# OFF

#### The People's Republic of China should ban the appropriation of outer space by private entities except for terrestrially accessible blockchain verification computing centers and cryptocurrency mining centers. The People's Republic of China should create significant subsidies for private entities to create terrestrially accessible blockchain verification computing centers and cryptocurrency mining centers on the Moon and Deep Space.

#### Climate-motivated terrestrial mining regulations kill crypto now – those don’t get applied to space because of unique environments – that saves crypto with sufficient private investment

Greene 21 Greene, Tristan. Tristan covers human-centric artificial intelligence advances, quantum computing, STEM, Spiderman, physics, and space stuff. As far as I can tell his highest level of education was that he was in the Navy for a while. "What happens to Bitcoin when billionaires build cryptocurrency miners on the Moon?" TNW | Hardfork, 8 June 2021, thenextweb.com/news/bitcoin-billionaires-build-cryptocurrency-miners-on-moon-bitcoin.

Space exploration and exploitation have traditionally been nationalist endeavors. But the rise of the 12-digit billionaire has suddenly made outer space look like open territory. The players Jeff Bezos is stepping down from his position as the CEO of Amazon after 25 years ahead of his imminent launch into space aboard one of his own Blue Origin spaceships. This will be the future of fintech 6 trends that will dominate fintech in 2022 While it’s easy to imagine the long-time leader retiring to live out a childhood fantasy, there’s nothing in Bezos’ history as an incredibly ambitious person and businessman to indicate his he’ll just blast off into the sunset to live a life of quiet leisure. Simply put, Bezos’ interest in the space sector likely won’t end with offering consumer thrill rides. While it’s impossible to know where the soon-to-be-former CEO might take his ambition, it’s likely Amazon and/or Blue Origin is already looking for ways to exploit the space sector for profit. But, obviously, Bezos isn’t the only private citizen with a spaceship company. Elon Musk’s SpaceX has spent the last decade becoming the belle of NASA’s ball and he’s already all-in on the idea of sending humans to Mars. And we can’t forget Richard Branson. He may only be worth a paltry $5 billion (lol), but his Virgin Galactic company’s been banking on making some money in space tourism for a long time. Let’s also not forget that Virgin’s dabbled in everything from railroad technology to record labels. And the list goes on. Anyone with a few billion dollars has business options and opportunities that extend beyond our planet’s surface. Space for profit In the past, we’ve discussed the idea of mining space asteroids for profit. Some experts believe there are unimaginable fortunes floating around in space in the form of resource-rich asteroids. In fact, you can even get a degree in asteroid mining. And even Goldman Sachs has considered getting in on the action. But, at the end of the day, we still have to figure out where these resources are, build machines capable of extracting them, and get them safely to somewhere they can be useful. Right now, there’s not much value in investing in asteroid mining futures because the technology either doesn’t exist or isn’t ready yet. However, there’s more than one kind of mining you can do in space. Enter cryptocurrency and the future Elon Musk recently got involved in a friendly space race, but this time it has nothing to do with competition over rockets or government contracts. He’s racing against BitMEX, a cryptocurrency exchange and derivative platform, to see who can get a cryptocurrency on the Moon first. If you’re curious about how that works, here’s a snippet from BitMEX’s official announcement: BitMEX will mint a one-of-a-kind physical bitcoin, similar to the Casascius coins of 2013, which will be delivered to the Moon by Astrobotic. The coin will hold one bitcoin at an address to be publicly released, underneath a tamper-evident hologram covering. The coin will proudly display the BitMEX name, the mission name, the date it was minted and the bitcoin price at the time of minting. According to BitMEX, this isn’t just a ceremonial or token delivery. The coin itself is a hardware wallet containing an actual Bitcoin, so its value will change with the value of the BTC here on Earth. In other words, BitMEX is sending a literal treasure to the Moon for anyone brave (or rich) enough to retrieve it. Per the company’s blog post: A moon surface background with text superimposed, quote below Credit: BitMEX Come and Get It. When the physical coin lands, it will remain on the Moon until anyone deems it worthy of retrieval. Decades from now, what will it be worth? It’s a great question. Some experts have predicted a single bitcoin will one day be worth $100K, $1M, or even more. But an even better question is this: What’s the end game for cryptocurrency in space? Billionaires want to be trillionaires Back in 1999 Wired ran a feature about the imminent rise of the world’s first trillionaire. At the time, everyone assumed the richest man in the world, Microsoft CEO Bill Gates, would be the first trillionaire by a long shot. Here’s a quote from that article: The value of Bill’s Microsoft stake has grown from $233.9 million at the time of Microsoft’s 1986 IPO to $72.2 billion as of June 15, 1999 (disregarding stock sales). At this rate – 58.2 percent a year – he will become a trillionaire in March 2005, at age 49, and his Microsoft holdings will be valued at $1 quadrillion in March 2020, when he is 64. Of course, we still haven’t seen a trillionaire in modern history. As of the time of this writing, the richest person in the world is France’s Bernard Arnault, whose $193.6 billion empire edges out Jeff Bezos’ $189 billion. At some point, if Bezos wants to pull away with it or Elon Musk wants to close the widening gap between his $151.4 billion and a first place finish, the world’s richest people are going to have to do more than squeeze terrestrial markets for every last drop of profit. That’s why many experts view Elon Musk’s heavy involvement in cryptocurrency as the potential difference maker. On any given day the Tesla, SpaceX, and Neuralink founder’s total worth can skyrocket or plummet by tens of billions of dollars based on how his cryptocurrency holdings are performing. When you consider that market movements can be directly tied to Musk’s social media statements, the power proposition for billionaires holding cryptocurrency is unbridled. Simply put: Elon Musk has more control over the so-called “volatile” world of cryptocurrency than most. Putting a cryptocurrency in space, much like firing a Tesla off into the galaxy, is a PR move meant to generate interest in the burgeoning cryptomarket. But that’s not the only purpose they serve. These acts remind us that people like Musk and Bezos can do anything they want. If they want to put a coin on the Moon, they have the means to do it. And, for example, if Musk or Bezos suddenly wanted to solve the biggest problems with cryptocurrency mining – power consumption, carbon footprint, developing powerful-enough hardware – they’re in a unique position to do so. In space, no one can hear you mine Arguably, one of the biggest things stopping an apex whale like Elon Musk from spending a fair portion of his billions on cryptomining centers is the fact that such an operation would almost certainly draw universal condemnation for its potential effect on the global climate crisis. But the Moon’s atmosphere isn’t necessarily as fragile as the Earth’s. Hypothetically speaking, there’s nothing to stop a billionaire from building a facility on the Moon to mine cryptocurrency. They would, of course, need to be able to build their own batteries, have experience with artificial intelligence and supercomputers, and already have their own satellite network set up in space – all boxes Elon Musk can tick today. And, in the near-future, as we perfect deep space transmission technology, what’s to stop a billionaire from putting a supercomputer on a satellite and sending it somewhere in deep space to mine cryptocurrency 24/7 at near absolute-zero temperatures? All of this is conjecture, but the writing is on the wall. Cryptocurrency enthusiasts fear what the experts are consistently warning: regulation is coming. Eventually, it’s possible cryptocurrency mining could become regulated with harsh policies designed to keep mining operations from further damaging the environment. This could seriously hinder the market. If humanity walks away from terrestrial mining to save the planet, we’ll be leaving unfathomable amounts of money on table. Billionaires don’t become billionaires by doing that. The only logical path forward, barring some unknown new green mining technology, may be moving the cryptocurrency industry to space.

#### Bitcoin is private property in space – appropriation is key

Rule & LeClair 21 [Dylan LeClair And Sam Rule Bitcoin Magazine. "Bitcoin’s Private Property Rights." https://www.nasdaq.com/articles/bitcoins-private-property-rights-2021-09-28]

Bitcoin’s Superior Private Property Rights

For the first time in history, bitcoin offers us a property option that does not rely on a local authority or legal system to enforce or protect it. It’s protected by the natural incentives of those participating in the network.

“Satoshi Nakamoto has created a form of property that can exist without relying on the state, centralized authority, or traditional legal structures.” - Eric D. Chason,"How Bitcoin Functions As Property Law"

It provides us with a store of value and savings technology where no government, central institution or voting bloc can seize, freeze or access it through violence or force when properly secured. Anyone in the world with an internet connection can secure this property without permission, and no other person or institution may take it away or erode its value. Whether it’s real estate, cash, equities, bonds, or gold, no other asset on the market provides this level of assurance and security.

What we know of strong, well-defined property rights is that they are the basis of human cooperation and economic activity. When private property rights flourish, so do the people. When we look at the nations of the world with the lowest ranking of property rights, we also find some of the key regions where bitcoin is making its mark.

#### Cryptocurrency reaching a wide rollout builds resilience to survive inevitable existential filters.

Alex McShane 21, Writer and Head of Video for Bitcoin Magazine, BA from the University of Iowa, Degree from the University College Dublin, Degree from Kirkwood Community College, “Bitcoin and Existential Risk”, Bitcoin Magazine, 9/5/2021, https://bitcoinmagazine.com/culture/bitcoin-and-existential-risk-alex-mcshane

TL;DR - An existential risk is the possibility of an event or series of events that could drastically curtail humanity’s potential. A hypothetical global catastrophe could be anthropogenic or non-anthropogenic and internal or external in nature. The adoption of Bitcoin will better position us to address these risks as a society.

EXTERNAL NON-ANTHROPOGENIC

A catastrophic collision with an astronomical object, such as an asteroid impact would be an external non-anthropogenic risk. This has already occurred here several times. During the Permian Triassic period (ending 250 million years ago) an astronomical impact killed 90 percent of the species on Earth. It took tens of millions of years for life on Earth to repopulate and Earth’s intelligence potential to recover.

One interesting external non-anthropogenic risk is Earth’s reflected light, which could be measured by an external intelligence who then come to extinguish us. (The topic of our own signal bringing about this death by misadventure is discussed further below.)

What does this have to do with Bitcoin?

Generally, hard money facilitates greater innovation and technological process. At this point one might argue that if we do not migrate to some degree from Earth as a species, and are subsequently wiped out by an astronomical object impact or a super-volcanic event, the risk becomes anthropogenic in nature. We are a centralized species on a grand scale, and at this point one could say we have through consensus chosen to remain vulnerable to a single vector of attack by staying here.

Bitcoin is not only the hardest money known to man, it is the most responsible from this standpoint. Bitcoin as it currently operates is currency that can provide a monetary framework on which humans can achieve greater capital growth, collaboration, resource allocation, and therefore technological progress. Because the terminal supply of Bitcoin is capped, we can store value in it indefinitely as a society.

66 Million years ago the Cretaceous-Paleogene Extinction Event extinguished the life and intelligence potential of the non-avian dinosaurs. This series of events was external, and broadly non-anthropogenic in the sense that no form of life on Earth at the time contributed to its own demise, but more specifically, at the time of those astronomical impacts the first humans hadn’t split from chimpanzee lineages. This split is thought to have occurred between between 4 and 8 million years ago.

An important distinction between astronomical impacts or super-volcanic events of the past and such events if they were to happen today is that one could argue that our intelligence potential is now mature enough to tackle certain of the external existential risks. Today, the risk posed by an asteroid impact or something similar would still be external in its origin, but at what point does the burden of responsibility to migrate off of the planet fall upon our population? We can surely solve for some external existential risks, and in any case, no one is going to do it for us. You could say that failing to collectively pursue a solution when technically we could have would recategorize a civilization-extinguishing asteroid impact as an external but anthropogenic risk.

At what point do innovation dampening authoritarian states and their mandated broken money cause society to stall at a local optimum? Surely the government has already caused this. It’s only a matter of time before another object strikes the Earth with devastating consequence. I would argue it is irresponsible to continue life here with government money. Government money is an existential risk. Bitcoin is not only a solution, it is a societal responsibility.

INTERNAL ANTHROPOGENIC

Nuclear war is one example of an internal anthropogenic risk. That is, should nuclear war arise, it would be both self destructive, and relatively self contained on a cosmic scale. It follows that biological warfare is an internal anthropogenic risk, the reality of which we as a species can surely understand now. If I were to hazard a guess I would say virtual emergencies and cyber pandemics are next. These self constructed catastrophes are the government’s misguided attempts at proof of work. This is a topic for another time. Do not surrender your ability to think and speak freely.

The second law of thermodynamics can summed thus, processes that involve the transfer or conversion of heat energy are irreversible. The law indicates we have not observed a spontaneous transfer of energy from cold to hot. Another way to think of this is that there is no such thing as cold, only lesser degrees of hot. Nothing cannot transfer. So broadly, within a closed system, the second law of thermodynamics would indicate that all differences tend to level out.

So what has this got to do with Bitcoin?

Well firstly, all hardware is subject to entropy. The distributed nature of the blockchain increases the probability that it will survive centralized entropy. At Bitcoin’s inception, imagine a failure because Satoshi’s computer randomly crashed. Distributed networks are inherently hedged against this particular centralized form of existential risk.

The second law of thermodynamics also suggests that on a grander scale, relatively isolated (centralized) systems will degenerate more and more into disordered states. Proof of work, and network growth are two ways Bitcoin fights against falling into disrepair.

Bitcoin uses proof of work to stave off entropy. The system cannot stay dormant. It must continue to use proof of work to advance the state of the chain, and to fight entropy to secure the monetary value all of the users have stored in the network. The U.S. dollar, as many have pointed out, relies on proof of war, or distributed political energies to maintain dominance. Its methodology can be described as haphazard at best.

INTERNAL NON-ANTHROPOGENIC

One internal non-anthropogenic risk is that of a super-volcanic eruption, provided it wasn’t humans who brought about the eruption. Just like with external non-anthropogenic risks, Bitcoin alone cannot prevent them, but it can help humans prepare for them such that we may survive these relatively small intelligence filters the universe throws our way.

Bitcoin allows for fundamental capital accumulation and human innovation, and promotes collaboration to such a degree that we will find an increased collective problem solving power as humans the further Bitcoin adoption spreads. It is worth mentioning that Bitcoin also maintains and appreciates wealth to such a degree that often those of us to chose to live our lives on a Bitcoin standard will experience relatively greater freedoms, and vastly greater amounts of free time than our peers who chose to continue their lives on a fiat standard, and are perpetually working to outpace their chronic debt. Many Bitcoiners will likely forego that newfound free time to work and continue to provide value to others in whatever area interests them, because Bitcoin incentivizes the collaborative accumulation of capital but also the responsible reallocation of it.

EXTERNAL ANTHROPOGENIC

An external anthropogenic risk has the least probability of occurring. This is a problem of reach. Imagine human intelligence being sent into the cosmos and signaling or generally causing an external intelligence or astronomical object to come back to extinguish us. This is a most improbable extinction by misadventure.

The probability that we send messages of consequence into the cosmos that in turn cause some other far-flung intelligence, with knowledge enough to reach us, to come and bring about our own destruction is next to zero, but it isn’t zero.

I would posit that the probability increases every day that Bitcoin survives, with each person that chooses to hold Bitcoin over fiat, because on a fiat standard we are again, stuck at a local optimum at best, and each day the global monetary system devolves further into chaos. The fiat world may continue to be habitable chaos, but our technological progress and our greatest capacity for innovation cannot be achieved on a fiat standard.

A Bitcoin standard is not only our current best bet, it is the only monetary vehicle that will take us from here, or enable us to build technology that can effectively communicate with places in the universe where other intelligence has emerged. The other reason this fatal miscommunication is unlikely to occur is that once through a Bitcoin standard we have manage to build a society that can effectively reach and communicate at greater depths of the cosmos we will at that time have already become a multi-planetary, if not transitory, if not multi-solar system species. The topic of Bitcoin in space and planetary interoperability will be discussed in a later essay.

The most distant human made object from the earth is the Voyager 1, which is over 13 billion miles away. (For perspective, Apha Centuri, the nearest star system to Earth, is 25 trillion miles away.) Human radio signals have announced our presence and our intelligence to the cosmos since around 1900. The first human radio signals have all ready traveled 114 light years, that is 681,920,540,000,000 miles. Although the reach of our radio signals is very great, the probability of us being heard and subsequently extinguished is negligible. External anthropogenic risks are the least of our concerns at the moment.

As Bitcoin adoption grows, it serves to promote advances in artificial intelligence and nanotechnology. External anthropogenic risks will become more relevant to human intelligence at a much later time. External non-anthropogenic risks are similarly out of our hands for the time being. That is, at the moment there is nothing we can do to prevent the Sun from becoming a red giant star and subsuming the Earth.

But we do already have the monetary technology upon which to engineer solutions to some of these problems. We have the potential as humans to prevent internal global catastrophes, both those set on by us and not. Survival and longevity is arguably our greatest task as a species. Adopting Bitcoin, and protecting this network is proceeding with diligence and a long eye toward the future in all of our political and scientific affairs. The existential risks of living are great, though it is human nature for our ambitions to out pace our current abilities. The only evidence of life is change. To change is to exit fiat currency, it is to use Bitcoin instead.

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#### Text: The United Nations Committee on the Peaceful Uses of Outer Space should collaborate with private entities in The People's Republic of China to establish and implement Long-Term Sustainability guidelines, and should fully endorse the appropriation of space by those entities that conforms with the agreed upon standards.

#### Only international, multilateral efforts can effectively incorporate the private sector to ensure space sustainability – non-uniform unilateral policies fail

Martinez 20 – Peter, Executive Director of the Secure World Foundation & 2011 - 2018 chair of UN COPUOS Working Group on the Long-Term Sustainability of Outer Space Activities, “UN COPUOS Guidelines for the Long-Term Sustainability of Outer Space Activities: Early implementation experiences and next steps in COPUOS,” 71st International Astronautical Congress (IAC) – The CyberSpace Edition, 12-14 October 2020

\*\*LTS = Long-Term Sustainability

3. LTS 2.0 – Next Steps in COPUOS

While the 21 consensus LTS Guidelines represent a significant step forward to promote space sustainability, COPUOS Member States agree that the work of COPUOS on this issue is far from over. Building on the lessons learnt from the LTS discussions, the Committee has initiated a new phase of the LTS discussions in COPUOS – LTS 2.0.

At its 62nd session in June 2019, the Committee noted that it should continue to serve as the principal forum for continued institutionalized dialogue on issues related to the implementation and review of the guidelines. The Committee also decided to establish, under a five-year workplan, a working group under the Scientific and Technical Subcommittee to continue the LTS discussions in COPUOS. The Committee decided that this new working group would be guided by the following framework:

a) Identifying and studying challenges and considering possible new guidelines for the long-term sustainability of outer space activities. This work could also take into consideration draft guidelines that were discussed, but for which consensus could not be reached during the term of the first LTS Working Group.[11]

b) Sharing experiences, practices and lessons learned from voluntary national implementation of the 21 already adopted guidelines.

c) Raising awareness and building capacity, in particular among emerging space nations and developing countries, to implement the guidelines.

In taking these discussions forward, COPUOS will have to deal with the challenge of preserving the consensus decision-making rule in a committee that is steadily increasing in size. When the Committee began its work on LTS in 2010 there were 70 member States. As of September 2020, COPUOS has 95 member States. As the Committee membership increases, so too does the diversity of space capabilities, views and priorities represented by the member States. These trends will make it ever more challenging to reach consensus in the Committee. As COPUOS takes this work forward, it will have to explore new methods of work, including ways of incorporating input from non-governmental organizations and the private sector.

Lastly, COPUOS will also need to discuss the ways by which the already agreed guidelines may be revised and updated in future, and also a process by which new topics for guidelines could be proposed for consideration by States. This is in keeping with the view of a number of member States that these guidelines should become a “living document” that is updated from time to time. Indeed, one may identify topics not included among the already agreed guidelines or the remaining unagreed draft guidelines, which could be addressed by COPUOS under the general context of LTS in future. Perhaps issues arising from on-orbit servicing or the placement and operation of large-scale constellations in Earth orbit could be the subjects of such future discussions and one or more possible draft guidelines. In this regard, industry initiatives such as CONFERS and the Space Safety Coalition discussed earlier may help to identify elements of future international standards and guidelines.

4. Conclusion

The adoption of the LTS Guidelines by COPUOS in 2019 was an important step forward for the international community in the sense that there is now a much wider appreciation among UN member States of the urgency of addressing this issue. To, be sure, the LTS Guidelines hardly represent the cutting-edge of what it is technically possible to do in terms of promoting space sustainability. However, the importance of the guidelines is that they codify, for the first time, an internationally accepted set of best practices for space sustainability. These practices have been agreed by 92 States, which includes all spacefaring countries and the vast majority of other countries that rely on space. This is significant because space sustainability is essentially a global challenge that can only be addressed successfully if all countries act collectively. The challenges of space sustainability are inherently multilateral challenges that are most effectively addressed through multilateral space diplomacy in the forum of COPUOS, where the international community has the opportunity to work together to find ways to expand access to the benefits of space activities to more nations, but also to ensure that the space environment is preserved and protected for use by future generations.

#### Multilateralism creates uniform standards, establishes models of best behavior, and prevents conflict escalation

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Sergio, “The final frontier: Prospects for arms control in outer space,” European Leadership Network Global Security Policy Brief, July 2019, https://www.europeanleadershipnetwork.org/wp-content/uploads/2019/07/10072019-Sergio-Marchisio-Arms-control-in-outer-space.pdf

More than ever, a set of international norms addressing the security of outer space activities is needed. While the adoption of legally binding norms revising or complementing the existing international legal regime would be difficult and time consuming, a non-legally binding instrument on basic principles and voluntary TCBMs has the potential to be a near-term outcome and important means to encouraging trust and confidence among space actors. That is to say, a positive first-step toward more engaging commitments for arms control in outer space.

It is imperative to create a platform for exchanging views on the establishment of general principles of responsible behaviour, transparency and confidence building measures and make workable recommendations. These should address challenges associated with the dual-use applications, civil and military, of outer space objects and capabilities, but should avoid hindering access to such technologies for peaceful purposes. In this regard, regional organisations have an important role to play. The implementation of the already adopted, and practically oriented, recommendations of the 2013 Group of Governmental Experts (GGE) report on TCBMs should be ensured. These should be integrated, as needed, as a consequence of evolution in space operations. It remains necessary to continue developing and promoting a range of norms of behaviour not only to minimise orbital debris, but also to promote coordination of space operations, and to enable greater space situational awareness data sharing though international co-operation.

Codes of conduct are normative instruments used in the diplomatic practice in a variety of fields: they have characteristics making them different from other categories of soft law. They embody political commitments that endorse basic principles of responsible behaviours in outer space and are open for further integration at a more technical level through best practices, standards and guidelines. It is legitimate to express compelling views, both for and against, a nonlegally binding instrument having the peculiar features of a code of conduct. There is a value in agreeing such an instrument, potentially negotiated within the framework of the UN, which could compliment on-going initiatives in UN mandated bodies and take care not to duplicate efforts. This would allow for the delivery of key principles, such as common interest in progress of exploration and use of outer space for peaceful purposes, or the commitment to refrain from any action that brings about damage or destruction of space objects, creating long-lasting space debris, amongst others.

Crucially, there is a need to foster increased international cooperation in order to establish a set of politically backed principles and measures that prevent outer space from becoming an arena of conflict. This requires a renewed European engagement at the multilateral level, learning lessons from past experiences. There are two parallel paths for the EU to pursue, one to support the continuous discussion of guidelines, space norms, and regulations at the United Nations within the context of the COPUOS, and another to promote an autonomous initiative aimed at setting out a multilateral framework that could function as a platform for broader, global, agreements.

#### Space conflicts go nuclear

Grego 15 [LAURA GREGO is a physicist in the Global Security program at UCS. She is an expert in space weapons and security; ballistic missile proliferation; and ballistic missile defense. "Preventing Space War." https://allthingsnuclear.org/lgrego/preventing-space-war]

So says a very good New York Times editorial “Preventing a Space War” this week. Sounds right, if X-Wing fighters come to mind when you think space conflict. But in reality conflict in space is both more likely than one would think and less likely to be so photogenic. Space as a locus of conflict The Pentagon has known that space could be a flash point at least since the late 1990s when it began including satellites and space weapons in earnest as part of its wargames. The early games revealed some surprises. For example, attacking an adversary’s ground-based anti-satellite weapons before they were used could be the “trip wire” that starts a war: in the one of the first war games, an attack on an enemy’s ground-based lasers was meant to defuse a potential conflict and protect space assets, but instead was interpreted as an act of war and initiated hostilities. The games also revealed that disrupting space-based communication and information flow or “blinding” could rapidly escalate a war, eventually leading to nuclear weapon exchange. The war games have continued over the years with increased sophistication, but continue to find that conflicts can rapidly escalate and become global when space weapons are involved, and that even minor opponents can create big problems. The report back from the 2012 game, which included NATO partners, said these insights have become “virtually axiomatic.” Participants in the most recent Schriever war games found that when space weapons were introduced in a regional crisis, it escalated quickly and was difficult to stop from spreading. The compressed timelines, the global as well as dual-use nature of space assets, the difficulty of attribution and seeing what is happening, and the inherent vulnerability of satellites all contribute to this problem. Satellite vulnerability & solutions Satellites are valuable but, at least on an individual basis, physically vulnerable. Vulnerable in that they are relatively fragile, as launch mass is at a premium and so protective armor is too expensive, and a large number of low-earth-orbiting satellites are no farther from the earth’s surface than the distance from Boston to Washington, DC.

# Case

## 1NC: Private not Key

#### They ban appropriation which means that private companies can't go out into space and own asteroids but that doesn't prevent them from commercializing tech and giving it to the government or just launching sats

#### Chinese space will be dominated by government enterprises — they're far more established making private corporations unprofitable and limits them to a niche role instead of broad capabilities

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"Tapping into China’s Space Program," China Briefing News, https://www.china-briefing.com/news/tapping-into-chinas-space-program/] mk

China’s space program From the launch of China’s space program in the mid-1950s to becoming a complete space power with autonomous access to outer space and to deep-space exploration, China has been very persistent in pursuing a “space dream”, as said by Chinese President Xi Jinping in 2013. Especially in recent years, China’s space industry has produced remarkable achievements. In 2019, China became the first country to send an uncrewed rover to the far side of the Moon. In 2020, China successfully put into orbit its final Beidou satellite in June, sent an unmanned probe to Mars in July, launched an uncrewed mission called Chang’e-5 with the aim of collecting lunar material in November, and successfully landed the Chang’e-5 probe on the moon’s surface in December. In 2021, China accelerated its Tiangong Space Station program, with the successful launch of the Tianhe core module in April, the Tianzhou-2 cargo craft in May, the Shenzhou-12 manned spaceship in June, and another planned Tianzhou-3 mission in September. A more detailed timeline of China’s space station construction can be found below. China's space station program In the long-term, China has set the following goals for its space program: Improve China’s standing in the world of space science Establish a crewed space station Crewed missions to the Moon Establish a crewed lunar base Robotic mission to Mars Exploit Earth-Moon space for industrial development The two state-owned enterprises behind China’s space program China’s space activity has been overwhelmingly dominated by two state-owned enterprises: China Aerospace Science & Industry Corporation Limited (CASIC) and China Aerospace Science and Technology Corporation (CASC). CASIC and CASC provide the technology and devices required by the state space and military programs, such as launch vehicles, satellites, manned spaceships, cargo spaceships, deep space explorers, space station, nuclear missiles, conventional ground-to-ground missiles, and air and missile defense equipment. The two state-owned corporations have decades of experience, secured state funding, thousands of personnel, dozens of labs and subsidiaries, and an established suite of high-tech products and services. In the years ahead, the Chinese state-owned space titans will continue to lead the country’s space program, while private commercial space companies are likely to serve as “supplements” to China’s broader space activities. Participation of private commercial players The past decade has witnessed an explosive growth in the number of China’s commercial space companies. By November 2020, China was home to over 160 commercial space companies. More than half of them were founded since 2014 – a year after Xi Jinping took over as the new leader of China and the government decided to treat civil space development as a key area of innovation. The private space enterprises boast a range of offerings from satellite manufacturing and rocket launch. FutureAerospace, a state-funded industry think tank, reports that investment in Chinese commercial space firms totaled RMB 3.57 billion (US$550 million) in 2018, and will exceed RMB 30.6 billion (US$4.7 billion) by 2025. The upsurge is fueled by rising demand for launching satellites. In the next decade, China envisions massive constellations of commercial satellites that can offer services ranging from high-speed internet for aircraft to tracking coal shipments. To boost the commercial space industry, China uses government contracts and subsidies to give these companies a foot up. However, state-owned commercial space companies like Expace and China Rocket can have easier access to government funding and Chinese financing. Private commercial space companies either receive government support or seek venture capital. A 2019 report by the Institute for Defense Analyses estimates that VC funding for Chinese space companies reached US$516 million in 2018, although the amount was far shy of the US$2.2 billion American companies raised. Unlike American companies, such as SpaceX and Blue Origin, whose billionaire founders are ready to take on large expensive risks, Chinese companies who are late starters have to consider whether they can be supported by deep-pocked and risk-prone investors. Some private companies like LandSpace and MinoSpace have managed to accrue foreign investment, which could make it easier for them to compete on a global scale, in terms of taking on overseas clients, launching from other countries, and attracting international talents. However, to maintain investor confidence will not be easy. At present, none of the new commercial space companies are profitable. These companies’ launch success rates have been erratic. And they have shown no sign of explosive innovation – the current offerings consist almost solely for small, solid-fuel, single-use rockets. Thus, China’s private commercial space sector is not yet positioned to upend the state-dominated or global space ecosystems any time soon, though eventually new entrants may carve out niche areas for themselves in the domestic market.

#### China's distinct environment guarantee’s private failure, contracts favor the public sector and independently private companies are funded by the govt which guarantees circumvention

Waidelich 21 [Brian Waidelich, Brian Waidelich is a Research Analyst with the China and Indo-Pacific Security Affairs Division at CNA, 3-13-2021, "China’s commercial space sector shoots for the stars," East Asia Forum, https://www.eastasiaforum.org/2021/03/13/chinas-commercial-space-sector-shoots-for-the-stars/] mk

Despite the hype surrounding Chinese space startups, the prospects for a Chinese SpaceX are not so optimistic. China’s space startups are hardly commercial, compared to countries like the United States where commercial space ventures are meaningfully supported by private capital. Some of China’s commercial space companies are directly state-owned, such as Expace and China Rocket. Other nominally private companies have received substantial investment from provincial and local governments. The lack of private capital at risk diminishes these companies’ motivation to innovate or lower costs. ‘Private’ Chinese space startups also find themselves facing two massive state-owned enterprises (SOEs) that dominate both the domestic industry and Chinese financing. The state-owned Expace received over one billion RMB (US$154 million) in series A financing, while nominally private Chinese companies like iSpace received around 100 million RMB (US$15 million). This apparent favouritism aligns with Chinese President Xi Jinping’s stated objective of making SOEs ‘stronger, better, and bigger’. Legislative gaps create further uncertainties for the activities of China’s commercial space companies. China still has no comprehensive space law, despite incorporating the need for one in the National People’s Congress’s legislation plan in 2013. New regulations on commercial launches in 2019 were a step forward, but many ambiguities remain. It is still unclear, for example, whether companies can build their own launch sites, or if they must use one of the four military-controlled sites. The launch record of China’s commercial space companies has also been rocky. Two of the three ‘private’ companies to conduct orbital launches — OneSpace and LandSpace — have failed in their sole attempts. Several other companies have fared better, but all three of their most recent launches — two by Expace in July and September 2020, and one by iSpace in February 2021 — ended in failure. These challenges suggest that China’s commercial space industry cannot yet rival its US and European counterparts. Chinese commercial launch companies have shown no signs of explosive innovation; indeed, their current offerings consist almost solely of small, solid-fuel, single-use rockets. Nor have these companies offered prices to challenge global leaders — Expace has announced launches of its Kuaizhou rockets at US$10,000/kg of payload, which will be eventually lowered to US$5000/kg, but this doesn’t even come close to SpaceX’s advertised prices — about US$2720/kg for the Falcon 9, and US$1410/kg for the Falcon Heavy. In the years ahead, breakthroughs in Chinese space technologies will almost certainly come from traditional state-owned contractors, not nominally private firms. CASC and the China Aerospace Science and Industry Corporation have decades of experience, secure state funding, thousands of personnel, dozens of labs and subsidiaries, and an established suite of high-tech products and services. These contractors’ best products and services will be primarily offered to Chinese military and government organisations, rather than private or international clients. The addition of ‘private’ commercial space companies provides China’s traditional contractors with some token competition, and eventually new entrants may carve out niche areas for themselves in the domestic market. But Chinese commercial space firms will not lead China’s space program — indeed, these companies describe themselves as ‘supplements’ to China’s broader space activities. They are not positioned to disrupt the domestic or global space ecosystems with low-cost, innovative offerings any time soon.

## 1NC: Space not key

#### Tons of other stuff thumps -- answers their info assymetry warrant

Wolverton 19 [Mark Wolverton is a science journalist, author, and 2016-17 Knight-MIT Science Journalism Fellow. He writes for various national and international publications including WIRED, Nature, Undark, Scientific American, and Air & Space Smithsonian. He has also worked with the NASA Ames History Project, Argonne National Laboratory, the Franklin Institute, and the NASA ISS Science Office. 7/9. "The Race for Space Weapons Speeds Up." https://www.asme.org/topics-resources/content/the-race-for-space-weapons-speeds-up]

Both antiballistic missiles and co-orbiting antisatellite weapons use kinetic attacks that apply physical force to disable or destroy a satellite. They are far from the only options in the counter-space arsenal.

Nonkinetic approaches were studied intensively since the early 1960’s and then revived during President Ronald Reagan’s Strategic Defense Initiative in the 1980s. They seek to disable or destroy vital components or sensors with lasers, particle beams, or high-powered microwaves, either from space or ground stations. Such methods are difficult, expensive, and require great amounts of power, but the United States and other nations have tested them.

A more subtle—and perhaps more deniable—nonkinetic approach might involve electronic warfare. This might range from such time-honored techniques as jamming or spoofing an adversary’s satellite communications to cyberwarfare that targets computer systems that control satellites or process their data.

## 1NC: ECS War

#### no military capability or escalation

Park 12 International Affairs Review Sungtae Park is a M.A. Security Policy Studies student at the George Washington University’s Elliott School of International Affairs. He has also written articles for CSIS (Center for Strategic and International Studies) and Brandeis International Journal.http://www.iar-gwu.org/node/434

There are also logistical reasons why a war over the Senkaku/Diaoyu Islands is unlikely. It is generally believed that neither China nor Japan at the moment has the military capability to wage a full-scale conventional war against the other. If China and Japan were to fight a war, the initial fighting would take place on water. The Chinese navy is mainly oriented towards coastal defense and does not have effective naval capabilities to project its power beyond the so-called “first island chain.” The Senkaku/Diaoyu Islands are part of the first island chain, but the Chinese military would have to stretch its naval capability to the limit in order to fight a war at that point. Even China’s on-going naval modernization is primarily for defensive purposes. The Japanese navy, on the other hand, does have some capability to project its power, but it is very limited. The Japanese military also does not have adequate ground forces to conduct fighting on the Chinese mainland. Even if violence breaks out, such a conflict would be very limited in scope and is highly unlikely that it would turn into a general war or escalate to a nuclear conflict. A more uncertain factor that must be considered is that the security treaty between the United States and Japan extends to the Senkaku/Diaoyu Islands. The treaty makes it possible for the United States to become involved in a military conflict. So far, Washington has taken a neutral stance between China and Japan . The United States is opposed to any violent solution and shares concerns, particularly economic, with both China and Japan about the consequences of a general war. Any major conflict between China and Japan would kill the prospects of global economic recovery. Furthermore, because any conflict between China and Japan would be limited at best, any U.S. involvement due to its security obligation would most likely be limited as well. In examining the potential for the use of military force, one must consider both intent and capability. Neither China nor Japan has the intent or the capability to fight a war over the Senkaku/Diaoyu Islands. While the rhetoric between the two countries may be fierce, it remains subject to reality.

#### No war—economic and political constraints

Park 12 International Affairs Review By Sungtae “Jacky” Park Contributor Sungtae Park is a M.A. Security Policy Studies student at the George Washington University’s Elliott School of International Affairs. He has also written articles for CSIS (Center for Strategic and International Studies) and Brandeis International Journal.http://www.iar-gwu.org/node/434

There is a growing fear among many Asia observers and pundits that the on-going territorial dispute could become a spark for a destructive, general war in Asia. The reality, however, is that there are several economic, political, as well as logistical (in military terms) constraints that make a war highly unlikely. In economic terms, trade between the two countries is at historic high levels. A war would have devastating human as well as material costs. While economic interests and interdependence do not necessarily lead to peace, as history has proven with World War I, the current situation is different. Both political and military leaders before World War I believed that a war would be quick with small costs. Each side also believed that it would win. Leaders of both China and Japan today understand that the costs of a war would be astronomical and understand that victory is no certainty. The CCP (the Chinese Communist Party) has a strong interest in making sure that the conflict does not turn into a war. One of the key pillars of the CCP’s legitimacy is economic growth. The Chinese economy is already slowing. A war would certainly put a halt to the so-called Chinese miracle. In the beginning of the dispute this year, Beijing actually discreetly encouraged protests in hope that they would divert the Chinese people’s attention away from China’s slowing economic growth and deteriorating socioeconomic conditions. As of now, however, Beijing is attempting to restrain the protests, fearing that they could pressure the government into an actual war. Despite constitutional constraints, Japan's military has continued to evolve over the past half century, but the pacifist sentiment among the Japanese public still remains very strong. The Japanese who are inflaming the tension between the two countries do not represent the majority. At the official level, Japan’s decision to purchase the disputed islands is in fact a way for the Japanese government to be able to exercise more control and restraint over the entire situation by taking the islands out of private hands.

## 1NC: Sino-Indian War

#### No Sino/Indian conflict - self-interest prevents it

Malik 9 (Mohan Malik, professor of Asian Security at the Asia-Pacific Center for Security Studies in Honolulu, 10/15/09, Bordering on Danger, WSJ,

However, all this misses the fact that China and India are both nuclear-armed nations with enormous stakes in maintaining peace. Burgeoning trade ties and collaboration on issues like climate change have shown both capitals the benefits of cooperation even as border tensions rise. For Beijing, a hardline approach to India could backfire and drive India and its other Asian neighbors into stronger opposition to China and deeper alignment with Washington and Tokyo. The pursuit of aggressive foreign adventures would destroy the benign "peaceful rise" image that China is so assiduously striving to achieve. A conflict will cost India dearly in terms of economic developmental objectives and political ambition of emerging as a great power in a multipolar Asia. Other countries, particularly the U.S., can play a vital role in preventing escalation. Washington enjoys close ties with both China and India and could exert diplomatic pressure on both sides to reach a settlement. But ultimately this is a border dispute between two large countries, and they alone have it in their combined power to resolve their differences peacefully. It's in both their interests to do so.

#### Diplomacy and CBMs check

The Hindu, 1-8-2010, Ties with china on even keel, http://beta.thehindu.com/news/national/article77301.ece

While maintaining that ties with China were on an even keel, India on Thursday was hopeful of amicably settling the border dispute through dialogue. “We have a long border with China and talks are being held between the Special Representatives. We are looking forward to an amicable settlement,” said External Affairs Minister S.M. Krishna here on Thursday. The complicated issue was being handled by seasoned diplomats proficient in issues relating to national security, he said in response to a spate of media questions on alleged Chinese intrusions in the eastern and western sections of the Sino-India border. Dialogue with China had helped preserve peace and tranquillity on the border for over two decades and the confidence building measures intended to reduce or eliminate the perception of threat from each other had worked satisfactorily well. “Let me reiterate that India does not view China or its development as a threat. That said, however, we recognise that cooperation and competition can overlap, as it is not possible to have a perfect congruence of interests between two nations as vast and diverse as India and China. Such competition or lack of cooperation must not be misunderstood as antagonism. Our differences, when they exist, must be handled with dialogue and diplomacy,” he said. As the border is not marked, both sides go by perceptions. And there are differences in this, he said, while agreeing with a questioner on the lack of understanding in India about the contours of the relationship.

## 1NC: Taiwan

#### China won’t use nukes in Taiwan.

Zhao ‘16 (Lo Bin Tong; senior associate working jointly in the Nuclear Policy Program and the Asia Program at the Carnegie Endowment for International Peace; 2016; "Understanding Chinese Nuclear Thinking"; Carnegie Endowment; https://carnegieendowment.org/files/ChineseNuclearThinking\_Final.pdf)

CHINA’S THINKING ON NUCLEAR STRATEGY HAS WITHSTOOD MILITARY STRUGGLES OVER TAIWAN During the onset of political turmoil in Beijing during the spring and summer of 1989, hostilities between China and the Soviet Union ended, and the U.S.-China relationship quickly hit rock bottom. The issue of Taiwan reemerged, but the situation was different than in the past. Previously, the Kuomintang in Taipei had sought to control all of China, and the low probability of this occurring meant that Beijing could afford to wait for better conditions to resolve the conflict. However, by 1989, the independence forces on the island had expanded and wanted to split Taiwan from mainland China, which greatly increased the urgency of the threat. Taiwanese separatist forces repeatedly tested China’s bottom line on the Taiwan issue, posing a serious threat to the reunification of China and bringing questions about the role of China’s nuclear weapons to the fore. In this way, China’s nuclear strategy was put to the test once again. In the face of increasingly bold Taiwanese separatist forces, Beijing issued an explicit warning in November 2003: Taiwan’s independence would mean war.77 But if a war were to break out in the Taiwan Strait, would it be a nuclear one? And if China’s nuclear weapons were to play a role in a potential military struggle against Taiwanese independence, what kind of role would this be? Tere has been much discussion and speculation about the role of nuclear weapons in dealing with Taiwan. At international conferences, some scholars have mentioned the threat that Beijing’s nuclear weapons may pose to Taiwan. Others have said that when Beijing talks about no first use, particularly against non-nuclear-weapon states, it has been referring to foreign countries. Beijing, they point out, considers Taiwanese independence a domestic Chinese issue. Therefore, if war were to break out in the Taiwan Strait, they argue, Beijing could use nuclear weapons on Taiwan.78 But these opinions reflect the speakers’ superficial understanding of nuclear weapons and nuclear strategy, along with their misinterpretation of Beijing’s nuclear strategy. If they were to think about it rationally, it would not be difficult to find the answer: Because China has disavowed using nuclear weapons on non-nuclear-weapon states, why would it use these weapons on its fellow countrymen? It is safe to say that Chinese leaders have never considered using nuclear weapons on Taiwan. Opposition to a U.S. military intervention is a prominent issue in China’s considerations about a potential military struggle against Taiwanese independence. Given the United States’ huge advantages in conventional naval and air forces, as well as its electronic military capabilities, how would China be able to effectively deal with a U.S. intervention in a military crisis in the Taiwan Strait? In July 2005, Major General Zhu Chenghu, a professor at the National Defense University of the People’s Liberation Army, warned, “If the Americans draw their missiles and position-guided ammunition on to the target zone on China’s territory, I think we will have to respond with nuclear weapons.”79 Although the general’s statement was only a personal opinion, it had significant repercussions.80 On one hand, it exacerbated U.S. suspicions about China’s no-first-use policy; on the other hand, it strengthened the credibility of the Chinese military’s determination to achieve national reunification. In terms of the latter, this actually channeled the spirit of Mao’s steadfast refusal to submit to force. In fact, in U.S. strategic planning, the Taiwan Strait has always been regarded as a possible battlefield for the use of nuclear weapons. Te January 2002 Nuclear Posture Review by the U.S. Department of Defense identified seven possible locations where nuclear weapons might be used, one of which was the Taiwan Strait region.81 Certain U.S. analysts have said that the reason for including the Taiwan Strait was that the United States thought that China would use nuclear weapons first if China were to suffer a conventional military defeat in a potential Taiwan Strait conflict.82 These U.S. observers clearly do not have a finger on the pulse of China’s nuclear strategy. Neither the risks of Taiwanese separatist forces nor an increased threat of U.S. military intervention would lead China to abandon its fundamental policy of no first use. The Diversified Employment of China’s Armed Forces, a white paper released in April 2013, made no statements about no first use of nuclear weapons.83 This triggered international speculation that China had changed its principled stand on this matter. In response to this, the spokesman for China’s Ministry of National Defense stated that “China has repeatedly reiterated that it has always pursued the policy of no-first-use of nuclear weap- ons, adhered to the nuclear strategy of self-defense, and has not conducted any form of nuclear arms race with any country, and this policy has never changed.”84 The anti-separatism and pro-unification struggle over Taiwan is a long-term contest in grand strategy, not just a military one. In this struggle, China’s nuclear weapons play no direct role, unless the United States were to use nuclear weapons against China first. China does not expect to resolve the issue of Taiwan with the use of nuclear weapons. Its leaders still believe that winning hearts and minds will remain the factor that ultimately decides this struggle. Te Chinese government continues to subscribe to the strategy of comprehensive using a variety of elements of power at the level of grand strategy, engagement with the people of Taiwan, modernization of China’s national defense, containment of Taiwanese separatist forces, and gradual shifting of the cross-strait military balance in mainland China’s favor.

#### PLA doesn’t have the capability to invade Taiwan – internal Chinese documents prove.

Ben Westcott ‘19 is a Digital News Producer based in Hong Kong, who joined CNN in 2016. He writes about China, Australia and Indonesia, June 24th, 2019, “A Chinese invasion of Taiwan would be a bloody, logistical nightmare” from https://www.cnn.com/2019/06/23/asia/taiwan-china-invasion-intl-hnk/index.html, accessed 7/5/19 || OES-AT

Roaring out of the sky, an F-16V fighter jet lands smoothly to rearm and refuel on an unremarkable freeway in rural Taiwan, surrounded by rice paddies. ¶ In different circumstances, this could be alarming sight. Taiwan's fighter pilots are trained to land on freeways between sorties in case all of the island's airports have been occupied or destroyed by an invasion. ¶ Luckily, this was a training exercise. ¶ There's only really one enemy that Taiwan's armed forces are preparing to resist -- China's People's Liberation Army (PLA). And as China's reputation as an economic and military superpower has grown in recent years, so too has that threat of invasion, according to security experts. ¶ Taiwan has been self-governed since separating from China at the end of a brutal civil war in 1949, but Beijing has never given up hope of reuniting with what it considers a renegade province. ¶ At a regional security conference in June, Chinese Defense Minister Wei Fenghe said: "If anyone dares to split Taiwan from China, the Chinese military has no choice but to fight at all costs for national unity." In some shops in mainland China, you can buy postcards and T-shirts emblazoned with patriotic emblems promoting the retaking of Taiwan. ¶ But for seven decades, China has resisted attacking Taiwan partly for political reasons, including the prospect of a US intervention and the potential heavy human toll. But the practical realities of a full-blown invasion are also daunting for the PLA, according to experts. ¶ Ferrying hundreds of thousands of troops across the narrow Taiwan Strait to a handful of reliable landing beaches, in the face of fierce resistance, is a harrowing prospect. Troops would then have a long slog over Taiwan's western mudflats and mountains to reach the capital, Taipei. ¶ Not only that, but China would face an opponent who has been preparing for war for almost 70 years. ¶ At mass anti-invasion drills in May, Taiwan military spokesman Maj. Gen. Chen Chung-Chi said the island knew it had to always be "combat-ready." ¶ "Of course, we don't want war, but only by gaining our own strength can we defend ourselves," he said. "If China wants to take any action against us, it has to consider paying a painful price." ¶ Difficult and bloody ¶ It could be easy to assume that any invasion of Taiwan by Beijing would be brief and devastating for Taipei: a David and Goliath fight between a tiny island and the mainland's military might, population and wealth. ¶ With nearly 1.4 billion people, the People's Republic of China has the largest population in the world. Taiwan has fewer than 24 million people -- a similar number to Australia. China has the fifth largest territory in the world, while Taiwan is the size of Denmark or the US state of Maryland. And Beijing runs an economy that is second only to the United States, while Taiwan's doesn't rank in the world's top 20. ¶ But perhaps most pertinently, China has been building and modernizing its military at an unprecedented rate, while Taiwan relies on moderate US arms sales. ¶ In sheer size, the PLA simply dwarfs Taiwan's military. ¶ China has an estimated 1 million troops, almost 6,000 tanks, 1,500 fighter jets and 33 navy destroyers, according to the latest US Defense Department report. Taiwan's ground force troops barely number 150,000 and are backed by 800 tanks and about 350 fighter aircraft, the report found, while its navy fields only four destroyer-class ships. ¶ Under Chinese President Xi Jinping, the PLA has rapidly modernized, buoyed by rises in military spending and crackdowns on corruption in the army's leadership. ¶ "China's leaders hope that possessing these military capabilities will deter pro-independence moves by Taiwan or, should deterrence fail, will permit a range of tailored military options against Taiwan and potential third-party military intervention," according to a 2019 US Defense Intelligence Agency report on China's military. ¶ Yet while China hawks in the media might beat the drum of invasion, an internal China military study, seen by CNN, revealed that the PLA considers an invasion of Taiwan to be extremely difficult. ¶ "Taiwan has a professional military, with a strong core of American-trained experts," said Ian Easton, author of "The Chinese Invasion Threat" and research fellow at the Project 2049 Institute, as well as "highly defensible" terrain. ¶ In his book he described an invasion by China as "the most difficult and bloody mission facing the Chinese military." ¶ The plan to take Taiwan ¶ China's Taiwan invasion plan, known internally as the "Joint Island Attack Campaign," would begin with a mass, coordinated bombing of Taiwan's vital infrastructure -- ports and airfields -- to cripple the island's military ahead of an amphibious invasion, according to both Easton and Sidharth Kaushal, a research fellow at the Royal United Services Institute for Defense and Security Studies. ¶ At the same time, the Chinese air force would fly over the Taiwan Strait and try to dominate the island's air space. Once the PLA was satisfied it had suitably disabled Taiwan's air and naval forces, Kaushal said soldiers would begin to invade on the west coast of the island. ¶ The island's rocky, mountainous east coast is considered too inhospitable and far from mainland China. ¶ The amphibious invasion needed to put troops on Taiwan, however, could be the biggest hurdle facing the PLA. ¶ In its 2019 report to Congress, the US Department of Defense said China -- which has one of the largest navies in Asia -- had at its command 37 amphibious transport docks and 22 smaller landing ships, as well as any civilian vessels Beijing could enlist. ¶ That might be enough to occupy smaller islands, such as those in the South China Sea, but an amphibious assault on Taiwan would likely require a bigger arsenal -- and there is "no indication China is significantly expanding its landing ship force," the report said. ¶ That makes it vital for Beijing to neutralize Taiwan's navy and air force in the early stages of an attack, Kaushal said. ¶ "The Taiwanese air force would have to sink around 40% of the amphibious landing forces of the PLA in order to render this sort of mission infeasible," he said. ¶ Essentially, that's only about 10 to 15 ships, he added. ¶ If they did make it across the strait, the PLA would still need to find a decent landing spot for its ships. ¶ China's military would be looking for a landing site both close to the mainland, and a strategic city, such as Taipei, with nearby port and airport facilities. ¶ That leaves just 14 potential beaches, Easton said -- and it's not only the PLA that knows it. Taiwanese engineers have spent decades digging tunnels and bunkers in potential landing zones along the coast. ¶ Furthermore, the backbone of Taiwan's defense is a fleet of vessels capable of launching anti-ship cruise missiles, on top of an array of ground-based missiles, and substantial mines and artillery on the coastline. ¶ "Taiwan's entire national defense strategy, including its war plans, are specifically targeted at defeating a PLA invasion," Easton said. ¶ Chinese troops could be dropped in from the air, but a lack of paratroopers in the PLA makes it unlikely. ¶ If the PLA held a position on Taiwan, and could reinforce with troops from the mainland to face off about 150,000 Taiwan troops, as well as more than 2.5 million reservists, it would have to push through the island's western mud flats and mountains, with only narrow roads to assist them, towards Taipei. ¶ Finally, the mobilization of amphibious landing vessels, ballistic missile launchers, fighters and bombers, as well as hundreds of thousands of troops, would give Taiwan plenty of advance warning of any attack, Kaushal said. ¶ "It's extremely unlikely that the invasion could come as a bolt from the blue," Kaushal added. ¶ There is, of course, one final deterrent to any PLA invasion of Taiwan. ¶ It isn't clear whether or not such an attack by China would spark an intervention by the United States on Taipei's behalf. ¶ Washington has been a longtime ally of the island, selling weapons to the Taiwan government and providing implicit military protection from Beijing. ¶ Easton said that, at present, the US would likely intervene in Taiwan's favor, both to protect investment by US companies on the island and reassure American allies in the region, who are also facing down a resurgent PLA in the East and South China seas. ¶ Collin Koh Swee Lean, research fellow at the S. Rajaratnam School of International Studies' Maritime Security Program in Singapore, said there would also be "immense political consequences" from taking over Taiwan, in the event of a successful China invasion. ¶ "It will likely mean that China will be seen as the bad guy in the neighborhood, who uses force," he said. "It will alienate some regional partners and the good will which China has been trying to build over the years will evaporate. And it will set China on a collision course with the US." ¶ But Taipei isn't taking anything for granted. ¶ On the sidelines of the massive Han Guang drills, Taiwan's Maj. Gen. Chen pointed out the hundreds of spectators who had come out to watch and support the island's military. ¶ "These exercises let people know the national army of the Republic of China is ready," he said. ¶ Taiwan is taking no chances.

## 1NC: Heg

#### No US leadership impact

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

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

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

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

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

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

To review, assuming for a moment that US leaders are subject to the same forces that affect every human being, they overestimate the amount of control they have over other actors, and are not as important to decisions made elsewhere as they believe themselves to be. And they probably perceive their own benevolence to be much greater than do others. These common phenomena all influence US beliefs in the same direction, and may well increase the apparent explanatory power of hegemony beyond what the facts would otherwise support. The United States is probably not as central to the New Peace as either liberals or neoconservatives believe.

In the end, what can be said about the relationship between US power and international stability? Probably not much that will satisfy partisans, and the pacifying virtue of US hegemony will remain largely an article of faith in some circles in the policy world. Like most beliefs, it will remain immune to alteration by logic and evidence. Beliefs rarely change, so debates rarely end.

For those not yet fully converted, however, perhaps it will be significant that corroborating evidence for the relationship is extremely hard to identify. If indeed hegemonic stability exists, it does so without leaving much of a trace. Neither Washington’s spending, nor its interventions, nor its overall grand strategy seem to matter much to the levels of armed conflict around the world (apart from those wars that Uncle Sam starts). The empirical record does not contain strong reasons to believe that unipolarity and the New Peace are related, and insights from political psychology suggest that hegemonic stability is a belief particularly susceptible to misperception. US leaders probably exaggerate the degree to which their power matters, and could retrench without much risk to themselves or the world around them. Researchers will need to look elsewhere to explain why the world has entered into the most peaceful period in its history.

The good news from this is that the New Peace will probably persist for quite some time, no matter how dominant the United States is, or what policies President Trump follows, or how much resentment its actions cause in the periphery. The people of the twenty-first century are likely to be much safer and more secure than any of their predecessors, even if many of them do not always believe it.

#### Heg not key to peace

Dombrowski 2/21/19 [Ellie Dombrowski, author for the Observer, citing C.J. Fettweis, Associate Professor of Political Science at Tulane University. The New Peace. 2/21/19. https://ndsmcobserver.com/2019/02/the-new-peace/]

We are a part of the generation of the “Long Peace,” a time of unprecedented lack of global conflict since World War II. The term was coined by John Gaddis in his novel “The Long Peace” (1989), and the period is well known because of the Cold War (1945 – 1991), which was marked by a lack of direct military conflict between major powers, the United States and the USSR. Few Americans during this time saw combat, at least relative to the two World Wars that preceded it. Now, the Cold War is over, but the Long Peace persists. The USSR is no longer a political entity, and Russia lacks the global, political and economic presence of its predecessor — but proxy wars continue. “Low intensity conflict” continues, but the “sides” are less clear.

This is the New Peace moment of the Long Peace.

If the term fits, we need to be clear about what that means. It doesn’t mean a lack of conflict, it can’t — the youth of today have never lived a day without war. The U.S. has been at war in the Middle East since Aug. 2, 1990, a total of 29 years of fighting in and around Iraq. Still, this is not a “total war” in the sense known by past generations. There were more military deaths in World War II than all of the wars since combined, and they took place in a much shorter period of time. In that sense, the New Peace is real for Americans, even while it remains devastating for those directly involved.

Why are we in a New Peace? What is making it stick? Political scientist Christopher Fettweis believes that “whether these trends represent a fundamental change in the rules that govern state behavior or a temporary respite between cataclysms is not yet clear, but there is no doubt that—thus far at least—the post-Cold War era has been more stable and peaceful than any that preceded it.” Many things could have caused this stability: a post-Cold War deterrence effect of massively unequal militaries, incentives toward global cooperation caused by high levels of economic growth, global reduction of poverty, women’s empowerment or the global increase of democracies. However, it is unlikely that any of these is sufficient on their own, and counter examples of peace without any of these elements are easy to find.

Some historians credited the New Peace to U.S. hegemony, but it appears unlikely: stability has occurred even where U.S. influence and investment was minor. Africa, for example, has experienced a reduced number of armed conflicts, despite reduced U.S. involvement. And Africa is hardly the only region where states are free to go to war with one another without fear of U.S. intervention. But they do not, at least not at former rates. From this, we can conclude that “the New Peace can in all likelihood continue without U.S. dominance and should persist long after [this] unipolarity comes to an end.”

While some may be surprised by the idea that stability will continue without U.S. prompting, the number and size of conflicts has continued to decline with the U.S. share of global wealth. This helps explain why the U.S. continues to spend so much of its income on military hardware and still leads the world in arms sales. Historians of the last 30 years might suggest that such trends run counter to the increasing interest of the states today, even where they are seen to be only rational and self-serving — to pursue global peace, instead of running the risk of damaging their economies with war.

So, where do we go from here? The good news is that the effect of changes in U.S. policies and strategies

— often driven by inward-looking rather than outward-looking concerns — are less likely to have an effect on this trend. “The New Peace will [likely] persist for quite some time, no matter how dominant the United States is, or what policies President Trump follows, or how much resentment its actions cause in the periphery,” Fettweis states. For those of us living in these tumultuous political times, it is reassuring to think that global peace is not dependent on the United States. Of course, many Americans would see this as a loss of control, but cooperation (even where forced upon us by a lack of hegemony) has increased equality, women’s opportunities and global health. That fact that none of our generation has known a world without these things means that we are the living representatives of that global cooperation. In a sense, we are the New Peace.