not just at promoting technological innovation, but also at drawing in foreign investment and maximizing a customer base beyond Chinese borders.

**“China realizes there are certain things they cannot get on their own,”** says Frans von der Dunk, a space policy expert at the University of Nebraska–Lincoln. Chinese companies like LandSpace and MinoSpace have worked to accrue funding through foreign investment, escaping dependence on state subsidies. And by avoiding state funding, a company can also avoid an array of restrictions on what it can and can’t do (such as constraints on talking with the media). Foreign investment also makes it easier to compete on a global scale: you’re taking on clients around the world, launching from other countries, and bringing talent from outside China.

#### 3] Mining basing competition causes war

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A brewing war to set a mining base in space is likely to see China and Russia joining forces to keep the US increasing attempts to dominate extra-terrestrial commerce at bay, experts warn.

The Trump Administration took an active interest in space, announcing that America would return astronauts to the moon by 2024 and creating the Space Force as the newest branch of the US military.

It also proposed global legal framework for mining on the moon, called the Artemis Accords, encouraging citizens to mine the Earth’s natural satellite and other celestial bodies with commercial purposes.

The directive classified outer space as a “legally and physically unique domain of human activity” instead of a “global commons,” paving the way for mining the moon without any sort of international treaty.

Spearheaded by the US National Aeronautics and Space Administration (NASA), the Artemis Accords were signed in October by Australia, Canada, England, Japan, Luxembourg, Italy and the United Emirates.

“Unfortunately, the Trump Administration exacerbated a national security threat and risked the economic opportunity it hoped to secure in outer space by failing to engage Russia or China as potential partners,” says Elya Taichman, former legislative director for then-Republican Michelle Lujan Grisham.

“Instead, the Artemis Accords have driven China and Russia toward increased cooperation in space out of fear and necessity,” he writes.

Russia’s space agency Roscosmos was the first to speak up, likening the policy to colonialism.

“There have already been examples in history when one country decided to start seizing territories in its interest — everyone remembers what came of it,” Roscosmos’ deputy general director for international cooperation, Sergey Saveliev, said at the time.

China, which made history in 2019 by becoming the first country to land a probe on the far side of the Moon, chose a different approach. Since the Artemis Accords were first announced, Beijing has approached Russia to jointly build a lunar research base.

President Xi Jinping has also he made sure China planted its flag on the Moon, which happened in December 2020, more than 50 years after the US reached the lunar surface.

#### 4] China space commercialization uniquely risks cascades – they ignore norms and don’t register satellites which prevents tracking

Swinhoe 21 – Editor at Datacenter Dynamics. Previously he was at IDG in roles including UK Editor at CSO Online and Senior Staff Writer at IDG Connect. [Dan, “China’s moves into mega satellite constellations could add to space debris problem,” 4/20/2021, <https://www.datacenterdynamics.com/en/analysis/chinas-moves-into-mega-satellite-constelations-could-add-to-space-debris-problem/>]

Of the 3,000-odd operational satellites currently in orbit, a little over 400 belong to China or Chinese companies. The number of commercial companies in the West launching satellites has skyrocketed in recent years, and SpaceX now operates more satellites than any other company or government.

But refusing to be left behind, China is planning both state and commercial deployments of constellation satellites in huge numbers in the coming years, which could post an increased risk to in-orbit operations if Chinese companies don’t take due care in how they behave.

The new commercial space race

A report by the Secure World Foundation says a 2014 document from the Chinese Government known as “Document 60” (Official English Language Title: Guiding Opinions of the State Council on Innovating the Investment and Financing Mechanisms in Key Areas and Encouraging Social Investment) was the start of China’s modern commercial space sector. And in 2020, satellite Internet was included in the scope of China’s New Infrastructure policy initiative. Space is also part of China’s expansive Belt and Road initiative, which all combined have led to an explosion in the country’s commercial space ambitions.

China is beginning to “get its act together” around commercial use of space, Jonathan McDowell of the Harvard-Smithsonian Center for Astrophysics tells DCD. Whereas in previous years he says China has had many government satellites and some quasi-commercial satellites with strong ties to government, but now there are true commercial Chinese companies in space.

“We have the same phenomenon as the US companies in that they're moving fast and they're innovative and doing new things.”

But as Chinese companies look to follow the likes of SpaceX and OneWeb in deploying large numbers of satellites, he warns their lack of care in operations could potentially damage space for everyone.

China’s commercial space industry blasts off

A number of private space companies including LinkSpace, OneSpace, iSpace, LandSpace, and ExPace, have all launched in recent years. As well developing their own rockets, these companies are launching satellites of all shapes and sizes into Low Earth Orbit (LEO) with the aim of forming their own constellations to rival those of Western companies.

Bao Weimin, member of the National Committee of the Chinese People’s Political Consultative Conference and director of the Science and Technology Committee of the Aerospace Science and Technology Group, recently announced plans to establish a national satellite network company to be responsible for “coordinating the planning and operation of space satellite Internet network construction.”

The China Aerospace Science and Industry Corporation (CASIC), a state-owned enterprise, outlined its plans to preliminarily finish the construction of the Xingyun project, an 80-satellite LEO narrowband Internet of Things constellation, by 2025 in addition to 320 Hongyan communications satellites.

China Telecom’s satellite communications reportedly has plans to launch 10,000 satellites in the next five to ten years under the name ‘China StarNet’. Spacety is also launching a constellation of imagery satellites and has launched at least 20 so far. Another company called GW has filed for spectrum allocation from the International Telecommunication Union for two broadband constellations called GW-A59 and GW-2 that would include almost 13,000 satellites.

A report from IDA into China’s commercial space industry found others including Zhuhai Orbita, GalaxySpace, MinoSpace, LaserFleet, Head Aerospace and numerous others are also developing constellations from which, like US counterparts, these companies aim to provide satellite broadband, 5G, IoT, and various data services. Though many are in the early stages of development, most plan to launch the first of what could be hundreds or even thousands of satellites within the next few years.

While most companies can’t boast the same level of funding as US space companies – VC funding for Chinese space companies was up to $516 million in 2018 compared to the $2.2 billion US companies raised – they are bringing in investment; earlier this year Beijing Commsat received more than $4.5 billion in funding from the China Internet Investment fund, with more than $10 billion in additional funding promised in the future.

Xie Tao, founder of Beijing Commsat Technology Development Co., Ltd, told China Money Network he expects the country to launch 30,000 to 40,000 Satellites in the future, compared to 40,000 to 60,000 launched by the US.

“Space in the orbit is allocated on a first-come, first-served basis and the onus will be on these latecomers to ensure their satellites will not collide with existing ones,” Commsat’s Xie previously said. “The low-Earth orbit is becoming increasingly crowded and the space land grab is on.”

China isn’t up to speed in orbital norms

While the UN tightly controls GEO orbits, offering countries licenses for a set number of slots in the closely-packed and highly valuable planes, there is no such limit at lower orbits. The number of satellites that companies can launch at LEO is limited only by what local regulators will permit, despite the machines circling the entire planet in around 90 minutes.

And space is becoming increasingly crowded. The number of satellites being launched annually is beginning to reach the thousands, leftovers parts from previous launches and satellites can mount up if not properly disposed of, and debris from previous in-orbit incidents means LEO is full of thousands of pieces of potentially satellite-destroying junk and debris.

Around 28,200 pieces of space junk and debris are currently being tracked in orbit but ESA estimates there could be up to hundreds of thousands of potentially harmful pieces in orbit. At its most extreme, Kessler syndrome predicts a scenario where the space around Earth is so full of satellites and debris that it becomes unmanageable and collisions begin to cascade, causing a chain reaction of collisions which render many orbits out of use for generations.

China has as much right to operate satellites as Western companies, but the current lack of adherence to ‘space norms’ could increase risks further. McDowell warns the ‘explosion’ of Chinese activity could have a massive impact on the usability of space.

“Chinese adherence to things like space debris norms and registration norms is, I would say, about 10 years behind everybody else, if not more” he says. “In UN registration of satellites, they're being very incomplete. They're not registering a lot of their CubeSats and things like that. They're not really being as careful, and they're not as transparent in what's going on.”

Chinese commercial satellites are subject the same risks as Western ones in space; extreme temperatures, crowded operating environment, and new companies seeing large numbers of failures as they go through rapid development. But a lack of proper registration can create more risk of collisions, which can have catastrophic effects, especially with larger satellites at higher orbits.

#### 5] Debris cascades---nuclear war

Les Johnson 13, Deputy Manager for NASA's Advanced Concepts Office at the Marshall Space Flight Center, Co-Investigator for the JAXA T-Rex Space Tether Experiment and PI of NASA's ProSEDS Experiment, Master's Degree in Physics from Vanderbilt University, Popular Science Writer, and NASA Technologist, Frequent Contributor to the Journal of the British Interplanetary Sodety and Member of the American Institute of Aeronautics and Astronautics, National Space Society, the World Future Society, and MENSA, Sky Alert!: When Satellites Fail, p. 9-12 [language modified]

Whatever the initial cause, the result may be the same. A satellite destroyed in orbit will break apart into thousands of pieces, each traveling at over 8 km/sec. This virtual shotgun blast, with pellets traveling 20 times faster than a bullet, will quickly spread out, with each pellet now following its own orbit around the Earth. With over 300,000 other pieces of junk already there, the tipping point is crossed and a runaway series of collisions begins. A few orbits later, two of the new debris pieces strike other satellites, causing them to explode into thousands more pieces of debris. The rate of collisions increases, now with more spacecraft being destroyed. Called the "Kessler Effect", after the NASA scientist who first warned of its dangers, these debris objects, now numbering in the millions, cascade around the Earth, destroying every satellite in low Earth orbit. Without an atmosphere to slow them down, thus allowing debris pieces to bum up, most debris (perhaps numbering in the millions) will remain in space for hundreds or thousands of years. Any new satellite will be threatened by destruction as soon as it enters space, effectively rendering many Earth orbits unusable. But what about us on the ground? How will this affect us? Imagine a world that suddenly loses all of its space technology. If you are like most people, then you would probably have a few fleeting thoughts about the Apollo-era missions to the Moon, perhaps a vision of the Space Shuttle launching astronauts into space for a visit to the International Space Station (ISS), or you might fondly recall the "wow" images taken by the orbiting Hubble Space Telescope. In short, you would know that things important to science would be lost, but you would likely not assume that their loss would have any impact on your daily life. Now imagine a world that suddenly loses network and cable television, accurate weather forecasts, Global Positioning System (GPS) navigation, some cellular phone networks, on-time delivery of food and medical supplies via truck and train to stores and hospitals in virtually every community in America, as well as science useful in monitoring such things as climate change and agricultural sustainability. Add to this the [destruction] ~~crippling~~ of the US military who now depend upon spy satellites, space-based communications systems, and GPS to know where their troops and supplies are located at all times and anywhere in the world. The result is a nightmarish world, one step away from nuclear war, economic disaster, and potential mass starvation. This is the world in which we are now perilously close to living. Space satellites now touch our lives in many ways. And, unfortunately, these satellites are extremely vulnerable to risks arising from a half-century of carelessness regarding protecting the space environment around the Earth as well as from potential adversaries such as China, North Korea, and Iran. No government policy has put us at risk. It has not been the result of a conspiracy. No, we are dependent upon them simply because they offer capabilities that are simply unavailable any other way. Individuals, corporations, and governments found ways to use the unique environment of space to provide services, make money, and better defend the country. In fact, only a few space visionaries and futurists could have foreseen where the advent of rocketry and space technology would take us a mere 50 years since those first satellites orbited the Earth. It was the slow progression of capability followed by dependence that puts us at risk. The exploration and use of space began in 1957 with the launch of Sputnik 1 by the Soviet Union. The United States soon followed with Explorer 1. Since then, the nations of the world have launched over 8,000 spacecraft. Of these, several hundred are still providing information and services to the global economy and the world's governments. Over time, nations, corporations, and individuals have grown accustomed to the services these spacecraft provide and many are dependent upon them. Commercial aviation, shipping, emergency services, vehicle fleet tracking, financial transactions, and agriculture are areas of the economy that are increasingly reliant on space. Telestar 1, launched into space in the year of my birth, 1962, relayed the world's first live transatlantic news feed and showed that space satellites can be used to relay television signals, telephone calls, and data. The modern telecommunications age was born. We've come a long way since Telstar; most television networks now distribute most, if not ali, of their programming via satellite. Cable television signals are received by local providers from satellite relays before being sent to our homes and businesses using cables. With 65% of US households relying on cable television and a growing percentage using satellite dishes to receive signals from direct-to-home satellite television providers, a large number of people would be cut off from vital information in an emergency should these satellites be destroyed. And communications satellites relay more than television signals. They serve as hosts to corporate video conferences and convey business, banking, and other commercial information to and from all areas of the planet. The first successful weather satellite was TIROS. Launched in 1960, TIROS operated for only 78 days but it served as the precursor for today's much more long-lived weather satellites, which provide continuous monitoring of weather conditions around the world. Without them, providing accurate weather forecasts for virtually any place on the globe more than a day in advance would be nearly impossible. Figure !.1 shows a satellite image of Hurricane Ivan approaching the Alabama Gulf coast in 2004. Without this type of information, evacuation warnings would have to be given more generally, resulting in needless evacuations and lost economic activity (from areas that avoid landfall) and potentially increasing loss of life in areas that may be unexpectedly hit. The formerly top-secret Corona spy satellites began operation in 1959 and provided critical information about the Soviet Union's military and industrial capabilities to a nervous West in a time of unprecedented paranoia and nuclear risk. With these satellites, US military planners were able to understand and assess the real military threat posed by the Soviet Union. They used information provided by spy satellites to help avert potential military confrontations on numerous occasions. Conversely, the Soviet Union's spy satellites were able to observe the United States and its allies, with similar results. It is nearly impossible to move an army and hide it from multiple eyes in the sky. Satellite information is critical to all aspects of US intelligence and military planning. Spy satellites are used to monitor compliance with international arms treaties and to assess the military activities of countries such as China, Russia, Iran, and North Korea. Figure 1.2 shows the capability of modem unclassified space-based imaging. The capability of the classified systems is presumed to be significantly better, providing much more detail. Losing these satellites would place global militaries on high alert and have them operating, literally, in the blind. Our military would suddenly become vulnerable in other areas as well. GPS, a network of 24-32 satellites in medium-Earth orbit, was developed to provide precise position information to the military, and it is now in common use by individuals and industry. The network, which became fully operational in 1993, allows our armed forces to know their exact locations anywhere in the world. It is used to guide bombs to their targets with unprecedented accuracy, requiring that only one bomb be used to destroy a target that would have previously required perhaps hundreds of bombs to destroy in the pre-GPS world (which, incidentally, has resulted in us reducing our stockpile of non-GPS-guided munitions dramatically). It allows soldiers to navigate in the dark or in adverse weather or sandstorms. Without GPS, our military advantage over potential adversaries would be dramatically reduced or eliminated.

#### 6] NEA scarcity and ilaw ambiguity makes US-China competition go nuclear

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Finally, a lack of coordination increases the risks for lunar crewmembers, once these arrive on the moon. The disruptions of the kind described above should be self-explanatory in their risk to humans attempting to establish a permanent presence. However, more insidious factors also abound. One of these is the lack of standardisation driven by a bifurcation into geopolitical blocs of lunar activity. As has been pointed out, widely adopted standards of lunar exploration promise considerable benefits[16]. A balkanisation of standards would do the opposite, limiting any attempt of future cooperation in exploration and scientific endeavour. In the most extreme cases, it endangers lives. Mutual aid is a core tenet of both the Outer Space Treaty and the Artemis Accords. Yet, a lack of universally accepted technological standards for lunar (and beyond) crewed operations potentially makes such action considerably more difficult. As the ISS has proven, any inter-operational system must be designed from the outset to be inter-operational. For future lunar activities, this presently seems impossible. Though currently remote, the possibility of the loss of life due to conflicting standards of crewed lunar technology is nevertheless a tragedy worth contemplating.

Again, the described issues are most likely to occur should terrestrial geopolitical tensions between the US and China preclude proactive coordination and information sharing. While the establishment of separate lunar operations can, at this point, be taken as a given, it is far from too late to establish functionally sufficient coordination mechanisms to prevent a major international incident. While US-China coordination is limited by the Wolf Amendment, it is not wholly precluded, as indicated by NASA’s monitoring of the Chang’e 4 mission, utilising the Lunar Reconnaissance Orbiter[17], and, more recently, an exchange of data to mitigate the risks of an orbital collision of Mars orbiters[18]. Ideally, therefore, the United States would proactively take the necessary bilateral steps to work with China to coordinate its respective beyond-Earth surface activities and prevent harmful interference.

Alongside, and regardless of, these efforts, it will be the task of members of international bodies, such as The Committee on the Peaceful Uses of Outer Space (COPUOS) to facilitate coordination activities. In the midst of such efforts, ESA member states are primary actors eligible for leading such initiatives, with ESA having engaged in collaborative activities in space with both the US and China. While diplomats active within UN COPUOS will be well aware of these issues, and their role in enabling such necessary coordination, it is incumbent upon national governments allied to the US to recognise these flashpoints and spearhead broader policy responses to proactively support coordination and the activities of their diplomats at the UN. The UK government, whose diplomats already play a major role in coordinating international space activities, must lend them its full support.

Beyond the moon, the issue of geographically concentrated sites of interest is only likely to prevail. While space is boundless, areas of economical or scientific value are nonetheless often concentrated. Some preliminary analysis, for example, places the number of economically viable near-Earth asteroids at around only ten[19], due to the fact that metallic, accessible, and economically viable near-Earth asteroids are comparatively rare in number. Given the considerable geographic challenges associated with on-asteroid operations, the need for multi-actor coordination will only become more pressing, especially if terrestrial US-China competition intensifies.

Failures to Coordinate

The risks outlined above are non-exhaustive, and do not touch upon the military dimension of space which carries equal if not greater weight. However, they demonstrate clearly the fact that US-China coordination in space will become ever more pressing as the exploration and commercialisation of space advances. Such risks will only manifest themselves if the US and China are unable to coordinate their activities sufficiently and allow geopolitical tensions to obstruct this crucial work.

Looking forwards, all third-party actors in space should closely monitor terrestrial US-China relations and map these to their own activities relating to space (be this in the realm of space exploration or applications), taking mitigating measures as necessary should tensions spill over beyond Earth. In tandem, states with notable diplomatic influence should increase further efforts to enable frictionless coordination and information sharing between the two great powers. Crucially, should formal coordination mechanisms in orbit, on the moon, or beyond be in sight, imperfect coordination should be prioritised if institutional gridlock driven by the pursuit of national interest is the alternative.

#### 7] China will long-term outpace the US in space – mining, first-mover advantage, lunar projects

Fabian 21 — (Chris Fabian, Capt. Chris Fabian, U.S. Space Force, is a crew commander in the 3rd Space Operations Squadron supporting the Delta 9 mission. , “A call to action for strategic space competition with China“, TheHill, 6-22-2021, Available Online at https://thehill.com/opinion/national-security/558979-a-call-to-action-for-strategic-space-competition-with-china?rl=1, accessed 1-12-2022, HKR-AR)

To compete with China’s space power, the United States needs ambitious visions, not business as usual. China aims to be a dominant space power by 2045, raising concerns that it seeks to establish itself as a space hegemon. The meteoric rise of China’s space program and its lofty ambitions could result in China outpacing the United States in space. China understands that a vibrant space industry is critical infrastructure for economic development, would achieve potent soft-power effects, and provide vital capabilities to Chinese national security and economic development.

China sent its first astronaut into orbit in 2003, yet in 2018 conducted more space-oriented operations than any other nation. Last December, China landed on the moon, planted its flag, collected moon rock samples, returned to Earth, and plans to install a permanent lunar space station by 2031. Months after China reached Mars’ orbit, its Zhurong rover landed on the red planet surface in May. China has begun talks with Russia to secure partnership for a lunar base project. Between 2036-2045, China plans to have a long-term human presence at the Lunar South Pole. These are amazing accomplishments and an ambitious vision for a nation that launched its first satellite only recently, in 1970.

China’s space diplomacy and science efforts are biased toward exploring and exploiting natural resources in near-Earth objects and on the moon. China’s behavior in space may mirror its patterns of resource nationalism on Earth — that is to say, spending incredible political and economic capital to secure exclusive access to strategic resources. As Earth-based resources become scarce and technology makes space-mining feasible, space will become a frontier for strategic competition, especially resource nationalism. Mining even a single asteroid could disrupt global iron, nickel, platinum group metals (PGM) and precious metal-based economies, markets and industry supply chains, especially if controlled by a single state and used for in situ manufacturing and re-supply. Establishing a presence in cislunar space, as China clearly intends, provides capabilities and capacity for space mining, positioning, navigation and timing (PNT), and first-mover locational advantages for space settlement.

This emerging competition differs from the Cold War-era race for symbolic space milestones that sought to prove the superiority of the U.S. market-based economic system for the benefit of unaligned nations. Today’s space race is about the actual economics of space-derived capabilities, access to space resources, and the technologies for acquiring and controlling them. The United States is at a crossroads: It can either prepare itself for this new paradigm, or be relegated to second-class status and look back on what could have been. Efficient and advantageous strategic investment now is better than doubling down later with a patchwork of expensive, rushed space programs.

#### 8] Space competition is inevitable and will determine hegemonic power on Earth–it’s just a question of who wins the race.

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The strategic competition between the U.S. and China is fierce even in space outside of the earth. What do the two countries compete for in space? What are their objectives and what strategic calculations did they start from? Will the space race between the two countries lead to competition over space hegemony? This is one of the most interesting issues for U.S.-China observers in recent days. The space race between the U.S. and China is not just a number fight. How many satellites and spaceships have been launched and how many space stations have been established are the questions that mattered in the past. These mattered for the convenience and benefit for mankind. It could also make possible for some of the curiosity about the universe to be solved. However, starting the 21st century, the space race between the U.S. and China has progressed into an intense, high-level strategic battle. Whoever rules space rules the future There is one reason why the two countries' space strategy competition will inevitably lead to a hegemony competition. This is because they try to conquer the space order. Conquering the space order is to define and establish the space order. Those who dominate space will dominate almost all sectors of the future world, including economy, technology, environment, cyberspace, transportation and energy. That's why the United States is considered as a hegemonic country on Earth today. The U.S. is recognized as a hegemonic country because it establishes and leads the economic, financial, trade, political, and diplomatic order. There are two areas in the world today where international order has not been established. One is virtual space, which is the cyber world. The other is the space. Since the international order of these two areas is closely correlated with each other, it is likely that the establishment of the order in these two areas will be pursued simultaneously. This means that cyber order cannot be discussed without discussing satellite issues. The Communist Party of China recognized this early on. At the 19th National Communist Party Congress in 2017, it expressed its justification for establishing space order. President Xi Jinping declared that China's diplomatic stage in the 21st century has expanded beyond the Earth into space and virtual space. It was the moment when China defined the concept of diplomatic space as the "universe" beyond the Earth. He then explained that the establishment of a system that can even manage the order of the universe and the virtual world eventually means the establishment of practical governance. Therefore, he justified that China's diplomatic horizon has no choice but to expand into space. Furthermore, he stressed that he is confident that the ideation of building such governance serves as the foundation for the community of common destiny for mankind which China pursues. In other words, he publicly urged China to have the capabilities and means to become a key country in building governance in these two areas. This led the Trump administration to spare no effort to develop space science and technology and space projects, which are the basis of space order. Since President George W. Bush, the maintenance work for supremacy in space has been carried out. President Obama also introduced a policy to encourage U.S. private companies to participate in space projects to expand the foundation for supremacy in space. It was President Trump who actualized all these. He was the one who legalized private companies' space development projects under the Space Policy Directive-I. He also thoroughly reflected his “America First” principle in the space business. For example, all the substances obtained in space, including minerals, were no longer defined as "common goods." He also promised that space activities by private companies in the United States would be free from restrictions such as the Outer Space Treaty and the 1979 resolution by the United Nations Committee on the Peaceful Uses of Outer Space. Space and the moon were known as repositories of resources. As it became known that the resources that are scarce or will be depleted on Earth are very abundant outside the Earth in space, the space race has gotten intense. This is why the space race has been promoted on a geoeconomic level. However, in order to secure these benefits of geoeconomic strategies, geopolitical strategies must be accompanied. In other words, military defenses should be backed up to protect the resource acquisition process. Fearing this, the United Nations Committee on the Peaceful Uses of Outer Space strictly regulates the military use of space. However, the fact that the logic of developing naval power to protect long-range foreign interests on Earth is reflected in the strategic thinking of securing space profits is the decisive factor that has driven the space race today. The repositories of resources and future energy sources There are three strategic benefits that drive the U.S.-China competition for supremacy in space. The first is the infinite resource in space. There are endless resources buried in more than 10,000 asteroids orbiting the Earth. They are known to have an abundance of resources such as carbon, zinc, cobalt, platinum, gold, silver and titanium, in which platinum and titanium, for example, can be sold for $30,000 to $50,000 per kilogram. Second, the future energy source lies in space. Power supply using solar energy will be possible by establishing a space power plant that concentrates solar energy in the Earth-Moon area and transmitting it to Earth through laser beams. Here, the supplied solar power is known to be 35 to 70% more powerful than the solar energy on Earth. By 2100, 70 terawatts of energy will be needed, and it is expected that 332 terawatts can be supplied through the development of space solar power plants in a geostationary orbit. Third, the desire to dominate space for hegemony has established the space competition relationship between the U.S. and China. Although each started from different strategic interests, in the end, they have one common goal. First of all, China wants to be free from the U.S. GPS system. This is because only through the freedom China can prevent its future weapons system from becoming vulnerable to U.S. control and restrictions. It is planning to achieve its goal of establishing a so-called "Space Silk Road" by expanding China's "BeiDou" navigation system to the regions within One Belt One Road and the national satellite and communication systems. The U.S. also plans to spend $25 billion to develop GPS3 systems with stronger defense capabilities against Chinese space and cyberattacks, by 2025. The competition between the U.S. and China to establish a space station in order to secure the benefits from space strategies is inevitable. This is because a space station is the foundation for establishing space order. As the space station has the purpose of protecting and defending from enemies, militarization is inevitable in the process. It is clear that the outcome will lead to a space arms race. This is why the competition over supremacy in space between the U.S. and China has the aspects of the New Cold War outside the Earth. Space is a blue ocean. It is a world without order. Preemption is therefore important. In order to prepare space order and accompanying laws, norms, and systems, the U.S. and China have been engaged in a fierce battle through space projects. This is because space is the decisive factor in the operation of energy, resources, environment, communication, and advanced military weapons systems in the future. Space is no longer a dream world. Of course, it takes a lot of time for these strategic benefits to become a reality. However, the Fourth Industrial Revolution and the development of AI (Artificial Intelligence) technology will speed up the pace. This is because economic problems can be solved if spacecraft recycling is made possible with the participation of private companies and facilities related to space stations and mineral mining equipment are set up with 3D printers.

#### 9] Heg solves nuclear war and global fascism

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Indeed, China itself has been among the greatest beneficiaries of a U.S.- led international order. American military and economic power have provided the peace and macroeconomic stability that allowed China to grow into the major power that it is today.

There is little reason to believe that Russia and China will be as kind. These autocratic powers long to establish spheres of influence in their near abroad, and they have shown little concern for the sovereignty or personal freedoms of their own citizens or subjected populations. To get a vision of a world led by Russia or China, just look at how they treat the people that fall under their influence today. Russian dictator Vladimir Putin invades neighboring countries and murders critical journalists. And China takes contested territory from its neighbors through brute force and locks up one million Muslim minorities in “re-education” camps. And this is but a small taste of the brutality of these governments. If readers doubt these claims, they can simply ask citizens of American allies in Eastern Europe or East Asia whether they desire continued American leadership, or whether they would prefer to live under the thumb of Moscow or Beijing, respectively.

Moreover, just as consequentially for the globe, the decline of the United States could very well result in war. As noted earlier, international relations theory maintains that the decline of one dominant power and the rise of another often results in great power conflict.24 According to this telling, World War I and World War II were primarily the result of the decline of the British Empire and the rise of Imperial and then Nazi Germany. Falling powers fight preventive wars in a bid to remain on top, and rising powers launch conflicts to dislodge the reigning power and claim their “place in the sun.”25 Many fear that a power transition between Beijing and Washington would produce a similar catastrophic result.26 Continued American leadership, therefore, could forestall this transition and may be necessary for continued peace and stability among the major powers. s

#### 10] Heg is sustainable but not impervious to collapse

Hal Brands, 5-1-2021, Henry A. Kissinger Distinguished Professor At The Johns Hopkins School Of Advanced International Studies, China’s Creative Challenge—and the Threat to America, Commentary Magazine, https://www.commentarymagazine.com/articles/hal-brands/chinas-geopolitical-challenge-threat-to-america//Khan

FINALLY, CHINA is testing the patterns of history simply by taking on the United States. America is the most lethal competitor of the modern era, and it now has its sights set squarely on Beijing. Consider the historical record. In an environment populated mostly by hostile autocracies, America became a continental behemoth and the world’s strongest economy within a century. It then achieved something no other modern great power has managed—lasting, if periodically contested, hegemony in its home region. During the 20th century, America or the coalitions it supported decisively defeated a series of illiberal powers—Germany (twice), Japan, the Soviet Union—that challenged its vital interests. Along the way, Washington peacefully wrested global leadership from the United Kingdom. For over a century, the surest path to destruction has been inviting the focused hostility of the United States. America’s formidable record is the product of many factors. Vast resource endowments and uniquely advantageous geography have allowed America to project power globally without facing severe geopolitical threats near home. Similarly, the fact that America is powerful and far away leads countries all around the Eurasian periphery to ally with the United States against nearby predators that threaten their independence. The country’s relatively open economy has created great dynamism and innovation; its democratic institutions have allowed it, more often than not, to use its other advantages effectively. And the slowness with which America sometimes mobilizes to confront threats contributes to the single-mindedness with which it eventually combats them. The type of superpower America is also matters. Because America is a liberal nation, it has taken a liberal approach to global power. Since 1945, it has delivered freedom of the seas, a global reserve currency, and a massive market for foreign goods, in addition to providing security and stability in key regions. Those attributes have made other countries support the American cause, which makes American hegemony even harder to overturn. Neither China nor any other country can compete on these dimensions: Beijing lacks the ability to act as a global security provider and the willingness (as a neo-mercantilist actor) to anchor a truly open global economy. It cannot fully open its market without exposing key industries to competition and wrecking plans to reduce strategic dependence on the West. Even if China’s raw power exceeded America’s, its ability to act as a comparatively benign and popular hegemon would not. Having helped the United States defeat the Soviet Union, Chinese leaders understood the peril of provoking American hostility: This was the crux of Deng Xiaoping’s famous dictum about “hiding” capabilities and “biding” time. Chinese statecraft in the post-Tiananmen era was meant to increase Beijing’s power while delaying an American response. The building of deep commercial and financial ties with the United States not only fueled Chinese growth; it also made it more painful for America to turn toward competition. The cultivation of American elites in academia, business, and politics strengthened supporters of continued engagement. Even as Chinese statecraft become more assertive after 2008, Beijing moved incrementally—in the South China Sea and elsewhere—to avoid giving America an eye-opening “Sputnik moment.” And even as the relationship deteriorated during the Obama years, the Chinese leadership used the lure of cooperation on climate change and talk of a “new type of great-power relations” to discourage a sharper pivot in American policy. Historians will one day marvel at how well this strategy—combined with America’s post-9/11 distraction—worked. It took two decades, from the time serious observers began warning about the Chinese challenge, for the United States to adjust its statecraft decisively. During that time, China gained access to technology, capital, and markets that powered its ascent; there emerged an incredibly complex interdependence that continues to retard multilateral mobilization against Beijing. If the United States loses the competition with China, it will be—in no small part—because Beijing successfully anesthetized Washington to a growing peril. The bad news, from Xi’s vantage point, is that the game is up. Predatory economic behavior that America once tolerated has become more threatening as Beijing worked its way up global value chains. Small nibbles at the status quo eventually added up to larger, more alarming shifts. The Chinese government prematurely let the mask slip after the 2008–09 financial crisis, with more assertive diplomacy that gradually made the thesis of America’s engagement policy—that Beijing would mellow over time—impossible to defend. And by the Trump era, China had simply gotten tired of waiting and disguising its ambitions. COVID then did more than any Committee on the Present Danger could ever have done to reveal both the utterly cynical nature of the CCP regime—which sought to stymie the virus’s spread within China even as it allowed continued travel from Wuhan to the world—and the fact that this behavior could mortally imperil Americans’ well-being. China is no longer the “stealth superpower”—there is now a bipartisan consensus that America must thwart its global designs. From here onward, Beijing must forcefully wrest influence from a dangerous hegemon that is alert to a new authoritarian challenge. STRUCTURAL CONSTRAINTS don’t determine everything: History wouldn’t be very interesting if they did. The United States always had profound advantages over the Soviet Union, but it wouldn’t have won the Cold War had it not worked feverishly to shore up Western Europe in the late 1940s and maintain a military balance that made Soviet aggression seem suicidal. Strategic urgency and commitment were what ultimately allowed America to make the most of its strengths. That’s worth keeping in mind today. The fact that Chinese power and influence have grown so markedly in recent decades and that the resulting challenge has become so stark show the impact that determined, innovative strategy can have. The dilemmas that the United States confronts, in areas from 5G technology to the military balance in the Taiwan Strait, illustrate the costs of strategic lethargy. Indeed, America is fully capable of squandering its advantages if it degrades or destroys its own democracy, declines to make domestic reforms and investments to maintain its competitive edge, fails to rally the overlapping coalitions needed to resist Chinese ambitions, or delays in driving the military innovation required to shore up a sagging balance in the Western Pacific. The list of hard policy problems America must urgently solve to prevail against China is itself long and formidable. And even if Washington does prevail in that rivalry, America may absorb significant setbacks—and the international order may absorb significant damage—in the process. Yet as rough as the road ahead looks from Washington, it ought to look even rougher from Beijing. The Chinese Communist Party runs a profoundly illiberal regime that is trying to overcome centuries of liberal dominance. China is straining against a strategic geography and international system that surely seem more constraining than inviting. Chinese strategists must find a way of breaking America’s position in the Western Pacific while avoiding the potential cataclysm of major war. And Beijing is taking on a superpower that has thrashed all previous comers. Smart strategies have permitted Beijing to do remarkably well, so far, in managing these problems. But many of those strategies face an uncertain future, in part because the international complacency that allowed them to flourish has been replaced—gradually, but increasingly—with international concern. This isn’t to say that China’s ambitions are hopeless illusions. In the coming years, there will be an intense interaction between an America that is adapting its strategies to deal with a pressing threat and a China that will have to adjust its own approaches in light of that response. Even American success in this interaction could bring new dangers: If Chinese leaders perceive that their window to achieve grand geopolitical goals is closing, then the regime could become even more aggressive in seeking to revise the global order while it still can. Much thus hinges on the quality of decisions made in Washington and other capitals around the world. But the fact that so many characteristics of modern great-power politics seem to favor the United States probably gives the reigning superpower better options and more room for error than its autocratic challenger. Nothing is predetermined: Beijing may still succeed in displacing the United States as the primary power in Asia and, eventually, the world. Yet if it does, that outcome will represent a catastrophic failure of American statecraft—or an awesome triumph of Chinese strategy in overcoming the great obstacles that litter Beijing’s path to hegemony.

#### 11] Biden will inev try to regain it – proves try or die

Tepperman 21 – a former editor in chief of Foreign Policy and the author of The Fix: How Countries Use Crises to Solve the World’s Worst Problems. (Jonathan, "Biden Was Right: America Is Back," Foreign Policy, 2-23-2021, https://foreignpolicy.com/2021/02/23/biden-was-right-america-is-back/, Accessed 11-17-2021, LASA-SC)

President Joe Biden’s declaration to the Munich Security Conference last Friday that “America is back”—lest anyone miss it, he repeated the line three times—hasn’t gone down very well in the days since. While I suspect many in the Zoom audience were quietly relieved to hear it, public responses have ranged from skeptical to hostile. At the same conference, for example, French President Emmanuel Macron insisted that France stake out greater “strategic autonomy” from the United States. His German counterpart, Angela Merkel, reminded the audience that U.S. and German interests “will not always converge.” And back in the United States, former Secretary of State Mike Pompeo said: “I don’t think the American people can afford to go back to eight more years of Barack Obama’s foreign policy.” While Pompeo’s sneering is easy to dismiss (why waste time worrying about the opinions of the worst secretary of state in U.S. history), the other comments deserve more attention. Yet they and the critiques of various pundits who have argued that the president’s pledge was both premature and hubristic also miss the key point. Biden surely didn’t mean to suggest that the United States has returned to the level of power, prestige, and importance it enjoyed in 2016. Or that it has recaptured its moral standing. He wasn’t arguing that he’d already repaired all the damage done by his predecessor; of course not. What Biden likely meant to convey—and what allies and adversaries should pay attention to—is the fact that Washington is trying again: trying to mend ties and restore cooperation with its friends. Trying to push back against authoritarian regimes and defend universal values. Trying to protect public goods like the environment. And, like it or not, trying to lead. If you have any doubt that America is back in this sense, just compare any of the five weeks Biden has been in office to any one of Donald Trump’s 208. Since taking charge, the new president has sought to wrap the country’s traditional allies in one of his trademark bear hugs: by returning to the G-7 (which Trump spurned), for example, or by reversing Trump’s withdrawal of U.S. troops from Germany. Washington has rejoined the Paris Agreement on climate change and the World Health Organization (both of which Trump dumped). Biden has extended the New START nuclear arms treaty with Russia (which Trump was about to abandon) and broadcast his intent to reenter the Iran nuclear deal, known as the Joint Comprehensive Plan of Action. He has stood up for democracy and human rights by imposing sanctions on the junta in Myanmar and preparing new measures to punish President Vladimir Putin and his cronies in Russia, as well as by ending U.S. support for the disastrous Saudi-led war in Yemen. And he has pledged up to $4 billion to COVAX, the global initiative to help vaccinate the developing world against COVID-19. That would be an impressive list of accomplishments for any monthlong period. When you remember that the Biden administration has pulled all this off while seriously understaffed (most of its key appointments have yet to be confirmed) and while the country is still suffering the aftershocks of last month’s violent insurrection (tremors that included Trump’s second impeachment), it looks even more remarkable—and makes recent criticisms of Biden’s foreign-policy record seem a little unfair. That’s especially so when you also factor in the administration’s overwhelming domestic to-do list, which includes small matters like passing a $1.9 trillion recovery package and speeding up the country’s COVID-19 vaccination Indeed, the fact that the administration is spending any time at all on foreign policy right now—let alone looking beyond immediate crises to longer-term priorities like restoring the country’s international standing—is yet more evidence for Biden’s claim that America is back. Such moves also firmly align the administration with a long-standing national tradition. One of the most unusual and distinguishing features of the country’s domestic and foreign-policy record isn’t the absence of mistakes—the United States makes as many or more of these than other countries. It’s the United States’ record of acting to repair the damage once it has been done and the moment has passed. The country has developed a remarkable mechanism for self-correction, a history of ensuring that, after every one of its disastrous bouts of inattention (think the interwar period) or destructive Jacksonian rage (think the aftermath of 9/11), the national pendulum swings back to the middle. Every Richard Nixon gets followed by a Gerald Ford or Jimmy Carter, every George W. Bush by a Barack Obama. Some mistakes take a lot longer to address than others. But the country often gets there in the end. American exceptionalism has become a dirty word in recent years, but this is that exceptionalism in its best form. Of course, the United States still has an enormous way to go before it can claim to be “back” to the kind of prominence it enjoyed before Trump’s election. But the fact that it’s trying so hard to get there shows it is already back in a critical sense. And that’s something we should all be grateful for.

#### 12] Heg solves unstable nuclear alliances that cause war

Hayes 18 [Peter Hayes, Nautilus Institute, Berkeley, California, USA; Center for International Security Studies, Sydney University. Trump and the Interregnum of American Nuclear Hegemony. November 8, 2018. <https://www.tandfonline.com/doi/full/10.1080/25751654.2018.1532525>]

During a **post-hegemonic era**, **long-standing** nuclear **alliances** are likely to be **replaced** by **ad hoc nuclear coalitions**, aligning and realigning around different congeries of threat and even actual **nuclear wars**, with **much higher levels** of **uncertainty** and unpredictability **than** was the case in the **nuclear hegemonic system**.

There are a number of ways that this dynamic could play out during the interregnum, and these dynamics are likely to be inconsistent and contradictory. In some instances, the sheer **momentum** of past policy combined with bureaucratic inertia and the potency of political, military service and corporate interests, may ensure that **residual aspects** of the formerly **hegemonic postures** are adhered to even as formal nuclear alliances rupture. Even as they **reach for** the **old anchors**, these states may be forced to adjust and retrench strategically, or start to **take** their own **nuclear risks** by making **increasingly explicit nuclear threats** and deployments against nuclear-armed adversaries – as **Japan** has begun to do with reference to its “technological deterrent” since about 2012.9 This period could last for many years **until and when** **nuclear war breaks out** and leads to a post-nuclear war disorder; or a new, post-hegemonic strategic framework is established to manage and/or abolish nuclear threat.

**Under** full-blown **American nuclear hegemony**, **fewer states** had **nuclear weapons**, the **major nuclear** weapons **states** entered into **legally binding restraints** on force levels and they learned from nuclear near-misses to **promulgate rules** of the road and tacit understandings. The lines drawn during full-blown collisions involving nuclear weapons were stark and concentrated the minds of leaders greatly. In a nuclear duel, it was clear that only one of two sides could fire first; the only question was which one. Now, with nine nuclear weapons states, and conflicts conceivably involving three, four or more of them, no matter how much leaders concentrate, it will not be evident who is aiming at who, who may fire first, and during a volley, who fired first and even who hit whom.

In a highly proliferated world, nuclear-armed states may feel driven to obtain larger nuclear forces able to deter multiple adversaries at the same time, sufficient to conduct not only a few nuclear attacks but configured to fight **more than one** protracted **nuclear war** **at a time**, especially in nuclear states torn apart by civil war and post-nuclear attack reconstruction. The first time nuclear weapons are used since 1945 will be shocking, the second time, less so, the third time, the **new normal**.

#### 13] Chinese led order fails – no clear vision or plan for security concerns

Liff '20 [Adam; 2/4/20; PhD and MA in Politics from Princeton, nonresident senior fellow with the Center for East Asia Policy Studies at Brookings, associate professor of East Asian international relations at Indiana University’s Hamilton Lugar School of Global and International Studies; "Chapter 1: Proactive Stabilizer: Japan’s Role in the Asia-Pacific Security Order," in The Crisis of Liberal Internationalism: Japan and the World Order, p. 54-55]

As Beijing’s behaviors appear to corrode key elements of the order in pursuit of narrow self-interest, it also appears—at least rhetorically—keen to undermine the U.S. alliance system, which it regularly disparages as “exclusive,” “zero-sum,” and reflecting a “Cold War mentality.”43 Even if one concedes that the alliance system is imperfect and may, inter alia, contribute to a security dilemma with China,44 it is generally welcomed by regional states—especially those who feel insecure vis-à- vis Beijing—and has important stabilizing effects.

Some scholars identify the lofty rhetoric of Hu Jintao’s “harmonious world” in 2005 or Xi Jinping’s call for a “new type of international relations” and “a community with a shared future for mankind” based on “win-win” cooperation as China’s “vision of the Asian political security order” and as “an alternative . . . to the U.S. vision.”45 Yet to refer to the status quo as “the U.S. vision” is misleading. A wide array of regional players publicly advocate for it, including both U.S. treaty allies and others who see it as fundamentally stabilizing—for example, Singapore. Furthermore, beyond lofty rhetoric and abstract, superficially attractive principles, China has offered no clear alternative to the U.S.-centered alliance system as a regional security guarantor. To be sure, Beijing has promoted its 1997 “New Security Concept” and 2014 “Asian Security Concept” as explicit foils to the U.S. alliance system and allegedly superior, enlightened pathways to “universal” security. Yet neither offers a clear plan for implementation or seems to acknowledge other states’ legitimate traditional security concerns—especially with respect to Beijing. In contrast, major functions of the U.S. alliance system are “to ensure diplomacy is always the first line of resort and as a hedge if diplomacy should fail.”46 In short, it is not clear what an alternative, China-led security order would even look like. In fact, when it comes to Chinese discussions of “order,” security often appears to be an afterthought. For example, a recent analysis of Chinese discourse on future international order barely mentions security affairs; instead, it focuses almost exclusively on international finance and economic integration.47

#### 14] China’s revisionist – containment solves war

Auslin 15 [Michael resident scholar at the American Enterprise Institute, 9/23/15, “Time For Realism In U.S.-China Relations,” http://nationalinterest.org/feature/time-realism-us-china-relations-13915?page=show]

To begin with, few of China’s neighbors feel that Beijing is altogether peaceful these days. Its coercion over disputed maritime territory in the East and South China Seas continues unabated, and it has now built islands in contested waters and is beginning to militarize them. Its military might, showcased this month at a major parade, was a clear message of China’s strength and a warning to those who would oppose it.

Secondly, longtime observers of China are increasingly concerned about its stability. Xi Jinping has instituted a social crackdown that belies the regime’s concern over its safety. Xi has arrested potential threats to his own power in the Communist Party, tightened control over the military, jailed lawyers and dissidents, and maintained oppression of Tibetan and Uighur minorities. Even established academics like George Washington University’s David Shambaugh are beginning to say that the Communist Party is entering its endgame, with unknown effects on social stability. Americans are willing to overlook these failings as long as China remained the goose that laid the golden egg. Yet this summer showed that Chinese prosperity, the third of Rice’s goals, can be taken for granted. The stock market collapse over the past few months is a sign of much deeper problems in the broader economy. The official growth rate has been knocked down to 7 percent, but few economists believe the figure, and it is entirely likely that China is already in stagnation. That means, as trade figures showed, dropping industrial production and shrinking imports. When the slowdown hits the pocketbooks of China’s nouveaux middle class, then social stability will be even more at risk.

A China suffering from economic stagnation and turmoil at home is unlikely to be a ‘responsible player in global affairs.’ In fact, it already isn’t, despite Rice’s desire. Just days before Xi’s visit to Obama, his government has formally arrested an American citizen on charges of spying. This sends a clear message to Obama about Beijing’s regard for diplomatic niceties. Far more serious, of course, is the unprecedented cyber espionage conducted by Chinese hackers, undoubtedly controlled or supported by the government, against U.S. citizens and businesses. The hack of the Office of Personnel Management compromised the sensitive data of tens of millions of Americans. In response, Washington is toying with signing a cybersecurity pact with Beijing that will do nothing to stop such aggression. Add on Beijing’s claims over the South China Sea and its attempt to dominate contested waters, its refusal to pressure North Korea, and its campaign to seek out Chinese expats in America and coerce them to return home, and the picture of bonhomie between America and China is itself a product of the kind of ‘reductive reasoning and lazy rhetoric’ denounced by Rice.

The question is, what to do about all this? How can the United States effectively pressure its largest import partner and the world’s second-largest economy? Must the arc of progress championed by Rice always bend in China’s favor? It is time for a new realism in U.S.-China relations. Such realism begins with an official acceptance that we are locked in a competition with China that is of Beijing’s choosing. Our economies may be increasingly interconnected, but no longer can U.S. officials quail at responding to Beijing’s provocations out of fear that trade relations will be harmed. It is time for high-level U.S.-China dialogues to be reset, to use a term once in favor in the Obama Administration, and conducted not as an unearned gift to Beijing, but only when there are concrete goals to be achieved. A state that acts increasingly in violation of global norms of behavior is not one that should be rewarded with pomp and circumstance by U.S. leaders.

In addition, it is past time for the U.S. to act as the guarantor of regional stability that it claims to be. That means sending U.S. ships and planes right up to the edges of China’s manmade islands in the South China Sea, something that Obama Administration admitted in Senate testimony last week that it was not doing. By not challenging China’s territorial claims we are in essence confirming them, and sending a message of political weakness to our allies in Asia. A China that knows we will employ our military strength where it is most in question will be far more circumspect in its attempts to undermine the rules of international behavior.

As for cyber, it is Beijing that has caused this crisis, and no U.S. administration should be negotiating a pact with the wolf in the sheep pen. First, we should be thinking of financial sanctions and diplomatic freezes as punishment for aggression already committed and that to come. It also is past time to throw some cyber elbows to show we won’t simply sit and take whatever fouls China decides to commit. There is no question that the U.S. is probably more vulnerable that China on the cyber front, but we are steadily being led down the path towards a real cyber Pearl Harbor (such as the shutting down of our energy grid) by our unwillingness to show that we can play the same game. It’s a discomfiting thought, but that is the world we have let ourselves be trapped into.

The point of the new realism is not to force a conflict with China. It is to avoid one. Only steady strength, a firm response, and a willingness to speak the truth will show Xi Jinping and his fellow leaders that America is no better friend and no worse adversary. The choice lies entirely with the Chinese leadership. So far, they have ignored Susan Rice’s earnest exhortations, and instead shown a dangerous willingness to undermine the very peace that has allowed their country to grow so much. By acting in our best interests, we will also help deflect China from a path that increasingly looks like one that will result in far greater risks to stability, prosperity, and peace.

#### 15] They’ll never pass the US – prefer long-term trends

Brands 18 [Hal, Henry Kissinger Distinguished Professor at Johns Hopkins University's School of Advanced International Studies and a senior fellow at the Center for Strategic and Budgetary Assessments." American Grand Strategy in the Age of Trump." Page 11-16]

This argument is not baseless, for America’s margin of superiority has slipped from its post–Cold War peak. In 1994, the United States accounted for nearly one-fourth of global GDP and 40 percent of world military spending, with those numbers rising even higher by the early 2000s. By 2015, however, these statistics had fallen— not dramatically, but not trivially—to 22.4 percent of global GDP and 33.8 percent of world military spending. The share of global wealth and power wielded by America’s core treaty allies had also declined, from roughly 47 percent of global GDP and 35 percent of global military spending in 1994 to roughly 39 and 25 percent, respectively, in 2015. Meanwhile, the share wielded by the chief challenger to American primacy rose dramatically. In 1994, China accounted for just 3.3 percent of global GDP and 2.2 percent of world military spending; by 2015 two decades of booming economic growth and double-digit annual increases in military spending had taken those numbers to 11.8 and 12.2 percent, respectively.19 By these common measures of global power, the world is not as unbalanced as it used to be.

As the global power gap has narrowed, Washington has also been faced with more—and arguably more severe—threats to its position and interests than at any time since the Cold War. Greatpower competition has returned, as Russia and China test the contours of an order that they never fully accepted, and that they now have greater capacity—economic, military, or both—to challenge. Moscow and Beijing are seeking to assert primacy within their own regions, probing the distant peripheries of the U.S. alliance system, and developing military capabilities that severely threaten America’s ability to project power and uphold its security commitments in eastern Europe and the western Pacific. China’s antiship ballistic missiles and its coercion of its neighbors, like Russia’s hybridwarfare activities and its anti-access/area-denial (A2/AD) capabilities, represent growing challenges to U.S. military superiority in key areas of Eurasia, and to the benign regional orders Washington has sought to maintain.20

Meanwhile, the long-standing challenge of handling rogue actors has also become more difficult as those actors have become more empowered. North Korea boasts a sizable nuclear arsenal and is rapidly developing a reliable intercontinental strike capability with which to underwrite its serial provocations.21 Iran is fanning sectarianism, fighting multiple proxy wars, and destabilizing an already-disordered Middle East as it also emerges from punishing international sanctions. The Islamic State is losing ground militarily, but it has shown the capacity of nonstate actors to sow chaos across a crucial region while also spreading and inspiring terrorism across the globe. The world is ablaze, it sometimes seems. In virtually every key region, the United States confronts rising challenges to the post–Cold War order.

The world ideological climate is now more contested as well. After being in retreat for decades, authoritarian regimes are increasingly pushing back against liberalizing currents, as the 2008 global financial crisis and its aftermath have raised questions about whether democracies can deliver the goods. Russia, China, and other authoritarian regimes have meanwhile reentered the global ideological competition in significant ways, touting the virtues of centralized control and “state capitalism,” and pushing back against Western concepts of political liberalism and human rights. Even countries that are part of the U.S.-led alliance system have regressed politically. Hungarian prime minister Viktor Orbán has proclaimed the rise of the “illiberal state” as an antidote to the weaknesses of liberal democracy, and his example has gained admirers in Poland, Slovakia, and elsewhere. As a result of all this, although democracy remains very robust by historical standards, the advance of electoral democracy has stalled over the past decade, and some contend that a “democratic recession” is under way.22 If history ever ended, it has restarted once more. In the realm of ideas, as in the realm of geopolitics, American primacy seems less daunting than before. Finally, there are questions about the trajectory of America’s own engagement with the world. The United States has experienced significant real declines in defense spending since 2011, forcing difficult trade-offs among force structure, readiness, and modernization. Indeed, Washington is increasingly facing a crisis of strategic solvency, as America’s undiminished commitments outstrip its shrinking capabilities.23 At the same time, the wars in Iraq and Afghanistan have encouraged pro-retrenchment sentiments at home; they have also raised doubts regarding America’s judgment in starting wars and its ability to conclude those wars successfully. Overseas, U.S. partners in Europe, the Middle East, and East Asia now appear concerned that America might undertake a broadbased withdrawal from key regions; for their part, Americans seem less convinced as to why the United States should retain such an assertive strategy when there is no obvious existential threat to national security to justify it. According to one poll conducted in 2013, 52 percent of Americans—the highest proportion in decades—believed that the country should now “mind its own business internationally and let other countries get along the best they can on their own.”24 Not least, there is the simple fact that a candidate who derided U.S. alliances and overseas commitments, who angrily denounced the pursuit of free trade and globalization, and who promised—on the stump, at least—major changes in American foreign policy was elected president in 2016. These factors have collectively fed into a narrative of national ennui and decline that is more pronounced than at any time since the 1970s.

Yet if this narrative is not baseless, it is overstated. For the idea that the era of American primacy has passed—that we are now entering or have already entered a truly multipolar world—is far from the truth. By virtually all key measures, the United States still has substantial, even massive, leads over its closest competitors. In 2016 the United States claimed a nearly US$18.6 trillion GDP that was almost US$7.5 trillion larger than China’s, and it possessed a per capita GDP (a crucial measure of how much money a government can extract from its citizens to pursue geopolitical ends) roughly four times that of China. In the military realm, U.S. annual defense spending was still nearly three times that of China as of 2015—a reminder that although China is closing the gap on Washington in certain respects, the overall gap remains significant indeed.25

In fact, America’s global lead is probably far bigger than indicated by simple numerical measures such as GDP and percentage of global military spending. GDP is a commonly used but problematic way of comparing U.S. and Chinese economic strength. It is merely a snapshot, rather than a fully explanatory measure of how wealth accrues over time; it does not account for factors such as the damage that China is doing to its own long-term economic potential through the devastation of its natural environment; it understates important U.S. advantages such as the fact that American citizens own significant minority shares in foreign corporations. By a more holistic measure of national economic strength—“inclusive wealth,” which takes account of manufactured capital, human capital, and natural capital—the United States was still roughly 4.5 times wealthier than China as recently as 2010. Add in the enormous long-term economic problems that China faces—from declining growth rates, to a massive asset bubble, to a rapidly aging population—and forecasts of coming Chinese economic supremacy become more tenuous still.26

The U.S. military lead is even more extensive. As a recent study by Stephen Brooks and William Wohlforth concludes, although China’s ongoing military buildup presents significant, even severe, regional challenges for the United States, at the global level there is still simply no comparison. The United States possesses massive advantages in high-end power-projection capabilities such as aircraft carriers, fourth- and fifth-generation tactical aircraft, nuclear powered submarines, AWACS, and heavy unmanned aerial vehicles. These advantages have been amassed over decades, through enormous and accumulating investments, and so it will take decades—if not longer—for China to come close to matching the United States. These metrics, moreover, do not reflect the other, more intangible advantages that the U.S. military possesses—the years of recent experience in complex operations, the extraordinarily high levels of human capital, the flexible command-and control structures that permit initiative and adaptation. “Rather than expecting a power transition in international politics,” Brooks and Wohlforth write, “everyone should start getting used to a world in which the United States remains the sole superpower for decades to come.”27

Finally, any consideration of global power dynamics must evaluate the role of allies: the United States has dozens of them, whereas China and Russia have few, if any. (Those that they do have, countries such as Belarus and North Korea, make up a veritable international most-wanted list.) America’s allies give it geopolitical leverage, diplomatic influence, and military access that other countries can only envy; they add enormously to the overall weight of the Western coalition of which Washington remains leader. As of 2015, the United States and its core treaty allies in Asia and Europe accounted for roughly three-fifths of global wealth and global military spending—a share that was moderately diminished from twenty years earlier, but still very impressive by nearly all other historical comparisons.

### AC – Framing vs K

#### I value morality, the standard is maximizing wellbeing.

#### 1] Use util – it’s impartial, specific to public actors, and resolves infinite regress which explains all value. Reject flawed calc indicts that misunderstand happiness and rely on problematic intuitions.

Greene 15 — (Joshua Greene, Professor of Psychology @ Harvard, being interviewed by Russ Roberts, “Joshua Greene on Moral Tribes, Moral Dilemmas, and Utilitarianism”, The Library of Economics and Liberty, 1-5-15, Available Online at <https://www.econtalk.org/joshua-greene-on-moral-tribes-moral-dilemmas-and-utilitarianism/#audio-highlights>, accessed 5-17-20, HKR-AM) \*\*NB: Guest = Greene, and only his lines are highlighted/underlined

Guest: Okay. So, I think utilitarianism is very much misunderstood. And this is part of the reason why we shouldn't even call it utilitarianism at all. We should call it what I call 'deep pragmatism', which I think better captures what I think utilitarianism is really like, if you really apply it in real life, in light of an understanding of human nature. But, we can come back to that. The idea, going back to the tragedy of common-sense morality is you've got all these different tribes with all of these different values based on their different ways of life. What can they do to get along? And I think that the best answer that we have is--well, let's back up. In order to resolve any kind of tradeoff, you have to have some kind of common metric. You have to have some kind of common currency. And I think that what utilitarianism, whether it's the moral truth or not, is **provide** a kind of **common currency**. So, what is utilitarianism? It's basically the idea that--it's really two ideas put together. One is the idea of impartiality. That is, at least **as social decision makers**, we should regard everybody's interests as of equal worth. Everybody counts the same. And then you might say, 'Well, but okay, what does it mean to count everybody the same? What is it that really matters for you and for me and for everybody else?' And there the utilitarian's answer is what is sometimes called, somewhat accurately and somewhat misleadingly, happiness. But it's not really happiness in the sense of cherries on sundaes, things that make you smile. It's really the quality of conscious experience. So, the idea is that if you start with anything that you value, and say, 'Why do you care about that?' and keep asking, 'Why do you care about that?' or 'Why do you care about that?' you ultimately come down to the quality of someone's conscious experience. So if I were to say, 'Why did you go to work today?' you'd say, 'Well, I need to make money; and I also enjoy my work.' 'Well, what do you need your money for?' 'Well, I need to have a place to live; it costs money.' 'Well, why can't you just live outside?' 'Well, I need a place to sleep; it's cold at night.' 'Well, what's wrong with being cold?' 'Well, it's uncomfortable.' 'What's wrong with being uncomfortable?' 'It's just bad.' Right? At some point if you keep asking why, why, why, it's going to come down to the conscious experience--in Bentham's terms, again somewhat misleading, the pleasure and pain of either you or somebody else that you care about. So the utilitarian idea is to say, Okay, we all have our pleasures and pains, and as a moral philosophy we should all count equally. And so a good standard for **resolving** **public** **disagreements** is to say we should go with whatever option is going to produce the best overall experience for the people who are affected. Which you can think of as shorthand as maximizing happiness--although I think that that's somewhat misleading. And the solution has a lot of merit to it. But it also has endured a couple of centuries of legitimate criticism. And one of the biggest criticisms--and now we're getting back to the Trolley cases, is that utilitarianism doesn't adequately account for people's rights. So, take the footbridge case. It seems that it's wrong to push that guy off the footbridge. Even if you stipulate that you can save more people's lives. And so anyone who is going to defend utilitarianism as a meta-morality--that is, a solution to the tragedy of common sense morality, as a moral system to adjudicate among competing tribal moral systems--if you are going to defend it in that way, as I do, you have to face up to these philosophical challenges: is it okay to kill on person to save five people in this kind of situation? So I spend a lot of the book trying to understand the psychology of cases like the footbridge case. And you mention these being kind of unrealistic and weird cases. That's actually part of my defense.

Russ: Yeah, there's some plus to it, I agree.

Guest: Right. And the idea is that your amygdala is responding to an act of violence. And most acts of violence are bad. And so it is good for us to have a gut reaction, which is really a reaction in your amygdala that's then sending a signal to your ventromedial prefrontal cortex and so on and so forth, and we can talk about that. It's good to have that reaction that says, 'Don't push people off of footbridges.' But if you construct a case in which you stipulate that committing this act of violence is going to lead to the greater good, and it still feels wrong, I think it's a mistake to interpret that gut reaction as a challenge to the theory that says we should do whatever in general is going to promote the greater good. That is, our gut reactions are somewhat limited. They are good for everyday life. It's good that you have a gut reaction that says, 'Don't go shoving people off of high places.' But that shouldn't be a veto against a general idea that otherwise makes a lot of sense. Which is that in the modern world, we have a lot of different competing value systems, and that the way to resolve disagreements among those different competing value systems is to say, 'What's going to actually produce the best consequences?' And best consequences measured in terms of the quality of people's experience. So, that's kind of completing or partially completing the circle between the tragedy of the commons, that discussion, and how do we get to the Trolleys.

#### 2] Extinction outweighs---it’s the upmost moral evil and disavowal of the risk makes it more likely.

Burns 2017 (Elizabeth Finneron-Burns is a Teaching Fellow at the University of Warwick and an Affiliated Researcher at the Institute for Futures Studies in Stockholm, What’s wrong with human extinction?, <http://www.tandfonline.com/doi/pdf/10.1080/00455091.2016.1278150?needAccess=true>, Canadian Journal of Philosophy, 2017)

Many, though certainly not all, people might believe that it would be wrong to bring about the end of the human species, and the reasons given for this belief are various. I begin by considering four reasons that could be given against the moral permissibility of human extinction. I will argue that only those reasons that impact the people who exist at the time that the extinction or the knowledge of the upcoming extinction occurs, can explain its wrongness. I use this conclusion to then consider in which cases human extinction would be morally permissible or impermissible, arguing that there is only a small class of cases in which it would not be wrong to cause the extinction of the human race or allow it to happen. 2.1. It would prevent the existence of very many happy people One reason of human extinction might be considered to be wrong lies in the value of human life itself. The thought here might be that it is a good thing for people to exist and enjoy happy lives and extinction would deprive more people of enjoying this good. The ‘good’ in this case could be understood in at least two ways. According to the first, one might believe that you benefit a person by bringing them into existence, or at least, that it is good for that person that they come to exist. The second view might hold that if humans were to go extinct, the utility foregone by the billions (or more) of people who could have lived but will now never get that opportunity, renders allowing human extinction to take place an incidence of wrongdoing. An example of this view can be found in two quotes from an Effective Altruism blog post by Peter Singer, Nick Beckstead and Matt Wage: One very bad thing about human extinction would be that billions of people would likely die painful deaths. But in our view, this is by far not the worst thing about human extinction. The worst thing about human extinction is that there would be no future generations. Since there could be so many generations in our future, the value of all those generations together greatly exceeds the value of the current generation. (Beckstead, Singer, and Wage 2013) The authors are making two claims. The first is that there is value in human life and also something valuable about creating future people which gives us a reason to do so; furthermore, it would be a very bad thing if we did not do so. The second is that, not only would it be a bad thing for there to be no future people, but it would actually be the worst thing about extinction. Since happy human lives have value, and the number of potential people who could ever exist is far greater than the number of people who exist at any one time, even if the extinction were brought about through the painful deaths of currently existing people, the former’s loss would be greater than the latter’s. Both claims are assuming that there is an intrinsic value in the existence of potential human life. The second claim makes the further assumption that the forgone value of the potential lives that could be lived is greater than the disvalue that would be accrued by people existing at the time of the extinction through suffering from painful and/or premature deaths. The best-known author of the post, Peter Singer is a prominent utilitarian, so it is not surprising that he would lament the potential lack of future human lives per se. However, it is not just utilitarians who share this view, even if implicitly. Indeed, other philosophers also seem to imply that they share the intuition that there is just something wrong with causing or failing to prevent the extinction of the human species such that we prevent more ‘people’ from having the ‘opportunity to exist’. Stephen Gardiner (2009) and Martin O’Neill (personal correspondence), both sympathetic to contract theory, for example, also find it intuitive that we should want more generations to have the opportunity to exist, assuming that they have worth-living lives, and I find it plausible to think that many other people (philosophers and non-philosophers alike) probably share this intuition. When we talk about future lives being ‘prevented’, we are saying that a possible person or a set of possible people who could potentially have existed will now never actually come to exist. To say that it is wrong to prevent people from existing could either mean that a possible person could reasonably reject a principle that permitted us not to create them, or that the foregone value of their lives provides a reason for rejecting any principle that permits extinction. To make the first claim we would have to argue that a possible person could reasonably reject any principle that prevented their existence on the grounds that it prevented them in particular from existing. However, this is implausible for two reasons. First, we can only wrong someone who did, does or will actually exist because wronging involves failing to take a person’s interests into account. When considering the permissibility of a principle allowing us not to create Person X, we cannot take X’s interest in being created into account because X will not exist if we follow the principle. By considering the standpoint of a person in our deliberations we consider the burdens they will have to bear as a result of the principle. In this case, there is no one who will bear any burdens since if the principle is followed (that is, if we do not create X), X will not exist to bear any burdens. So, only people who do/will actually exist can bear the brunt of a principle, and therefore occupy a standpoint that is owed justification. Second, existence is not an interest at all and a possible person is not disadvantaged by not being caused to exist. Rather than being an interest, it is a necessary requirement in order to have interests. Rivka Weinberg describes it as ‘neutral’ because causing a person to exist is to create a subject who can have interests; existence is not an interest itself.3 In order to be disadvantaged, there must be some detrimental effect on your interests. However, without existence, a person does not have any interests so they cannot be disadvantaged by being kept out of existence. But, as Weinberg points out, ‘never having interests itself could not be contrary to people’s interests since without interest bearers, there can be no ‘they’ for it to be bad for’ (Weinberg 2008, 13). So, a principle that results in some possible people never becoming actual does not impose any costs on those ‘people’ because nobody is disadvantaged by not coming into existence.4 It therefore seems that it cannot be wrong to fail to bring particular people into existence. This would mean that no one acts wrongly when they fail to create another person. Writ large, it would also not be wrong if everybody decided to exercise their prerogative not to create new people and potentially, by consequence, allow human extinction. One might respond here by saying that although it may be permissible for one person to fail to create a new person, it is not permissible if everyone chooses to do so because human lives have value and allowing human extinction would be to forgo a huge amount of value in the world. This takes us to the second way of understanding the potential wrongness of preventing people from existing — the foregone value of a life provides a reason for rejecting any principle that prevents it. One possible reply to this claim turns on the fact that many philosophers acknowledge that the only, or at least the best, way to think about the value of (individual or groups of) possible people’s lives is in impersonal terms (Parfit 1984; Reiman 2007; McMahan 2009). Jeff McMahan, for example, writes ‘at the time of one’s choice there is no one who exists or will exist independently of that choice for whose sake one could be acting in causing him or her to exist … it seems therefore that any reason to cause or not to cause an individual to exist … is best considered an impersonal rather than individual-affecting reason’ (McMahan 2009, 52). Another reply along similar lines would be to appeal to the value that is lost or at least foregone when we fail to bring into existence a next (or several next) generations of people with worth-living lives. Since ex hypothesi worth-living lives have positive value, it is better to create more such lives and worse to create fewer. Human extinction by definition is the creation of no future lives and would ‘deprive’ billions of ‘people’ of the opportunity to live worth-living lives. This might reduce the amount of value in the world at the time of the extinction (by killing already existing people), but it would also prevent a much vaster amount of value in the future (by failing to create more people). Both replies depend on the impersonal value of human life. However, recall that in contractualism impersonal values are not on their own grounds for reasonably rejecting principles. Scanlon himself says that although we have a strong reason not to destroy existing human lives, this reason ‘does not flow from the thought that it is a good thing for there to be more human life rather than less’ (104). In contractualism, something cannot be wrong unless there is an impact on a person. Thus, neither the impersonal value of creating a particular person nor the impersonal value of human life writ large could on its own provide a reason for rejecting a principle permitting human extinction. It seems therefore that the fact that extinction would deprive future people of the opportunity to live worth-living lives (either by failing to create either particular future people or future people in general) cannot provide us with a reason to consider human extinction to be wrong. Although the lost value of these ‘lives’ itself cannot be the reason explaining the wrongness of extinction, it is possible the knowledge of this loss might create a personal reason for some existing people. I will consider this possibility later on in section (d). But first I move to the second reason human extinction might be wrong per se. 2.2. It would mean the loss of the only known form of intelligent life and all civilization and intellectual progress would be lost A second reason we might think it would be wrong to cause human extinction is the loss that would occur of the only (known) form of rational life and the knowledge and civilization that that form of life has created. One thought here could be that just as some might consider it wrong to destroy an individual human heritage monument like the Sphinx, it would also be wrong if the advances made by humans over the past few millennia were lost or prevented from progressing. A related argument is made by those who feel that there is something special about humans’ capacity for rationality which is valuable in itself. Since humans are the only intelligent life that we know of, it would be a loss, in itself, to the world for that to end. I admit that I struggle to fully appreciate this thought. It seems to me that Henry Sidgwick was correct in thinking that these things are only important insofar as they are important to humans (Sidgwick 1874, I.IX.4).5 If there is no form of intelligent life in the future, who would there be to lament its loss since intelligent life is the only form of life capable of appreciating intelligence? Similarly, if there is no one with the rational capacity to appreciate historic monuments and civil progress, who would there be to be negatively affected or even notice the loss?6 However, even if there is nothing special about human rationality, just as some people try to prevent the extinction of nonhuman animal species, we might think that we ought also to prevent human extinction for the sake of biodiversity. The thought in this, as well as the earlier examples, must be that it would somehow be bad for the world if there were no more humans even though there would be no one for whom it is bad. This may be so but the only way to understand this reason is impersonally. Since we are concerned with wrongness rather than badness, we must ask whether something that impacts no one’s well-being, status or claims can be wrong. As we saw earlier, in the contractualist framework reasons must be personal rather than impersonal in order to provide grounds for reasonable rejection (Scanlon 1998, 218–223). Since the loss of civilization, intelligent life or biodiversity are per se impersonal reasons, there is no standpoint from which these reasons could be used to reasonably reject a principle that permitted extinction. Therefore, causing human extinction on the grounds of the loss of civilization, rational life or biodiversity would not be wrong. 2.3. Existing people would endure physical pain and/or painful and/or premature deaths Thinking about the ways in which human extinction might come about brings to the fore two more reasons it might be wrong. It could, for example, occur if all humans (or at least the critical number needed to be unable to replenish the population, leading to eventual extinction) underwent a sterilization procedure. Or perhaps it could come about due to anthropogenic climate change or a massive asteroid hitting the Earth and wiping out the species in the same way it did the dinosaurs millions of years ago. Each of these scenarios would involve significant physical and/or non-physical harms to existing people and their interests. Physically, people might suffer premature and possibly also painful deaths, for example. It is not hard to imagine examples in which the process of extinction could cause premature death. A nuclear winter that killed everyone or even just every woman under the age of 50 is a clear example of such a case. Obviously, some types of premature death themselves cannot be reasons to reject a principle. Every person dies eventually, sometimes earlier than the standard expected lifespan due to accidents or causes like spontaneously occurring incurable cancers. A cause such as disease is not a moral agent and therefore it cannot be wrong if it unavoidably kills a person prematurely. Scanlon says that the fact that a principle would reduce a person’s well-being gives that person a reason to reject the principle: ‘components of well-being figure prominently as grounds for reasonable rejection’ (Scanlon 1998, 214). However, it is not settled yet whether premature death is a setback to well-being. Some philosophers hold that death is a harm to the person who dies, whilst others argue that it is not.7 I will argue, however, that regardless of who is correct in that debate, being caused to die prematurely can be reason to reject a principle when it fails to show respect to the person as a rational agent. Scanlon says that recognizing others as rational beings with interests involves seeing reason to preserve life and prevent death: ‘appreciating the value of human life is primarily a matter of seeing human lives as something to be respected, where this involves seeing reasons not to destroy them, reasons to protect them, and reasons to want them to go well’ (Scanlon 1998, 104). The ‘respect for life’ in this case is a respect for the person living, not respect for human life in the abstract. This means that we can sometimes fail to protect human life without acting wrongfully if we still respect the person living. Scanlon gives the example of a person who faces a life of unending and extreme pain such that she wishes to end it by committing suicide. Scanlon does not think that the suicidal person shows a lack of respect for her own life by seeking to end it because the person whose life it is has no reason to want it to go on. This is important to note because it emphasizes the fact that the respect for human life is person-affecting. It is not wrong to murder because of the impersonal disvalue of death in general, but because taking someone’s life without their permission shows disrespect to that person. This supports its inclusion as a reason in the contractualist formula, regardless of what side ends up winning the ‘is death a harm?’ debate because even if death turns out not to harm the person who died, ending their life without their consent shows disrespect to that person. A person who could reject a principle permitting another to cause his or her premature death presumably does not wish to die at that time, or in that manner. Thus, if they are killed without their consent, their interests have not been taken into account, and they have a reason to reject the principle that allowed their premature death.8 This is as true in the case of death due to extinction as it is for death due to murder. However, physical pain may also be caused to existing people without killing them, but still resulting in human extinction. Imagine, for example, surgically removing everyone’s reproductive organs in order to prevent the creation of any future people. Another example could be a nuclear bomb that did not kill anyone, but did painfully render them infertile through illness or injury. These would be cases in which physical pain (through surgery or bombs) was inflicted on existing people and the extinction came about as a result of the painful incident rather than through death. Furthermore, one could imagine a situation in which a bomb (for example) killed enough people to cause extinction, but some people remained alive, but in terrible pain from injuries. It seems uncontroversial that the infliction of physical pain could be a reason to reject a principle. Although Scanlon says that an impact on well-being is not the only reason to reject principles, it plays a significant role, and indeed, most principles are likely to be rejected due to a negative impact on a person’s well-being, physical or otherwise. It may be queried here whether it is actually the involuntariness of the pain that is grounds for reasonable rejection rather than the physical pain itself because not all pain that a person suffers is involuntary. One can imagine acts that can cause physical pain that are not rejectable — base jumping or life-saving or improving surgery, for example. On the other hand, pushing someone off a cliff or cutting him with a scalpel against his will are clearly rejectable acts. The difference between the two cases is that in the former, the person having the pain inflicted has consented to that pain or risk of pain. My view is that they cannot be separated in these cases and it is involuntary physical pain that is the grounds for reasonable rejection. Thus, the fact that a principle would allow unwanted physical harm gives a person who would be subjected to that harm a reason to reject the principle. Of course the mere fact that a principle causes involuntary physical harm or premature death is not sufficient to declare that the principle is rejectable — there might be countervailing reasons. In the case of extinction, what countervailing reasons might be offered in favour of the involuntary physical pain/ death-inducing harm? One such reason that might be offered is that humans are a harm to the natural environment and that the world might be a better place if there were no humans in it. It could be that humans might rightfully be considered an all-things-considered hindrance to the world rather than a benefit to it given the fact that we have been largely responsible for the extinction of many species, pollution and, most recently, climate change which have all negatively affected the natural environment in ways we are only just beginning to understand. Thus, the fact that human extinction would improve the natural environment (or at least prevent it from degrading further), is a countervailing reason in favour of extinction to be weighed against the reasons held by humans who would experience physical pain or premature death. However, the good of the environment as described above is by definition not a personal reason. Just like the loss of rational life and civilization, therefore, it cannot be a reason on its own when determining what is wrong and countervail the strong personal reasons to avoid pain/death that is held by the people who would suffer from it.9 Every person existing at the time of the extinction would have a reason to reject that principle on the grounds of the physical pain they are being forced to endure against their will that could not be countervailed by impersonal considerations such as the negative impact humans may have on the earth. Therefore, a principle that permitted extinction to be accomplished in a way that caused involuntary physical pain or premature death could quite clearly be rejectable by existing people with no relevant countervailing reasons. This means that human extinction that came about in this way would be wrong. There are of course also additional reasons they could reject a similar principle which I now turn to address in the next section. 2.4. Existing people could endure non-physical harms I said earlier than the fact in itself that there would not be any future people is an impersonal reason and can therefore not be a reason to reject a principle permitting extinction. However, this impersonal reason could give rise to a personal reason that is admissible. So, the final important reason people might think that human extinction would be wrong is that there could be various deleterious psychological effects that would be endured by existing people having the knowledge that there would be no future generations. There are two main sources of this trauma, both arising from the knowledge that there will be no more people. The first relates to individual people and the undesired negative effect on well-being that would be experienced by those who would have wanted to have children. Whilst this is by no means universal, it is fair to say that a good proportion of people feel a strong pull towards reproduction and having their lineage continue in some way. Samuel Scheffler describes the pull towards reproduction as a ‘desire for a personalized relationship with the future’ (Scheffler 2012, 31). Reproducing is a widely held desire and the joys of parenthood are ones that many people wish to experience. For these people knowing that they would not have descendants (or that their descendants will endure painful and/or premature deaths) could create a sense of despair and pointlessness of life. Furthermore, the inability to reproduce and have your own children because of a principle/policy that prevents you (either through bans or physical interventions) would be a significant infringement of what we consider to be a basic right to control what happens to your body. For these reasons, knowing that you will have no descendants could cause significant psychological traumas or harms even if there were no associated physical harm. The second is a more general, higher level sense of hopelessness or despair that there will be no more humans and that your projects will end with you. Even those who did not feel a strong desire to procreate themselves might feel a sense of hopelessness that any projects or goals they have for the future would not be fulfilled. Many of the projects and goals we work towards during our lifetime are also at least partly future-oriented. Why bother continuing the search for a cure for cancer if either it will not be found within humans’ lifetime, and/or there will be no future people to benefit from it once it is found? Similar projects and goals that might lose their meaning when confronted with extinction include politics, artistic pursuits and even the type of philosophical work with which this paper is concerned. Even more extreme, through the words of the character Theo Faron, P.D. James says in his novel The Children of Men that ‘without the hope of posterity for our race if not for ourselves, without the assurance that we being dead yet live, all pleasures of the mind and senses sometimes seem to me no more than pathetic and crumbling defences shored up against our ruins’ (James 2006, 9). Even if James’ claim is a bit hyperbolic and all pleasures would not actually be lost, I agree with Scheffler in finding it not implausible that the knowledge that extinction was coming and that there would be no more people would have at least a general depressive effect on people’s motivation and confidence in the value of and joy in their activities (Scheffler 2012, 43). Both sources of psychological harm are personal reasons to reject a principle that permitted human extinction. Existing people could therefore reasonably reject the principle for either of these reasons. Psychological pain and the inability to pursue your personal projects, goals, and aims, are all acceptable reasons for rejecting principles in the contractualist framework. So too are infringements of rights and entitlements that we accept as important for people’s lives. These psychological reasons, then, are also valid reasons to reject principles that permitted or required human extinction.

#### 3] That is the only egalitarian metric---anything else collapses cooperation on collective action crises and makes extinction inevitable

Khan 18 (Risalat, activist and entrepreneur from Bangladesh passionate about addressing climate change, biodiversity loss, and other existential challenges. He was featured by The Guardian as one of the “young climate campaigners to watch” (2015). As a campaigner with the global civic movement Avaaz (2014-17), Risalat was part of a small core team that spearheaded the largest climate marches in history with a turnout of over 800,000 across 2,000 cities. After fighting for the Paris Agreement, Risalat led a campaign joined by over a million people to stop the Rampal coal plant in Bangladesh to protect the Sundarbans World Heritage forest, and elicited criticism of the plant from Crédit Agricolé through targeted advocacy. Currently, Risalat is pursuing an MPA in Environmental Science and Policy at Columbia University as a SIPA Environmental Fellow, “5 reasons why we need to start talking about existential risks,” https://www.weforum.org/agenda/2018/01/5-reasons-start-talking-existential-risks-extinction-moriori/)

Infinite future possibilities I find the story of the Moriori profound. It teaches me two lessons. Firstly, that human culture is far from immutable. That we can struggle against our baser instincts. That we can master them and rise to unprecedented challenges. Secondly, that even this does not make us masters of our own destiny. We can make visionary choices, but the future can still surprise us. This is a humbling realization. Because faced with an uncertain future, the only wise thing we can do is prepare for possibilities. Standing at the launch pad of the Fourth Industrial Revolution, the possibilities seem endless. They range from an era of abundance to the end of humanity, and everything in between. How do we navigate such a wide and divergent spectrum? I am an optimist. From my bubble of privilege, life feels like a rollercoaster ride full of ever more impressive wonders, even as I try to fight the many social injustices that still blight us. However, the accelerating pace of change amid uncertainty elicits one fundamental observation. Among the infinite future possibilities, only one outcome is truly irreversible: extinction. Concerns about extinction are often dismissed as apocalyptic alarmism. Sometimes, they are. But repeating that mankind is still here after 70 years of existential warning about nuclear warfare is a straw man argument. The fact that a 1000-year flood has not happened does not negate its possibility. And there have been far too many nuclear near-misses to rest easy. As the World Economic Forum’s Annual Meeting in Davos discusses how to create a shared future in a fractured world, here are five reasons why the possibility of existential risks should raise the stakes of conversation: 1. Extinction is the rule, not the exception More than 99.9% of all the species that ever existed are gone. Deep time is unfathomable to the human brain. But if one cares to take a tour of the billions of years of life’s history, we find a litany of forgotten species. And we have only discovered a mere fraction of the extinct species that once roamed the planet. In the speck of time since the first humans evolved, more than 99.9% of all the distinct human cultures that have ever existed are extinct. Each hunter-gatherer tribe had its own mythologies, traditions and norms. They wiped each other out, or coalesced into larger formations following the agricultural revolution. However, as major civilizations emerged, even those that reached incredible heights, such as the Egyptians and the Romans, eventually collapsed. It is only in the very recent past that we became a truly global civilization. Our interconnectedness continues to grow rapidly. “Stand or fall, we are the last civilization”, as Ricken Patel, the founder of the global civic movement Avaaz, put it. 2. Environmental pressures can drive extinction More than 15,000 scientists just issued a ‘warning to humanity’. They called on us to reduce our impact on the biosphere, 25 years after their first such appeal. The warning notes that we are far outstripping the capacity of our planet in all but one measure of ozone depletion, including emissions, biodiversity, freshwater availability and more. The scientists, not a crowd known to overstate facts, conclude: “soon it will be too late to shift course away from our failing trajectory, and time is running out”. In his 2005 book Collapse, Jared Diamond charts the history of past societies. He makes the case that overpopulation and resource use beyond the carrying capacity have often been important, if not the only, drivers of collapse. Even though we are making important incremental progress in battles such as climate change, we must still achieve tremendous step changes in our response to several major environmental crises. We must do this even while the world’s population continues to grow. These pressures are bound to exert great stress on our global civilization. 3. Superintelligence: unplanned obsolescence? Imagine a monkey society that foresaw the ascendance of humans. Fearing a loss of status and power, it decided to kill the proverbial Adam and Eve. It crafted the most ingenious plan it could: starve the humans by taking away all their bananas. Foolproof plan, right? This story describes the fundamental difficulty with superintelligence. A superintelligent being may always do something entirely different from what we, with our mere mortal intelligence, can foresee. In his 2014 book Superintelligence, Swedish philosopher Nick Bostrom presents the challenge in thought-provoking detail, and advises caution. Bostrom cites a survey of industry experts that projected a 50% chance of the development of artificial superintelligence by 2050, and a 90% chance by 2075. The latter date is within the life expectancy of many alive today. Visionaries like Stephen Hawking and Elon Musk have warned of the existential risks from artificial superintelligence. Their opposite camp includes Larry Page and Mark Zuckerberg. But on an issue that concerns the future of humanity, is it really wise to ignore the guy who explained the nature of space to us and another guy who just put a reusable rocket in it? 4. Technology: known knowns and unknown unknowns Many fundamentally disruptive technologies are coming of age, from bioengineering to quantum computing, 3-D printing, robotics, nanotechnology and more. Lord Martin Rees describes potential existential challenges from some of these technologies, such as a bioengineered pandemic, in his book Our Final Century. Imagine if North Korea, feeling secure in its isolation, could release a virulent strain of Ebola, engineered to be airborne. Would it do it? Would ISIS? Projecting decades forward, we will likely develop capabilities that are unthinkable even now. The unknown unknowns of our technological path are profoundly humbling. 5. 'The Trump Factor' Despite our scientific ingenuity, we are still a confused and confusing species. Think back to two years ago, and how you thought the world worked then. Has that not been upended by the election of Donald Trump as US President, and everything that has happened since? The mix of billions of messy humans will forever be unpredictable. When the combustible forces described above are added to this melee, we find ourselves on a tightrope. What choices must we now make now to create a shared future, in which we are not at perpetual risk of destroying ourselves? Common enemy to common cause Throughout history, we have rallied against the ‘other’. Tribes have overpowered tribes, empires have conquered rivals. Even today, our fiercest displays of unity typically happen at wartime. We give our lives for our motherland and defend nationalistic pride like a wounded lion. But like the early Morioris, we 21st-century citizens find ourselves on an increasingly unstable island. We may have a violent past, but we have no more dangerous enemy than ourselves. Our task is to find our own Nunuku’s Law. Our own shared contract, based on equity, would help us navigate safely. It would ensure a future that unleashes the full potential of our still-budding human civilization, in all its diversity. We cannot do this unless we are humbly grounded in the possibility of our own destruction. Survival is life’s primal instinct. In the absence of a common enemy, we must find common cause in survival. Our future may depend on whether we realize this.