# 1NC vs. Kabir

## 1

**Interp: The affirmative must defend private entities as a general principle, not specify a subset**

**Private entities is a bare plural–that’s generic**

**Byrd** [“Generic Meaning,” Georgia State University, Transcript of lecture given by Pat Byrd, Department of Applied Linguistics & ESL]

Here are some things that we do know about these generic noun phrase types when they are used in context:1. The + singular: The computer has changed modern life This form is considered more formal than the others--and is not as likely to be used in conversation as the plural noun: Computers have changed modern life. Master (1987) found in the samp.le that he analyzed that this form with the was often used to introduce at topic--and came at the beginning of a paragraph and in introductions and conclusions.2. Zero + plural: Computers are machines. Computers have changed modern life. Probably the most common form for a generalization. It can be used in all contexts--including both conversation (Basketball players make too much money) and academic writing (Organisms as diverse as humans and squid share many biological processes). Perhaps used more in the hard sciences and social sciences than in the humanities. 3. A + singular: A computer is a machine. This generic structure is used to refer to individual instances of a whole group and is used to classify whatever is being discussed.The form is often used for definitions of terms. It is also often used to explain occupations. My sister is a newspaper reporter. I am a teacher. Use is limited to these "classifying" contexts. Notice that this form can't always be subtituted for the other: \*Life has been changed by a computer. \*A computer has changed modern life. 4. Zero + noncount: Life has been changed by the computer. The most basic meaning and use of noncount nouns is generic--they are fundamentally about a very abstract level of meaning. Thus, the most common use of noncount nouns is this use with no article for generic meaning. Zero Article and Generic Meaning: Most nouns without articles have generic meaning. Two types are involved.1. Zero + plural: Computers are machines. Computers have changed modern life.2. Zero + noncount: Life has been changed by the computer.

**1–Precision outweighs - anything outside the res is arbitrary and unpredictable because the topic determines prep, not being bound by it lets them jettison any word.**

**2–Limits and Ground - decimates clash by exploding limits to infinite private entities and combinations, each with different astrological fields of science, political and economic conditions, and goals which makes contesting the aff with unifying neg ground impossible and means they can always pick the most aff skewed slice of the res.**

**3–TVA – read your aff as an advantage under whole res – we still get your content education and sufficient aff ground by switching up aff advantages, frameworks, implementation, etc. But, 1ar theory checks pics and they incentivize more of them cuz nothing but cheaty generics link**

**DTD–T indicts the whole aff.**

**No rvi–you shouldn’t win for being T and incentivizes baiting T just to beat it back with infinite prep while chilling T since you’ll out frame us and auto-win on 2ar ethos every round.**

**Competing interps–reasonability is arbitrary and causes a race to the bottom–finding the best model of debate is key to preserve the most substantive norms in the long terms but no frivolous race to the top since limited words in the res mean limited interps**

**T before 1ar theory–NC abuse was reactive and only 2 months to discuss T whereas we can discuss 1ar theory whenever**

## 2

**Interpretation: Private entities are companies not affiliated or controlled by the government**

**USSSA NO DATE** [US Social Security Administration is an independent agency of the USfg. “Determining Public vs Private Entities.” https://www.ssa.gov/section218training/documents/course\_9.doc]

1. What is the definition of a governmental entity? A governmental entity is that which is closely affiliated, generally by government ownership or control, with State and local governments. 2. What is the definition of a non-governmental or private entity? A non-governmental entity is that which is not affiliated, through ownership or control, with State and local governments.

**Violation: China's "private" sector companies aren't private–neg on presumption since public companies would circumvent through public-private partnerships at best**

**Olson 20** [Stephen Olson, research fellow at the Hinrich Foundation. "Are Private Chinese Companies Really Private?" The Diplomat, 9-30-2020, accessed 1-14-2022, https://thediplomat.com/2020/09/are-private-chinese-companies-really-private/] HWIC

China has often been criticized for a lack of transparency, especially with regard to its economic and trade policies. While in many cases these criticisms are valid, it belies the fact that in other instances, China is remarkably open and transparent about its intentions and ambitions. Such is the case with China’s “Opinion on Strengthening the United Front Work of the Private Economy in the New Era,” recently released by the Central Committee of the Chinese Communist Party (and further elaborated on by President Xi Jinping himself). This document tells us in no uncertain terms that Chinese private companies will be increasingly called upon to conduct their operations in tight coordination with governmental policy objectives and ideologies. The rest of the world should take note. A Different Vision of “Private” Business The 5,000 word “opinion” aims to ratchet-up the role and influence of the CCP within the private sector in order “to better focus the wisdom and strength of the private businesspeople on the goal and mission to realize the great rejuvenation of the Chinese nation.” The objective is to establish a “united front” between business and government and facilitate the “enhancement of the party’s leadership over the private economy.” According to the plan, “private economic figures are to be more closely united around the party,” thereby achieving “a high degree of consistency with the Party Central Committee on political stand, political direction, political principles, and political roads.” All of this stands in stark contrast to long-accepted concepts of how private companies function in a free market. The overriding purpose of business, according to these traditional precepts, is to earn profits through the provision of value-added products and services, in response to marketplace signals and under the constraint of basic economic realities. Government ideology plays no role in that equation. But China has a very different vision. Government officials and government ideologies are directly infused into business operations. Private sector employees are “educated” on government policies and ideologies, with the expectation that this “enlightenment” will help inform their business decisions. This government-business symbiosis is further cemented by the provision of massive government subsidies (estimated to be about 3 percent of China’s GDP) to Chinese companies.

**Negate for limits and ground --- jettisoning private entity explodes NEG prep burdens and opens the topic to any permutation of public sector activities from space situational awareness to banning space militarization to space traffic management and destroys NEG generics like the innovation DA, biz con DA, and unilateral action CP proven by the fact that their advantage is functionally China space good/bad. No plan text in a vacuum–worst model is the plan not meeting the advantage**

## 3

**Xi’s regime is stable now, but its success depends on strong growth and private sector development.**

**Mitter and Johnson 21** [Rana Mitter and Elsbeth Johnson, [Rana Mitter](https://hbr.org/search?term=rana%20mitter&search_type=search-all) is a professor of the history and politics of modern China at Oxford. [Elsbeth Johnson](https://hbr.org/search?term=elsbeth%20johnson&search_type=search-all), formerly the strategy director for Prudential PLC’s Asian business, is a senior lecturer at MIT’s Sloan School of Management and the founder of SystemShift, a consulting firm. May-June 2021, "What the West Gets Wrong About China," Harvard Business Review, [https://hbr.org/2021/05/what-the-west-gets-wrong-about-china accessed 12/14/21](https://hbr.org/2021/05/what-the-west-gets-wrong-about-china%20accessed%2012/14/21)] Adam

In China, however, growth has come in the context of stable communist rule, suggesting that democracy and growth are not inevitably mutually dependent. In fact, many Chinese believe that the country’s recent economic achievements—large-scale poverty reduction, huge infrastructure investment, and development as a world-class tech innovator—have come about because of, not despite, China’s authoritarian form of government. Its aggressive handling of Covid-19—in sharp contrast to that of many Western countries with higher death rates and later, less-stringent lockdowns—has, if anything, reinforced that view. China has also defied predictions that its authoritarianism would inhibit its capacity to [innovate](https://hbr.org/2011/06/what-the-west-doesnt-get-about-china). It is a global leader in AI, biotech, and space exploration. Some of its technological successes have been driven by market forces: People wanted to buy goods or communicate more easily, and the likes of Alibaba and Tencent have helped them do just that. But much of the technological progress has come from a highly innovative and well-funded military that has invested heavily in China’s burgeoning new industries. This, of course, mirrors the role of U.S. defense and intelligence spending in the development of Silicon Valley. But in China the consumer applications have come faster, making more obvious the link between government investment and products and services that benefit individuals. That’s why ordinary Chinese people see Chinese companies such as Alibaba, Huawei, and TikTok as sources of national pride—international vanguards of Chinese success—rather than simply sources of jobs or GDP, as they might be viewed in the West. Thus July 2020 polling data from the Ash Center at Harvard’s Kennedy School of Government revealed 95% satisfaction with the Beijing government among Chinese citizens. Our own experiences on the ground in China confirm this. Most ordinary people we meet don’t feel that the authoritarian state is solely oppressive, although it can be that; for them it also provides opportunity. A cleaner in Chongqing now owns several apartments because the CCP reformed property laws. A Shanghai journalist is paid by her state-controlled magazine to fly around the world for stories on global lifestyle trends. A young student in Nanjing can study propulsion physics at Beijing’s Tsinghua University thanks to social mobility and the party’s significant investment in scientific research.

**Xi has committed to the commercial space industry as the linchpin of China’s rise – the plan is seen as a complete 180**

**Patel 21** [Neel V. Patel, Neel is a space reporter for MIT Technology Review. 1-21-2021, "China’s surging private space industry is out to challenge the US," MIT Technology Review, <https://www.technologyreview.com/2021/01/21/1016513/china-private-commercial-space-industry-dominance/> accessed 12/14/21] Adam

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](https://archive.md/o/bc9l4/www.cpppc.org/en/zy/994006.jhtml) 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](https://archive.md/o/bc9l4/https:/www.ida.org/-/media/feature/publications/e/ev/evaluation-of-chinas-commercial-space-sector/d-10873.ashx). 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](https://archive.md/o/bc9l4/https:/spacenews.com/spacety-releases-first-sar-images/), 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.  Although China is taking inspiration from the US in building out its private industry, the nature of the Chinese state also means these new companies face obstacles that their rivals in the West don’t have to worry about. While Chinese companies may look private on paper, they must still submit to government guidance and control, and accept some level of interference. It may be difficult for them to make a case to potential overseas customers that they are independent. The distinction between companies that are truly private and those that are more or less state actors is still quite fuzzy, especially if the government is a frequent customer. “That could still lead to a lack of trust from other partners,” says Goswami. It doesn’t help that the government itself is often [very cagey about what its national program is even up to](https://archive.md/o/bc9l4/https:/www.bbc.com/news/science-environment-54076895). And Hines adds that it’s not always clear exactly how separate these companies are from, say, the People’s Liberation Army, given the historical ties between the space and defense sectors. “Some of these things will pose significant hurdles for the commercial space sector as it tries to expand,” he says.

**Shifts in regime perception threatens CCP’s legitimacy from nationalist hardliners**

**Weiss 19** Jessica Weiss 1-29-2019 “Authoritarian Audiences, Rhetoric, and Propaganda in International Crises: Evidence from China” <http://www.jessicachenweiss.com/uploads/3/0/6/3/30636001/19-01-24-elite-statements-isq-ca.pdf> (Associate Professor of Government at Cornell University)//Elmer

Public support—or the appearance of it—matters to many autocracies. As Ithiel de Sola Pool writes, modern dictatorships are “highly conscious of public opinion and make major efforts to affect it.”6 Mao Zedong told his comrades: “When you make revolution, you must first manage public opinion.”7 Because autocracies often rely on nationalist mythmaking,8 success or failure in defending the national honor in international crises could burnish the leadership’s patriotic credentials or spark opposition. Shared outrage at the regime’s foreign policy failures could galvanize street protests or elite fissures, creating intraparty upheaval or inviting military officers to step in to restore order. Fearing a domestic backlash, authoritarian leaders may feel compelled to take a tough international stance. Although authoritarian leaders are rarely held accountable to public opinion through free and fair elections, fears of popular unrest and irregular ouster often weigh heavily on autocrats seeking to maximize their tenure in office. Considering the harsh consequences that authoritarian elites face if pushed out of office, even a small increase in the probability of ouster could alter authoritarian incentives in international crises.9 A history of nationalist uprisings make Chinese citizens and leaders especially aware of the linkage between international disputes and domestic unrest. The weakness of the PRC’s predecessor in defending Chinese sovereignty at the Paris Peace Conference in 1919 galvanized protests and a general strike, forcing the government to sack three officials and reject the Treaty of Versailles, which awarded territories in China to Japan. These precedents have made Chinese officials particularly sensitive to the appearance of hewing to public opinion. As the People’s Daily chief editor wrote: “History and reality have shown us that public opinion and regime safety are inseparable.”10 One Chinese scholar even claimed: “the Chinese government probably knows the public’s opinion better and reacts to it more directly than even the U.S. government.”11

**Xi will launch diversionary war to domestic backlash – escalates in multiple hotspots**

**Norris 17**, William J. Geostrategic Implications of China’s Twin Economic Challenges. CFR Discussion Paper, 2017. (Associate professor of Chinese foreign and security policy at Texas A&M University’s Bush School of Government and Public Service)//Elmer

Populist pressures might tempt the party leadership to encourage diversionary nationalism. The logic of this concern is straightforward: the Communist Party might seek to distract a restless domestic population with adventurism abroad.19 The Xi administration wants to appear tough in its defense of foreign encroachments against China’s interests. This need stems from a long-running narrative about how a weak Qing dynasty was unable to defend China in the face of European imperial expansion, epitomized by the Opium Wars and the subsequent treaties imposed on China in the nineteenth century. The party is particularly sensitive to perceptions of weakness because much of its claim to legitimacy—manifested in Xi’s Chinese Dream campaign today—stems from the party’s claims of leading the restoration of Chinese greatness. For example, the May Fourth Movement, a popular protest in 1919 that helped catalyze the CPC, called into question the legitimacy of the Republic of China government running the country at that time because the regime was seen as not having effectively defended China’s territorial and sovereignty interests at the Versailles Peace Conference. Diversionary nationalist frictions would likely occur if the Chinese leadership portrayed a foreign adversary as having made the first move, thus forcing Xi to stand up for China’s interests. An example is the 2012 attempt by the nationalist governor of Tokyo, Shintaro Ishihara, to buy the Senkaku/Diaoyu Islands from a private owner.20 Although the Japanese central government sought to avert a crisis by stepping in to purchase the islands—having them bought and administered by Ishihara’s Tokyo metropolitan government would have dragged Japan into a confrontation with China—China saw this move as part of a deliberate orchestration by Japan to nationalize the islands. Xi seemingly had no choice but to defend China’s claims against an attempt by Japan to consolidate its position on the dispute.21 This issue touched off a period of heated tensions between China and Japan, lasting more than two years.22 Such dynamics are not limited to Japan. Other possible areas of conflict include, but are not necessarily limited to, Taiwan, India, and the South China Sea (especially with the Philippines and Vietnam). The Chinese government will use such tactics if it believes that the costs are relatively low. Ideally, China would like to appear tough while avoiding material repercussions or a serious diplomatic breakdown. Standing up against foreign encroachment—without facing much blowback—could provide Xi’s administration with a tempting source of noneconomic legitimacy. However, over the next few years, Xi will probably not be actively looking to get embroiled abroad. Cushioning the fallout from slower growth while managing a structural economic transition will be difficult enough. Courting potential international crises that distract the central leadership would make this task even more daunting. Even if the top leadership did not wish to provoke conflict, a smaller budgetary allotment for security could cause military interests in China to deliberately instigate trouble to justify their claims over increasingly scarce resources. For example, an air force interested in ensuring its funding for a midair tanker program might find the existence of far-flung territorial disputes to be useful in making its case. Such a case would be made even stronger by a pattern of recent frictions that highlights the necessity of greater air power projection. Budgetary pressures may be partly behind a recent People’s Liberation Army reorganization and headcount reduction. A slowing economy might cause a further deceleration in China’s military spending, thus increasing such pressures as budgetary belts tighten. Challenges to Xi’s Leadership Xi Jinping’s efforts to address economic challenges could fail, unleashing consequences that extend well beyond China’s economic health. For example, an economic collapse could give rise to a Vladimir Putin–like redemption figure in China. Xi’s approach of centralizing authority over a diverse, complex, and massive social, political, and economic system is a recipe for brittleness. Rather than designing a resilient, decentralized governance structure that can gracefully cope with localized failures at particular nodes in a network, a highly centralized architecture risks catastrophic, system-level failure. Although centralized authority offers the tantalizing chimera of stronger control from the center, it also puts all the responsibility squarely on Xi’s shoulders. With China’s ascension to great power status, the consequences of internecine domestic political battles are increasingly playing out on the world stage. The international significance of China’s domestic politics is a new paradigm for the Chinese leadership, and one can expect an adjustment period during which the outcome of what had previously been relatively insulated domestic political frictions will likely generate unintended international repercussions. Such dynamics will influence Chinese foreign policy and security behavior. Domestic arguments over ideology, bureaucratic power struggles, and strategic direction could all have ripple effects abroad. Many of China’s party heavyweights still employ a narrow and exclusively domestic political calculus. Such behavior increases the possibility of international implications that are not fully anticipated, raising the risks of strategic miscalculation on the world stage. For example, the factional power struggles that animated the Cultural Revolution were largely driven by domestic concerns, yet manifested themselves in Chinese foreign policy for more than a decade. During this period, China was not the world’s second largest economy and, for much of this time, did not even have formal representation at the United Nations. If today’s globally interconnected China became engulfed in similar domestic chaos, the effects would be felt worldwide.23 Weakened Fetters of Economic Interdependence If China successfully transitioned away from its export-driven growth model toward a consumption-driven economic engine over the next four or five years, it could no longer feel as constrained by economic interdependence. To the extent that such constraints are loosened, the U.S.-China relationship will be more prone to conflict and friction.24 While China has never been the archetypal liberal economic power bent on benign integration with the global economy, its export-driven growth model produced a strong strategic preference for stability. Although past behavior is not necessarily indicative of future strategic calculus, China’s “economic circuit breaker” logic seems to have held its most aggressive nationalism below the threshold of war since 1979. A China that is both comparatively strong and less dependent on the global economy would be a novel development in modern geopolitics. As China changes the composition of its international economic linkages, global integration could place fewer constraints on it. Whereas China has been highly reliant on the import of raw materials and semifinished goods for reexport, a consumption-driven China could have a different international trade profile. China could still rely on imported goods, but their centrality to the country’s overall economic growth would be altered. Imports of luxury goods, consumer products, international brands, and services may not exert a significant constraining influence, since loss of access to such items may not be seen as strategically vital. If these flows were interrupted or jeopardized, the result would be more akin to an inconvenience than a strategic setback for China’s rise. That said, China is likely to continue to highly depend on imported oil even if the economic end to which that energy resource is directed shifts away from industrial and export production toward domestic consumption.

**US–China war goes nuclear – crisis mis-management ensures conventional escalation - extinction**

**Kulacki 20** [Dr. Gregory Kulacki focuses on cross-cultural communication between the United States and China on nuclear and space arms control and is the China Project Manager for the Global Security Program at the Union of Concerned Scientists, 2020. Would China Use Nuclear Weapons First In A War With The United States?, Thediplomat.com, https://thediplomat.com/2020/04/would-china-use-nuclear-weapons-first-in-a-war-with-the-united-states/] srey

Admiral Charles A. Richard, the head of the U.S. Strategic Command, recently told the Senate Armed Service Committee he “could drive a truck” through the holes in China’s no first use policy. But when Senator John Hawley (R-MO) asked him why he said that, Commander Richard backtracked, described China’s policy as “very opaque” and said his assessment was based on “very little” information. That’s surprising. China has been exceptionally clear about its intentions on the possible first use of nuclear weapons. On the day of its first nuclear test on October 16, 1964, China declared it “will never at any time or under any circumstances be the first to use nuclear weapons.” That unambiguous statement has been a cornerstone of Chinese nuclear weapons policy for 56 years and has been repeated frequently in authoritative Chinese publications for domestic and international audiences, including a highly classified training manual for the operators of China’s nuclear forces. Richard should know about those publications, particularly the training manual. A U.S. Department of Defense translation has been circulating within the U.S. nuclear weapons policy community for more than a decade. The commander’s comments to the committee indicate a familiarity with the most controversial section of the manual, which, in the eyes of some U.S. analysts, indicates there may be some circumstances where China would use nuclear weapons first in a war with the United States. This U.S. misperception is understandable, especially given the difficulties the Defense Department encountered translating the text into English. The language, carefully considered in the context of the entire book, articulates a strong reaffirmation of China’s no first use policy. But it also reveals Chinese military planners are struggling with crisis management and considering steps that could create ambiguity with disastrous consequences. Towards the end of the 405-page text on the operations of China’s strategic rocket forces, in a chapter entitled, “Second Artillery Deterrence Operations,” the authors explain what China’s nuclear forces train to do if “a strong military power possessing nuclear‐armed missiles and an absolute advantage in high‐tech conventional weapons is carrying out intense and continuous attacks against our major strategic targets and we have no good military strategy to resist the enemy.” The military power they’re talking about is the United States. The authors indicate China’s nuclear missile forces train to take specific steps, including increasing readiness and conducting launch exercises, to “dissuade the continuation of the strong enemy’s conventional attacks.” The manual refers to these steps as an “adjustment” to China’s nuclear policy and a “lowering” of China’s threshold for brandishing its nuclear forces. Chinese leaders would only take these steps in extreme circumstances. The text highlights several triggers such as U.S. conventional bombing of China’s nuclear and hydroelectric power plants, heavy conventional bombing of large cities like Beijing and Shanghai, or other acts of conventional warfare that “seriously threatened” the “safety and survival” of the nation. U.S. Misunderstanding Richard seems to believe this planned adjustment in China’s nuclear posture means China is preparing to use nuclear weapons first under these circumstances. He told Hawley that there are a “number of situations where they may conclude that first use has occurred that do not meet our definition of first use.” The head of the U.S. Strategic Command appears to assume, as do other U.S. analysts, that the Chinese would interpret these types of U.S. conventional attacks as equivalent to a U.S. first use of nuclear weapons against China. But that’s not what the text says. “Lowering the threshold” refers to China putting its nuclear weapons on alert — it does not indicate Chinese leaders might lower their threshold for deciding to use nuclear weapons in a crisis. Nor does the text indicate Chinese nuclear forces are training to launch nuclear weapons first in a war with the United States. China, unlike the United States, keeps its nuclear forces off-alert. Its warheads are not mated to its missiles. China’s nuclear-armed submarines are not continuously at sea on armed patrols. The manual describes how China’s nuclear warheads and the missiles that deliver them are controlled by two separate chains of command. Chinese missileers train to bring them together and launch them after China has been attacked with nuclear weapons. All of these behaviors are consistent with a no first use policy. The “adjustment” Chinese nuclear forces are preparing to make if the United States is bombing China with impunity is to place China’s nuclear forces in a state of readiness similar to the state the nuclear forces of the United States are in all the time. This step is intended not only to end the bombing, but also to convince U.S. decision-makers they cannot expect to destroy China’s nuclear retaliatory capability if the crisis escalates. Chinese Miscalculation Unfortunately, alerting Chinese nuclear forces at such a moment could have terrifying consequences. Given the relatively small size of China’s nuclear force, a U.S. president might be tempted to try to limit the possible damage from a Chinese nuclear attack by destroying as many of China’s nuclear weapons as possible before they’re launched, especially if the head of the U.S. Strategic Command told the president China was preparing to strike first. One study concluded that if the United States used nuclear weapons to attempt to knock out a small fraction of the Chinese ICBMs that could reach the United States it may kill tens of millions of Chinese civilians. The authors of the text assume alerting China’s nuclear forces would “create a great shock in the enemy’s psyche.” That’s a fair assumption. But they also assume this shock could “dissuade the continuation of the strong enemy’s conventional attacks against our major strategic targets.” That’s highly questionable. There is a substantial risk the United States would respond to this implicit Chinese threat to use nuclear weapons by escalating, rather than halting, its conventional attacks. If China’s nuclear forces were targeted, it would put even greater strain on the operators of China’s nuclear forces. A slippery slope to nuclear war Chinese military planners are aware that attempting to coerce the United States into halting conventional bombardment by alerting their nuclear forces could fail. They also know it might trigger a nuclear war. But if it does, they are equally clear China won’t be the one to start it. Nuclear attack is often preceded by nuclear coercion. Because of this, in the midst of the process of a high, strong degree of nuclear coercion we should prepare well for a nuclear retaliatory attack. The more complete the preparation, the higher the credibility of nuclear coercion, the easier it is to accomplish the objective of nuclear coercion, and the lower the possibility that the nuclear missile forces will be used in actual fighting. They assume if China demonstrates it is well prepared to retaliate the United States would not risk a damage limitation strike using nuclear weapons. And even if the United States were to attack China’s nuclear forces with conventional weapons, China still would not strike first. In the opening section of the next chapter on “nuclear retaliatory attack operations” the manual instructs, as it does on numerous occasions throughout the entire text: According to our country’s principle, its stand of no first use of nuclear weapons, the Second Artillery will carry out a nuclear missile attack against the enemy’s important strategic targets, according to the combat orders of the Supreme Command, only after the enemy has carried out a nuclear attack against our country. Richard is wrong. There are no holes in China’s no first use policy. But the worse-case planning articulated in this highly classified military text is a significant and deeply troubling departure from China’s traditional thinking about the role of nuclear weapons. Mao Zedong famously called nuclear weapons “a paper tiger.” Many assumed he was being cavalier about the consequences of nuclear war. But what he meant is that they would not be used to fight and win wars. U.S. nuclear threats during the Korean War and the Taiwan Strait Crisis in the 1950s – threats not followed by an actual nuclear attack – validated Mao’s intuition that nuclear weapons were primarily psychological weapons. Chinese leaders decided to acquire nuclear weapons to free their minds from what Mao’s generation called “nuclear blackmail.” A former director of China’s nuclear weapons laboratories told me China developed them so its leaders could “sit up with a straight spine.” Countering nuclear blackmail – along with compelling other nuclear weapons states to negotiate their elimination – were the only two purposes Chinese nuclear weapons were meant to serve. Contemporary Chinese military planners appear to have added a new purpose: compelling the United States to halt a conventional attack. Even though it only applies in extreme circumstances, it increases the risk that a war between the United States and China will end in a nuclear exchange with unpredictable and catastrophic consequences. Adding this new purpose could also be the first step on a slippery slope to an incremental broadening the role of nuclear weapons in Chinese national security policy. Americans would be a lot safer if we could avoid that. The United States government should applaud China’s no first use policy instead of repeatedly calling it into question. And it would be wise to adopt the same policy for the United States. If both countries declared they would never use nuclear weapons first it may not guarantee they can avoid a nuclear exchange during a military crisis, but it would make one far less likely.

## 4

**China’s economy is on the brink.**

**Lopez 21** Linette Lopez 10-24-2021 "If China's economy keeps stumbling, it won't just take down Beijing - the whoel world will collapse with it"<https://archive.md/M4qjY#selection-2241.0-2250.1> (Linette is the senior finance correspondent at Business Insider, writing a combination of opinions and analysis. She joined BI in the summer of 2011 after graduating from Columbia University's School of Journalism.)//Elmer

China's economy — the 2nd-largest in the world — is teetering on the brink of disaster. Since this spring, Beijing has canceled initial public offerings, fined tech companies billions for antitrust violations, forcibly shut down China's entire for-profit education industry, and sent CEOs running for the exits to avoid the government's ire. Even more dire, the Chinese megadeveloper Evergrande recently started missing payments on its more than $300 billion in debt, shaking global markets. The convulsions have woken the world up to a startling new possibility — that Beijing may be willing to allow some of its private corporate behemoths to collapse in a bid to reshape the economic model that made China a superpower. The upheaval, spanning multiple industries and vast swaths of the country, is the result of one giant issue: China's inability to borrow or buy its way out of its current economic crisis. For decades, the country relied on cheap labor and eye-popping amounts of debt, handed out by government-owned banks, to fuel economic growth — pouring money into massive apartment developments, factories, bridges, and other projects at lightning speed. Now the country needs people to actually use, and pay for, everything that's been built. But the bulk of China's population lacks the income needed to shift the economy from one driven by state investments to one sustained by consumer spending.

**Robust Chinese space industry key to economic rejuvenation–mining, manufacturing, moon base, solar power, and space value predictions**

**Goswami 19** Namrata Goswami 2019 "What China Wants in Outer Space"<https://www.thecairoreview.com/wp-content/uploads/2019/05/cr33-global-forum.pdf> (Dr. Namrata Goswami is an independent scholar on space policy, great power politics, and ethnic conflicts. She was subject matter expert in international affairs with the Futures Laboratory, Alabama, U.S., and guest lecturer, India Today Class, Emory University. After earning her Ph.D. in international relations from Jawaharlal Nehru University, New Delhi, she worked as research fellow at the Institute for Defence Studies and Analyses, New Delhi. She has been a visiting fellow at Peace Research Institute, Oslo, Norway; La Trobe University, Melbourne, Australia; and University of Heidelberg, Germany.)//Elmer

Beijing has made it clear that its ambitions for China’s space program are an integral part of its long-term vision for national rejuvenation. In his 2017 address to the Chinese Communist Party’s nineteenth National Congress, President Xi Jinping said that the Chinese space program will play a critical role in elevating the country to a “fully developed, rich, and powerful nation” by 2049—the year the People’s Republic of China celebrates its one-hundredth anniversary. For China, investing in outer space goes beyond simply achieving prestige and reputation—as opposed to the “flags and footprints”-based moon race between the United States and the Soviet Union during the Cold War. Instead, China aims to establish a permanent space presence, which would offer long-term economic benefits. The global space economy today is worth $350 billion, but is predicted to grow to $2.7 trillion by 2040. The economic returns from future mining of space-based resources like titanium, platinum, water-ice, thorium, and iron-ore far exceed the trillion-dollar mark. Consequently, the Chinese are working to establish a base on the moon with the industrial capacity to build spacecrafts using lunar resources. This would drastically reduce the cost of interplanetary travel. A lunar base would serve the distinctive purpose of providing a testing ground for human space settlement, and building capacity for China’s long-term space ambitions. Beijing’s Lunar Dreams Following the landing of Chang’e 4 (China’s fourth lunar exploration mission) on the far side of the moon on January 3, the China National Space Administration (CNSA) announced follow-on missions to augment the state’s space capacity. By this year’s end, China will launch Chang’e 5 to bring lunar samples back to Earth, followed by Chang’e 6 (2024) to bring samples specifically from the moon’s south pole. Chang’e 7 (2030) will survey the south pole’s composition and Chang’e 8 (2035) will test key technologies like 3D printing to lay the groundwork for the construction of a research station. The moon not only strengthens China’s space-faring capacities but also has resources like iron-ore and water that can be utilized for space-based manufacturing. Meanwhile, a lunar base offers some short-term strategic dominance in cislunar space (the area between the Earth and the moon). Another of China’s major space ambitions is its investment in SpaceBased Solar Power (SBSP) to build a space solar station thirty-six thousand kilometers above Earth. Some Chinese leaders stress that dwindling fossil fuel resources on Earth will make solar energy the most important future energy source. China started construction on the world’s first SBSP experimental plant in Chongqing earlier this year. If successful, the technology would allow China to fully power its lunar base and augment space mining operations. Space mining involves developing technologies to harvest resources from asteroids and the moon—a highly lucrative prospect. For instance, a single asteroid called 2011 UW158, which passed by Earth in 2015, was estimated to contain 5 trillion dollars’ worth of platinum. While still roughly a decade off, space mining is fast becoming a reality. Countries like the United States and Luxembourg have already passed legislation enabling private companies to begin exploration and operations.

**Independently,**

**1–That’s key to biomedicine–they’re in the lead and solves disease**

**Anqi 21** [Fan Anqi, reporter. “Chinese tech start-up sends bio-payload to space, a bold and steady step to build its own space lab.” December 17, 2021. https://www.globaltimes.cn/page/202112/1241736.shtml]

With 2021, the most ambitious and fruitful year in China's aerospace history drawing to an end, the country has seen yet another major progress in its commercial aerospace sector with the successful launch of the HY-1 sub-orbital rocket on Friday, sending China's first biological payload developed by a private Chinese company, Sparkle-1, to an altitude of 250 kilometers above Earth. The payload will verify the biological experiment devices in a microgravity environment in space, with the aim of providing an R&D platform for near-Earth life science research, space biomedical research, and biotechnology experiments, Rocket Pi, the payload's developer, told the Global Times on Friday. With the help of cloud computing and Artificial Intelligence, Sparkle-1 will establish a preliminary framework for cell's in-orbit counting and identification detection during the mission. As China has ushered in the era of self-developed space stations, microgravity-related studies including pharmaceuticals, biotechnology, and materials science, are about to enter a disruptive phase with the presentation of such a historical opportunity," Zhuang Fengyuan, an academician at the International Academy of Astronautics, told the Global Times. "A microgravity environment can significantly shorten the development cycle of new drugs and vaccines, and accelerate the development process of protein crystals and new materials, which are both of scientific value and have huge commercial benefits," noted Zhuang.

**Future pandemics cause extinction**

**Diamandis 21** [Eleftheriosi, biochemist specializing in clinical chemistry, Prof and Head of Clinical Biochemistry in the Dept of Laboratory Medicine and Pathobiology at the University of Toronto] “The Mother of All Battles: Viruses vs Humans. Can Humans Avoid Extinction in 50-100 Years?” Preprints, April 13, 2021,<https://www.preprints.org/manuscript/202104.0397/v1> TG

The recent SARS-CoV-2 pandemic, which is causing COVID 19 disease, has taught us unexpected lessons about the dangers of human extinction through highly contagious and lethal diseases. As the COVID 19 pandemic is now being controlled by various isolation measures, therapeutics and vaccines, it became clear that our current lifestyle and societal functions may not be sustainable in the long term. We now have to start thinking and planning on how to face the next dangerous pandemic, not just overcoming the one that is upon us now. Is there any evidence that even worse pandemics could strike us in the near future and threaten the existence of the human race? The answer is unequivocally yes. It is not necessary to get infected by viruses of bats, pangolins and other exotic animals that live in remote forests in order to be in danger. Creditable scientific evidence indicates that the human gut microbiota harbor billions of viruses which are capable of affecting the function of vital human organs such as the immune system, lung, brain, liver, kidney, heart etc. It is possible that the development of pathogenic variants in the gut can lead to contagious viruses which can cause pandemics, leading to destruction of vital organs, causing death or various debilitating diseases such as blindness, respiratory, liver, heart and kidney failures. These diseases could result in the complete shutdown of our civilization and probably the extinction of human race. In this essay, I will first provide a few independent pieces of scientific facts and then combine this information to come up with some (but certainly not all) hypothetical scenarios that could cause human race misery, even extinction. I hope that these scary scenarios will trigger preventative measures that could reverse or delay the projected adverse outcomes.

**2–China private mining is light years ahead–solves warming**

**Cohen 21** Ariel Cohen 10-26-2021 "China’s Space Mining Industry Is Prepping For Launch – But What About The US?"<https://www.forbes.com/sites/arielcohen/2021/10/26/chinas-space-mining-industry-is-prepping-for-launch--but-what-about-the-us/?sh=6b8bea862ae0> (I am a Senior Fellow at the Atlantic Council and the Founding Principal of International Market Analysis, a Washington, D.C.-based global risk advisory boutique.)//Elmer

Exploration of space-based natural resources are on the Chinese policy makers’ mind. The question is, what Joe Biden thinks? In April of this year, China’s Shenzen Origin Space Technology Co. Ltd. launched the NEO-1, the first commercial spacecraft dedicated to the mining of space resources – from asteroids to the lunar surface. Falling costs of space launches and spacecraft technology alongside existing infrastructure provides a unique opportunity to explore extraterrestrial resource extraction. Current technologies are equipped to analyze and categorize asteroids within our solar system with a limited degree of certainty. One of the accompanying payloads to the NEO-1 was the Yuanwang-1, or “little hubble” satellite, which searches the stars for possible asteroid mining targets. The NEO-1 launch marks another milestone in private satellite development, adding a new player to space based companies which include Japan’s Astroscale. Private asteroid identification via the Sentinel Space Telescope was supported by NASA until 2015. As private investment in space grows, the end goal is to be capable of harvesting resources to bring to Earth. “Through the development and launch of the spacecraft, Origin Space is able to carry out low-Earth orbit space junk cleanup and prototype technology verification for space resource acquisition, and at the same time demonstrate future asteroid defense related technologies.” In the end, it will come down to progressively lowering the cost of launched unit of weight and booster rocket reliability – before fundamentally new engines may drive the launch costs even further down. The April launch demonstrates that China is already succeeding while the West is spinning its wheels. The much touted Planetary Resources and Deep Space Industries (DSI) DSI -1% were supposed to be the vanguard of extra-terrestrial resource acquisition with major backers including Google’s GOOG -1.4% Larry Page. But both have since been acquired, the former by block chain company ConsenSys and the latter by Bradford Space, neither of which are prioritizing asteroid mining. This is too bad, given that that supply chain crunches here on Earth – coupled with the global green energy transition – are spiking demand for strategic minerals that are increasingly hard to come by on our environmentally stressed planet. And here China currently holds a monopoly on rare earth element (REE) extraction and processing to the tune of 90%. REE’s 17 minerals essential for modern computing and manufacturing technologies for everything from solar panels to semi-conductors. Resource-hungry China also has major involvement in global critical mineral supply chains, which include cobalt, tungsten, and lithium. As I’ve written before, the Chinese hold of upstream and downstream markets is staggering. Possessing 30% of the global mined ore, 80% of the global processing facilities, and an ever increasing list of high dollar investments around the world, China boasts over $36 billion invested in mining projects in Africa alone. Beijing’s space program clearly indicates that the Chinese would also like to tighten their grip on space-based resources as well. According to research, it is estimated that a small asteroid roughly 200 meters in length that is rich in platinum could be worth up to $300 million. Merrill Lynch predicts the space industry — including extraterrestrial mining industry – to value $2.7 trillion in the next three decades. REEs are fairly common in the solar system, but to what degree remains unknown. The most sought after are M-type asteroids which are mostly metal and hundreds of cubic meters. While these are not the most common, the 27,115 Near Earth asteroids are bound to contain a few. This – and military applications – are no doubt a driving factor of China’s ever increasing space ambitions.

**Warming causes extinction**

**Schultz 16** (Robert Schultz [Retired Professor and Chair of Computer Information Systems at Woodbury University] “Modern Technology and Human Extinction,” <http://proceedings.informingscience.org/InSITE2016/InSITE16p131-145Schultz2307.pdf>) RW

There is consensus that there is a relatively short window to reduce carbon emissions before drastic effects occur. Recent credible projections of the result of lack of rapid drastic action is an average temperature increase of about 10o F by 2050. This change alone will be incredibly disruptive to all life, but will also cause great weather and climate change. For comparison purposes, a 10 degree (Fahrenheit) decrease was enough to cause an ice layer 4000 feet thick over Wisconsin (Co2gether, 2012). Recently relevant information has surfaced about a massive previous extinction. This is the Permian extinction, which happened 252 million years ago, during which 95% of all species on earth, both terrestrial and aquatic, vanished. The ocean temperature after almost all life had disappeared was 15 degrees (Fahrenheit) above current ocean temperatures. Recent information about the Permian extinction indicates it was caused by a rapid increase in land and ocean temperatures, caused by the sudden appearance of stupendous amounts of carbon in the form of greenhouse gases (Kolbert, 2014, pp. 102-144). The origin of the carbon in these enormous quantities is not yet known, but one possibility is the sudden release of methane gases stored in permafrost. This is also a possibility in our current situation. If so, extinction would be a natural side effect of human processes. There is also a real but smaller possibility of what is called “runaway greenhouse,” in which the earth’s temperature becomes like Venus’ surface temperature of 800o The threat of extinction here is not entirely sudden. The threat is, if anything, worse. Changes in the atmosphere--mainly increases in the concentration of greenhouse gases in the atmosphere-- can start processes that can’t be reversed but which take long periods of time to manifest. “Runaway greenhouse” may be the worst. Once again, suggestions of technological solutions to this situation should be treated with some skepticism. These proposals are often made by technophiles ignoring all the evidence that technology is very much subject to unanticipated side effects and unanticipated failures. What has happened concerning the depletion of the ozone layer should be a clear warning against the facile uses of technology through geoengineering to alter the makeup of the entire planet and its atmosphere. The complicating factor in assessing extinction likelihood from climate change is corporations, especially American fossil fuel corporations such as Exxon-Mobil and Shell. Through their contributions, they have been able to delay legislation ameliorating global warming and climate change. As mentioned before, recently released papers from Exxon-Mobil show that the corporation did accept the scientific findings about global warming and climate change. But they concluded that maintaining their profits was more important than acting to ameliorate climate change. Since it is not a matter of getting corporations to appreciate scientific facts, the chances of extinction from climate change are good. To ameliorate climate change, it is important to leave a high percentage of fossil fuel reserves in the ground. But this is exactly what a profit-seeking fossil fuel corporation cannot do. One can still hope that because fossil fuel corporations are made up of individuals, increasingly bad consequences of global warming and climate change will change their minds about profits. But because of the lag in effects, this mind change will probably be too late. So I conclude we will probably see something like the effects of the Permian extinction perhaps some time around 2050. (The Permian extinction was 95% extinction of all species.) This assumes the release of methane from the arctic will take place around then.

**Chinese Economic Decline spills-over globally.**

**Rogoff 18** Kennetth Rogoff 11-7-2018 "The Global Impact of a Chinese Recession"<https://www.project-syndicate.org/commentary/global-impact-of-chinese-recession-by-kenneth-rogoff-2018-11?barrier=accesspaylog> (Professor of Economics and Public Policy at Harvard University and recipient of the 2011 Deutsche Bank Prize in Financial Economics, was the chief economist of the International Monetary Fund from 2001 to 2003.)//Elmer

Most economic forecasts suggest that a recession in China will hurt everyone, but that the pain would be more regionally confined than would be the case for a deep recession in the United States. Unfortunately, that may be wishful thinking. CAMBRIDGE – When China finally has its inevitable growth recession – which will almost surely be amplified by a financial crisis, given the economy’s massive leverage – how will the rest of world be affected? With US President Donald Trump’s trade war hitting China just as growth was already slowing, this is no idle question. Typical estimates, for example those embodied in the International Monetary Fund’s assessments of country risk, suggest that an economic slowdown in China will hurt everyone. But the acute pain, according to the IMF, will be more regionally concentrated and confined than would be the case for a deep recession in the United States. Unfortunately, this might be wishful thinking. First, the effect on international capital markets could be vastly greater than Chinese capital market linkages would suggest. However jittery global investors may be about prospects for profit growth, a hit to Chinese growth would make things a lot worse. Although it is true that the US is still by far the biggest importer of final consumption goods (a large share of Chinese manufacturing imports are intermediate goods that end up being embodied in exports to the US and Europe), foreign firms nonetheless still enjoy huge profits on sales in China. Investors today are also concerned about rising interest rates, which not only put a damper on consumption and investment, but also reduce the market value of companies (particularly tech firms) whose valuations depend heavily on profit growth far in the future. A Chinese recession could again make the situation worse. I appreciate the usual Keynesian thinking that if any economy anywhere slows, this lowers world aggregate demand, and therefore puts downward pressure on global interest rates. But modern thinking is more nuanced. High Asian saving rates over the past two decades have been a significant factor in the low overall level of real (inflation-adjusted) interest rates in both the United States and Europe, thanks to the fact that underdeveloped Asian capital markets simply cannot constructively absorb the surplus savings. Former US Federal Reserve chair Ben Bernanke famously characterized this much-studied phenomenon as a key component of the “global savings glut.” Thus, instead of leading to lower global real interest rates, a Chinese slowdown that spreads across Asia could paradoxically lead to higher interest rates elsewhere – especially if a second Asian financial crisis leads to a sharp draw-down of central bank reserves. Thus, for global capital markets, a Chinese recession could easily prove to be a double whammy. As bad as a slowdown in exports to China would be for many countries, a significant rise in global interest rates would be much worse. Eurozone leaders, particularly German Chancellor Angela Merkel, get less credit than they deserve for holding together the politically and economically fragile single currency against steep economic and political odds. But their task would have been well-nigh impossible but for the ultra-low global interest rates that have allowed politically paralyzed eurozone officials to skirt needed debt write-downs and restructurings in the periphery. When the advanced countries had their financial crisis a decade ago, emerging markets recovered relatively quickly, thanks to low debt levels and strong commodity prices. Today, however, debt levels have risen significantly, and a sharp rise in global real interest rates would almost certainly extend today’s brewing crises beyond the handful of countries (including Argentina and Turkey) that have already been hit. Nor is the US immune. For the moment, the US can finance its trillion-dollar deficits at relatively low cost. But the relatively short-term duration of its borrowing – under four years if one integrates the Treasury and Federal Reserve balance sheets – means that a rise in interest rates would soon cause debt service to crowd out needed expenditures in other areas. At the same time, Trump’s trade war also threatens to undermine the US economy’s dynamism. Its somewhat arbitrary and politically driven nature makes it at least as harmful to US growth as the regulations Trump has so proudly eliminated. Those who assumed that Trump’s stance on trade was mostly campaign bluster should be worried. The good news is that trade negotiations often seem intractable until the eleventh hour. The US and China could reach an agreement before Trump’s punitive tariffs go into effect on January 1. Such an agreement, one hopes, would reflect a maturing of China’s attitude toward intellectual property rights – akin to what occurred in the US during the late nineteenth century. (In America’s high growth years, US entrepreneurs often thought little of pilfering patented inventions from the United Kingdom.) A recession in China, amplified by a financial crisis, would constitute the third leg of the debt supercycle that began in the US in 2008 and moved to Europe in 2010. Up to this point, the Chinese authorities have done a remarkable job in postponing the inevitable slowdown. Unfortunately, when the downturn arrives, the world is likely to discover that China’s economy matters even more than most people thought.

**Decline cascades – nuclear war**

Dr. Mathew **Maavak 21**, PhD in Risk Foresight from the Universiti Teknologi Malaysia, External Researcher (PLATBIDAFO) at the Kazimieras Simonavicius University, Expert and Regular Commentator on Risk-Related Geostrategic Issues at the Russian International Affairs Council, “Horizon 2030: Will Emerging Risks Unravel Our Global Systems?”, Salus Journal – The Australian Journal for Law Enforcement, Security and Intelligence Professionals, Volume 9, Number 1, p. 2-8

Various scholars and institutions regard global social instability as the greatest threat facing this decade. The catalyst has been postulated to be a Second Great Depression which, in turn, will have profound implications for global security and national integrity. This paper, written from a broad systems perspective, illustrates how emerging risks are getting more complex and intertwined; blurring boundaries between the economic, environmental, geopolitical, societal and technological taxonomy used by the World Economic Forum for its annual global risk forecasts. Tight couplings in our global systems have also enabled risks accrued in one area to snowball into a full-blown crisis elsewhere. The COVID-19 pandemic and its socioeconomic fallouts exemplify this systemic chain-reaction. Onceinexorable forces of globalization are rupturing as the current global system can no longer be sustained due to poor governance and runaway wealth fractionation. The coronavirus pandemic is also enabling Big Tech to expropriate the levers of governments and mass communications worldwide. This paper concludes by highlighting how this development poses a dilemma for security professionals. Key Words: Global Systems, Emergence, VUCA, COVID-9, Social Instability, Big Tech, Great Reset INTRODUCTION The new decade is witnessing rising volatility across global systems. Pick any random “system” today and chart out its trajectory: Are our education systems becoming more robust and affordable? What about food security? Are our healthcare systems improving? Are our pension systems sound? Wherever one looks, there are dark clouds gathering on a global horizon marked by volatility, uncertainty, complexity and ambiguity (VUCA). But what exactly is a global system? Our planet itself is an autonomous and selfsustaining mega-system, marked by periodic cycles and elemental vagaries. Human activities within however are not system isolates as our banking, utility, farming, healthcare and retail sectors etc. are increasingly entwined. Risks accrued in one system may cascade into an unforeseen crisis within and/or without (Choo, Smith & McCusker, 2007). Scholars call this phenomenon “emergence”; one where the behaviour of intersecting systems is determined by complex and largely invisible interactions at the substratum (Goldstein, 1999; Holland, 1998). The ongoing COVID-19 pandemic is a case in point. While experts remain divided over the source and morphology of the virus, the contagion has ramified into a global health crisis and supply chain nightmare. It is also tilting the geopolitical balance. China is the largest exporter of intermediate products, and had generated nearly 20% of global imports in 2015 alone (Cousin, 2020). The pharmaceutical sector is particularly vulnerable. Nearly “85% of medicines in the U.S. strategic national stockpile” sources components from China (Owens, 2020). An initial run on respiratory masks has now been eclipsed by rowdy queues at supermarkets and the bankruptcy of small businesses. The entire global population – save for major pockets such as Sweden, Belarus, Taiwan and Japan – have been subjected to cyclical lockdowns and quarantines. Never before in history have humans faced such a systemic, borderless calamity. COVID-19 represents a classic emergent crisis that necessitates real-time response and adaptivity in a real-time world, particularly since the global Just-in-Time (JIT) production and delivery system serves as both an enabler and vector for transboundary risks. From a systems thinking perspective, emerging risk management should therefore address a whole spectrum of activity across the economic, environmental, geopolitical, societal and technological (EEGST) taxonomy. Every emerging threat can be slotted into this taxonomy – a reason why it is used by the World Economic Forum (WEF) for its annual global risk exercises (Maavak, 2019a). As traditional forces of globalization unravel, security professionals should take cognizance of emerging threats through a systems thinking approach. METHODOLOGY An EEGST sectional breakdown was adopted to illustrate a sampling of extreme risks facing the world for the 2020-2030 decade. The transcendental quality of emerging risks, as outlined on Figure 1, below, was primarily informed by the following pillars of systems thinking (Rickards, 2020): • Diminishing diversity (or increasing homogeneity) of actors in the global system (Boli & Thomas, 1997; Meyer, 2000; Young et al, 2006); • Interconnections in the global system (Homer-Dixon et al, 2015; Lee & Preston, 2012); • Interactions of actors, events and components in the global system (Buldyrev et al, 2010; Bashan et al, 2013; Homer-Dixon et al, 2015); and • Adaptive qualities in particular systems (Bodin & Norberg, 2005; Scheffer et al, 2012) Since scholastic material on this topic remains somewhat inchoate, this paper buttresses many of its contentions through secondary (i.e. news/institutional) sources. ECONOMY According to Professor Stanislaw Drozdz (2018) of the Polish Academy of Sciences, “a global financial crash of a previously unprecedented scale is highly probable” by the mid- 2020s. This will lead to a trickle-down meltdown, impacting all areas of human activity. The economist John Mauldin (2018) similarly warns that the “2020s might be the worst decade in US history” and may lead to a Second Great Depression. Other forecasts are equally alarming. According to the International Institute of Finance, global debt may have surpassed $255 trillion by 2020 (IIF, 2019). Yet another study revealed that global debts and liabilities amounted to a staggering $2.5 quadrillion (Ausman, 2018). The reader should note that these figures were tabulated before the COVID-19 outbreak. The IMF singles out widening income inequality as the trigger for the next Great Depression (Georgieva, 2020). The wealthiest 1% now own more than twice as much wealth as 6.9 billion people (Coffey et al, 2020) and this chasm is widening with each passing month. COVID-19 had, in fact, boosted global billionaire wealth to an unprecedented $10.2 trillion by July 2020 (UBS-PWC, 2020). Global GDP, worth $88 trillion in 2019, may have contracted by 5.2% in 2020 (World Bank, 2020). As the Greek historian Plutarch warned in the 1st century AD: “An imbalance between rich and poor is the oldest and most fatal ailment of all republics” (Mauldin, 2014). The stability of a society, as Aristotle argued even earlier, depends on a robust middle element or middle class. At the rate the global middle class is facing catastrophic debt and unemployment levels, widespread social disaffection may morph into outright anarchy (Maavak, 2012; DCDC, 2007). Economic stressors, in transcendent VUCA fashion, may also induce radical geopolitical realignments. Bullions now carry more weight than NATO’s security guarantees in Eastern Europe. After Poland repatriated 100 tons of gold from the Bank of England in 2019, Slovakia, Serbia and Hungary quickly followed suit. According to former Slovak Premier Robert Fico, this erosion in regional trust was based on historical precedents – in particular the 1938 Munich Agreement which ceded Czechoslovakia’s Sudetenland to Nazi Germany. As Fico reiterated (Dudik & Tomek, 2019): “You can hardly trust even the closest allies after the Munich Agreement… I guarantee that if something happens, we won’t see a single gram of this (offshore-held) gold. Let’s do it (repatriation) as quickly as possible.” (Parenthesis added by author). President Aleksandar Vucic of Serbia (a non-NATO nation) justified his central bank’s gold-repatriation program by hinting at economic headwinds ahead: “We see in which direction the crisis in the world is moving” (Dudik & Tomek, 2019). Indeed, with two global Titanics – the United States and China – set on a collision course with a quadrillions-denominated iceberg in the middle, and a viral outbreak on its tip, the seismic ripples will be felt far, wide and for a considerable period. A reality check is nonetheless needed here: Can additional bullions realistically circumvallate the economies of 80 million plus peoples in these Eastern European nations, worth a collective $1.8 trillion by purchasing power parity? Gold however is a potent psychological symbol as it represents national sovereignty and economic reassurance in a potentially hyperinflationary world. The portents are clear: The current global economic system will be weakened by rising nationalism and autarkic demands. Much uncertainty remains ahead. Mauldin (2018) proposes the introduction of Old Testament-style debt jubilees to facilitate gradual national recoveries. The World Economic Forum, on the other hand, has long proposed a “Great Reset” by 2030; a socialist utopia where “you’ll own nothing and you’ll be happy” (WEF, 2016). In the final analysis, COVID-19 is not the root cause of the current global economic turmoil; it is merely an accelerant to a burning house of cards that was left smouldering since the 2008 Great Recession (Maavak, 2020a). We also see how the four main pillars of systems thinking (diversity, interconnectivity, interactivity and “adaptivity”) form the mise en scene in a VUCA decade. ENVIRONMENTAL What happens to the environment when our economies implode? Think of a debt-laden workforce at sensitive nuclear and chemical plants, along with a concomitant surge in industrial accidents? Economic stressors, workforce demoralization and rampant profiteering – rather than manmade climate change – arguably pose the biggest threats to the environment. In a WEF report, Buehler et al (2017) made the following pre-COVID-19 observation: The ILO estimates that the annual cost to the global economy from accidents and work-related diseases alone is a staggering $3 trillion. Moreover, a recent report suggests the world’s 3.2 billion workers are increasingly unwell, with the vast majority facing significant economic insecurity: 77% work in part-time, temporary, “vulnerable” or unpaid jobs. Shouldn’t this phenomenon be better categorized as a societal or economic risk rather than an environmental one? In line with the systems thinking approach, however, global risks can no longer be boxed into a taxonomical silo. Frazzled workforces may precipitate another Bhopal (1984), Chernobyl (1986), Deepwater Horizon (2010) or Flint water crisis (2014). These disasters were notably not the result of manmade climate change. Neither was the Fukushima nuclear disaster (2011) nor the Indian Ocean tsunami (2004). Indeed, the combustion of a long-overlooked cargo of 2,750 tonnes of ammonium nitrate had nearly levelled the city of Beirut, Lebanon, on Aug 4 2020. The explosion left 204 dead; 7,500 injured; US$15 billion in property damages; and an estimated 300,000 people homeless (Urbina, 2020). The environmental costs have yet to be adequately tabulated. Environmental disasters are more attributable to Black Swan events, systems breakdowns and corporate greed rather than to mundane human activity. Our JIT world aggravates the cascading potential of risks (Korowicz, 2012). Production and delivery delays, caused by the COVID-19 outbreak, will eventually require industrial overcompensation. This will further stress senior executives, workers, machines and a variety of computerized systems. The trickle-down effects will likely include substandard products, contaminated food and a general lowering in health and safety standards (Maavak, 2019a). Unpaid or demoralized sanitation workers may also resort to indiscriminate waste dumping. Many cities across the United States (and elsewhere in the world) are no longer recycling wastes due to prohibitive costs in the global corona-economy (Liacko, 2021). Even in good times, strict protocols on waste disposals were routinely ignored. While Sweden championed the global climate change narrative, its clothing flagship H&M was busy covering up toxic effluences disgorged by vendors along the Citarum River in Java, Indonesia. As a result, countless children among 14 million Indonesians straddling the “world’s most polluted river” began to suffer from dermatitis, intestinal problems, developmental disorders, renal failure, chronic bronchitis and cancer (DW, 2020). It is also in cauldrons like the Citarum River where pathogens may mutate with emergent ramifications. On an equally alarming note, depressed economic conditions have traditionally provided a waste disposal boon for organized crime elements. Throughout 1980s, the Calabriabased ‘Ndrangheta mafia – in collusion with governments in Europe and North America – began to dump radioactive wastes along the coast of Somalia. Reeling from pollution and revenue loss, Somali fisherman eventually resorted to mass piracy (Knaup, 2008). The coast of Somalia is now a maritime hotspot, and exemplifies an entwined form of economic-environmental-geopolitical-societal emergence. In a VUCA world, indiscriminate waste dumping can unexpectedly morph into a Black Hawk Down incident. The laws of unintended consequences are governed by actors, interconnections, interactions and adaptations in a system under study – as outlined in the methodology section. Environmentally-devastating industrial sabotages – whether by disgruntled workers, industrial competitors, ideological maniacs or terrorist groups – cannot be discounted in a VUCA world. Immiserated societies, in stark defiance of climate change diktats, may resort to dirty coal plants and wood stoves for survival. Interlinked ecosystems, particularly water resources, may be hijacked by nationalist sentiments. The environmental fallouts of critical infrastructure (CI) breakdowns loom like a Sword of Damocles over this decade. GEOPOLITICAL The primary catalyst behind WWII was the Great Depression. Since history often repeats itself, expect familiar bogeymen to reappear in societies roiling with impoverishment and ideological clefts. Anti-Semitism – a societal risk on its own – may reach alarming proportions in the West (Reuters, 2019), possibly forcing Israel to undertake reprisal operations inside allied nations. If that happens, how will affected nations react? Will security resources be reallocated to protect certain minorities (or the Top 1%) while larger segments of society are exposed to restive forces? Balloon effects like these present a classic VUCA problematic. Contemporary geopolitical risks include a possible Iran-Israel war; US-China military confrontation over Taiwan or the South China Sea; North Korean proliferation of nuclear and missile technologies; an India-Pakistan nuclear war; an Iranian closure of the Straits of Hormuz; fundamentalist-driven implosion in the Islamic world; or a nuclear confrontation between NATO and Russia. Fears that the Jan 3 2020 assassination of Iranian Maj. Gen. Qasem Soleimani might lead to WWIII were grossly overblown. From a systems perspective, the killing of Soleimani did not fundamentally change the actor-interconnection-interaction adaptivity equation in the Middle East. Soleimani was simply a cog who got replaced.

**Private companies key**

**1AC Patel 21**, Neel. (I’m the space reporter for MIT Technology Review, and I also write The Airlock newsletter, your number one source for everything happening off this planet. Before joining, I worked as a freelance science and technology journalist, contributing stories to Popular Science, The Daily Beast, Slate, Wired, the Verge, and elsewhere. Prior to that, I was an associate editor for Inverse, where I grew and led the website’s space coverage.) “China's Surging Private Space Industry Is out to Challenge the US.” MIT Technology Review, MIT Technology Review, 28 Jan. 2021, https://www.technologyreview.com/2021/01/21/1016513/china-private-commercial-space-industry-dominance/. //JQ

“The state is really great at large, ambitious projects like going to the moon or developing a large reconnaissance satellite,” says Lincoln Hines, a Cornell University researcher who focuses on Chinese foreign policy. “But it’s not responsive to meeting market needs”—one big way to encourage rapid technological growth and innovation. “I think the government thinks its commercial space sector can be complementary to the state,” he says.

## 5

**CP Text: The People’s Republic of China**

* **Ending all private appropriation of outer space except for Space-Based Solar Power.**
* **Demilitarizing its civilian, military, and commercial space industry.**
* **Dismantling the People’s Liberation Army**

**Is just**

**It solves the aff–SBSP uniquely doesn’t cause heg and their debris link is for IMAGERY satellites–read the card**

**SBSP is appropriation**

**Matignon 19** Louis De Gouyon Matignon 4-15-2019 "THE LEGAL STATUS OF CHINESE SPACE-BASED SOLAR POWER STATIONS"<https://www.spacelegalissues.com/the-legal-status-of-chinese-space-based-solar-power-stations/> (PhD in space law)//Elmer

Near-Earth space is formed of different orbital layers. Terrestrial orbits are limited common resources and inherently repugnant to any appropriation: they are not property in the sense of law. Orbits and frequencies are res communis (a Latin term derived from Roman law that preceded today’s concepts of the commons and common heritage of mankind; it has relevance in international law and common law). It’s the first-come, first-served principle that applies to orbital positioning, which without any formal acquisition of sovereignty, records a promptness behaviour to which it grants an exclusive grabbing effect of the space concerned. Geostationary orbit is a limited but permanent resource: this de facto appropriation by the first-comers – the developed countries – of the orbit and the frequencies is protected by Space Law and the International Telecommunications Law. The challenge by developing countries of grabbing these resources is therefore unjustified on the basis of existing law. Denying new entrants geostationary-access or making access more difficult does not constitute appropriation; it simply results from the traditional system of distribution of access rights. The practice of developed States is based on free access and priority given to the first satellites placed in geostationary orbit. The geostationary orbit is part of outer space and, as such, the customary principle of non-appropriation and the 1967 Space Treaty apply to it. The equatorial countries have claimed sovereignty, then preferential rights over this space. These claims are contrary to the 1967 Treaty and customary law. However, they testify to the concern of the equatorial countries, shared by developing countries, in the face of saturation and seizure of geostationary positions by developed countries. The regime of res communis of outer space in Space Law (free access and non-appropriation) does not meet the demand of the developing countries that their possibilities of future access to the geostationary orbit and associated radio frequencies are guaranteed. New rules appear necessary and have been envisaged to ensure the access of all States to these positions and frequencies. As a conclusion, we may say that those Chinese space-based solar power stations would be considered space objects, the solar energy they would be exploiting would be free of use, and the orbital position they would occupy would have to obey the first-come, first-served principle that applies to orbital positioning. Concerning Article I of the 1967 Outer Space Treaty, which imposes that “The exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind”, “the benefit and in the interests of all countries” doesn’t prohibit private exploitation, as it is the case with satellite navigation, satellite television and commercial satellite imagery for example.

**Chinese Private Companies are pursuing Space-Based Solar Power.**

**McKirdy and Fang 19** Euan McKirdy and Nanlin Fang 3-3-2019 "Space power plant and a mission to Mars: China’s new plans to conquer the final frontier"<https://www.cnn.com/2019/03/03/asia/china-plans-solar-power-in-space-intl/index.html> (Journalists at CNN)//Elmer

China Aerospace Science and Technology Corporation plans to launch small solar satellites that can harness energy in space as soon as 2021. Then it will test larger plants capable of advanced functions, such as beaming energy back to Earth via lasers. A receiving station will be built in Xian, around 500 miles northeast of the Chinese city of Chongqing. The city is a regional space hub where a facility to develop the solar power farms has been founded. By 2050, the company plans that a full-sized space-based solar plant would be ready for commercial use, the Chinese media report said.

**China’s key – they’ve been working on this for decades longer than anyone else.**

**Rosenbaum and Russo 19** Eric Rosenbam and Donovan Russo 3-17-2019 "China plans a solar power play in space that NASA abandoned decades ago"<https://www.cnbc.com/2019/03/15/china-plans-a-solar-power-play-in-space-that-nasa-abandoned-long-ago.html> (Senior Editors at CNBC)//Elmer

The space race heats up China’s ambitions in space rival that of the United States. Its two main objectives were originally human spaceflight (accomplished in 2003) and a permanent Chinese space station, which is coming closer to reality — it announced in early March that a manned space station similar to ISS is now on schedule for 2022, earlier than expected. As the two geopolitical foes increasingly turn their attention to a technological and military race beyond the earth’s atmosphere, space-based solar power projects are an overlooked, often criticized idea. But with China recently announcing that within the next decade it expects to finish the high voltage power transmission and wireless energy tests that would be needed for a space-based solar power system, the concept is likely to get renewed attention. All of the plans in the space race have potential implications for a new military build-out in space of increasing relevance to the world’s powers. The Trump administration formalized plans in February for a branch of U.S. military known as the Space Force. The solar power station plans being contemplated by China include the launch of small- to medium-sized solar power projects in the stratosphere to generate electricity between 2021 and 2025, followed by a space-based solar power station that can generate at least a megawatt of electricity in 2030, and a commercial-scale solar power plant in space by 2050. “The dramatically stated interest on the part of the Chinese will do a lot to engender interest,” Mankins said. “Around a decade ago the Chinese started working seriously on this, and about five years ago they started coming to international meetings. Before that, they were in the dark. Now they are coming out of the shadows and talking much more openly about this.” He added, “There is absolutely progress from the Chinese at this point. This is not posturing; this is a real plan from serious organizations with revered scientists in China. They have a perfectly good technical plan, and they can do it by 2030,” Mankins said, describing a small-scale solar power project producing megawatts of electricity, but not a commercial-scale project able to produce gigawatts needed to compete with utilities. A space-based solar power station would capture the sun’s energy that never makes it to the planet and use laser beams to send the energy back to Earth to meet energy demand needs. China said in a recent announcement about the project that a big advantage of space-based solar power is its ability to offer energy supply on a constant basis and with greater intensity than terrestrial solar farms. One of the issues with renewable-energy projects like solar and wind power plants are their intermittency — that refers to the fact that the sun isn’t shining and the wind is not blowing 24-hours a day, limiting the periods of time during which these projects can be a source of power generation. Space-based solar would not only offer a solution to intermittency, but also delivery. Today, utility power generation is regional, if not local, but electricity generated in space and near the equator could be beamed almost anywhere across the globe, except for the poles. “You could beam electricity from Canada to the Tierra del Fuego at the southern tip of South America from a satellite at equator,” Mankins said. Roughly one billion people live in the Americas. Hopkins said the current Chinese view is, “We want to be major dominant power in space solar power by 2050. This has the potential to really turn the geopolitics in our favor if we are a leader, so let’s look at it seriously.” Meanwhile, the U.S. says, “Are you kidding? Let’s worry about something else.” New life for a ‘losing proposition’ The idea of collecting solar power in space was popularized by science fiction author Isaac Asimov in 1941 in a short story that envisioned space stations that could transport energy from the sun to other planets with microwave beams. In 1968, Asimov’s vision was brought closer to reality when an American aerospace engineer named Peter Glaser wrote the first formal proposal for a solar-based system in space. After experimenting in the 1970s with transporting solar power, Glaser was able to land a contract with NASA to fund research. However, the project suffered with changes in federal administrations and it was not until 1999 that NASA’s solar power exploratory research and technology program jumped back in to study the issue. In the end “NASA didn’t want to do it,” Mankins said. But a lot has changed, especially relating to the cost equation and rapid advances in technologies like robotics. A NASA spokeswoman said it is not currently studying space-based solar power for use on Earth. It is exploring several advanced power and energy technologies to enable long-duration human exploration of the Moon and Mars, such as its Kilopower project, a small, lightweight nuclear fission system that could power future outposts on the Moon to support astronauts, rovers and surface operations. Next year, this project is expected to transition from ground-based testing to an in-space demonstration mission.

**Space-Based Solar Power solves Paris Goals that checks back Warming.**

**Ravisetti 21** Monisha Ravisetti 11-8-2021 "Harvesting energy with space solar panels could power the Earth 24/7"<https://www.cnet.com/news/harvesting-energy-with-space-solar-panels-could-power-the-earth-247/> (Science Writer at CNet)//Elmer

Solar power has been a key part of humanity's clean energy repertoire. We spread masses of sunlight-harvesting panels on solar fields, and many people power their homes by decorating their roofs with the rectangles. But there's a caveat to this wonderful power source. Solar panels can't collect energy at night. To work at peak efficiency, they need as much sunlight as possible. So to maximize these sun catchers' performance, researchers are toying with a plan to send them to a place where the sun never sets: outer space. Theoretically, if a bunch of solar panels were blasted into orbit, they'd soak up the sun even on the foggiest days and the darkest nights, storing an enormous amount of power. If that power were wirelessly beamed down to Earth, our planet could breathe in renewable clean energy, 24/7. That would significantly reduce our carbon footprint. Against the backdrop of a worsening climate crisis, the success of space-based solar power could be more important than ever. The state of the climate is in the spotlight right now as world leaders gather in Glasgow, Scotland, for the COP26 summit, which has been called the "world's best last chance" to get the crisis under control. CNET Science is highlighting a few futuristic strategies intended to aid countries in cutting back on human-generated carbon emissions. Next-generation tech like space-based solar power can't solve our climate problems -- we still need to rapidly decarbonize our energy systems -- but green innovation could help achieve the goals of the Paris Agreement: Limit global warming to well below 2 degrees Celsius (3.6 degrees Fahrenheit) by the end of the century. An unlimited supply of renewable energy from the sun might help us do that.

## 6

**CP Text: The People’s Republic of China**

* **Increasing and encouraging private and civil space cooperation with the United States over appropriation of outer space.**
* **Demilitarizing its space industry.**

**The United States Federal Government repealing the Wolf Amendment**

**Is just**

**The Counterplan competes – it redirects China’s commercial space industry to productive cooperation with the United States. The 1AC said that China’s government is reliant on private action meaning the Plan collapses all of the space sector meaning meaningful cooperation with the US becomes impossible.**

**Cooperation de-escalates the Space Race, allows US to check back against Chinese debris, and spills-over to broader US-China relations**

**Marshall and Hadfield 21** Will Marshall and Chris Hadfield 4-15-2021 "Why the U.S. and China Should Collaborate in Space" https://time.com/5954941/u-s-china-should-collaborate-in-space/ (CEO of Planet which operates 200 satellites that image the entire Earth landmass on a daily basis, and he formerly worked at NASA on lunar missions and space debris. Colonel Chris Hadfield was Commander of the International Space Station and flew both the U.S. Space Shuttle and Russian Soyuz vehicles. Prior to that he served as a fighter/test pilot with the U.S. Air Force, U.S. Navy, and Royal Canadian Air Force.)//Elmer

While much has been made of the tense March 18 exchange between American and Chinese diplomats in Anchorage, Alaska, one area became an unlikely candidate for cooperation: outer space. During a press conference after the meeting, Jake Sullivan, the U.S. National Security Advisor, pointed out that the Perseverance rover that recently landed on Mars “wasn’t just an American project. It had technology from multiple countries from Europe and other parts of the world.” China’s top diplomat, Yang Jiechi, seized the opportunity to say that, “China would welcome it if there is a will to carry out similar cooperation from the United States with us.” Planned or not, Yang’s comment gave voice to one very smart way two geopolitical rivals sharing the same planet could work together despite their growing tensions. Space exploration has long been used to foster deep cooperation, even between adversaries. During the height of the Cold War, the U.S. and U.S.S.R. jointly undertook the 1975 Apollo-Soyuz mission, which both served as a means of political rapprochement and opened the possibility of cooperation in other areas. Those links endured. After the Soviet Union collapsed, Russia was invited to partner in the construction of the International Space Station (ISS). It was a multi-layered act that went beyond simple generosity; the more work former Soviet scientists had to do designing and building the ISS, the less likely they’d be to sell their expertise to other countries. Today, Sino-American space cooperation is similarly desirable. It could improve ties as it did for the U.S. and Russia, de-escalate an emerging Sino-Russian axis in space, and serve as a bargaining chip to help sustain other areas of cooperation. While China and the U.S. seem to clash on virtually every issue, space, by its nature, is different. Orbit isn’t a high-ground that one can seize. Instead, space works like a commons, where for any one state or company to be able to operate safely, all have to act responsibly. We need peaceful cooperation to enjoy its benefits. One reason not to cooperate in space with a geopolitical rival is technology transfer. There are legitimate concerns that collaboration could lead to technology sharing that unfairly advances China. Indeed, in 2011, the U.S. Congress included a passage, known as the Wolf Amendment, in an appropriations bill, forbidding NASA from cooperating in any way with China for fear of technological theft or espionage. The reasoning was straightforward: The U.S. enjoys significant leadership in some space technologies, including satellites, and much of that technology is proprietary, shared with no other countries. In the area of human spaceflight, however, things are different. The U.S. has extensively shared the entire ISS program for decades with the fourteen partner nations, including Russia. If there ever were secrets there, they are secrets no more. In fact, Russia and the U.S. as partners saved the day between 2011, after the space shuttles were grounded, and 2021, when the U.S. regained the ability to transport astronauts to space. During that decade, Russia’s Soyuz spacecraft served as the only way to get crews to and from the station. At the same time, uncrewed American resupply ships similarly helped keep the ISS viable when the Russian Soyuz fleet was grounded following mishaps. China has developed and proven a very successful human spaceflight program; adding their launch and spacecraft capability to the partnership would strengthen the overall mission. In order for China and the U.S. to work together in space, some things would have to change. First, the Wolf Amendment would have to be repealed—nothing meaningful can happen until that goes. Cooperation might then begin in lower profile areas such as sharing remote sensing data and reducing orbital debris. The United States and Europe have led the way with Landsat and Copernicus satellite programs providing free images of Earth that can be used to understand changes to our environment. The Chinese have yet to create a similar data share program for their Earth imaging systems—but they should. The United States and China could also discuss joint efforts to reduce the belt of space junk that circles the planet and threatens everyone’s satellites. Most importantly, cooperation could extend to joint human spaceflight missions; the US could invite China to conduct a crewed visit to the ISS, or to join in the human exploration of the Moon, targeted to happen in this decade and which both nations are now working on separately; the goal would be a joint Moon base rather than a space race. For decades, space travel has provided an opportunity for humans to see our world differently. Apollo 11 astronaut Michael Collins said, “The thing that really surprised me was that the Earth projected an air of fragility.” Chinese astronauts, since Yang Liwei’s first flight 18 years ago, have surely had a similar experience gazing down at our planet. Cooperating in space can give the United States and China the opportunity to change their thinking together. Bold American leadership can be a leveraged move in reducing tensions, as it was in keeping the Cold War cold—a win for all nations and our shared, blue-green planet.

**That solves every impact**

**Paulson 15**, H. M. "Dealing with China: An insider unmasks the new economic superpower. Hachette Book Group." Inc.: All Books (2015). (Former US Treasury Secretary)//Elmer

One crisp day in early March 2014, I found myself sitting in a sleek conference room high above Boston Harbor taking questions from a group of financial executives. These men and women worked for a range of institutions that managed well over $3 trillion of financial assets, including the personal savings and pension funds of millions of Americans. They were keen to learn as much as they could about the Chinese economy. Was it about to hit the wall? Was I worried about a real estate bubble? How fragile was the country's financial system? Was the government serious about dealing with China's environmental problems? One fellow had a more personal question for me. "Hank," he said. "You're a real patriot. Why are you helping China?" The question pulled me up short. Three years before, when I first 'c began planning to write this book, I don't think I would have been asked anything like that at a meeting of sophisticated financiers. They would J have accepted that helping China to reform its economy, open its markets, protect its environment, and improve the quality of life of its people-all things I have been working on-would bring economic and strategic benefits to the U.S. as well. But that viewpoint has been changing as China has emerged as our biggest, most formidable economic competitor since the end of World War II and has started flexing its newfound military muscle in unsettling ways. As a result, many Americans, from all walks of life, have begun to view China with growing apprehension and resentment. Some would now prefer confrontation to cooperation. I understand these sentiments. Partly they are a function of China's choices and actions, and partly they are born of frustration with the recent economic troubles of the United States. I've spent a fair number of pages explaining how China must carry out meaningful economic reforms if it expects to continue its amazing success story. These arguments make sense for China and its people. But why should an American care? Why should we root for China to succeed? Shouldn't we instead be hoping that this ungainly giant stumbles, if only to slow down its daunting economic and military growth? In coming years China's weight and influence in the world, already substantial, is likely to begin to rival our own. Why take the chance now of helping the Chinese deal with so many of their problems and challenges? Why aid a competitor? The answer is simple: we should do so because it is more than ever in America's own self-interest that we do. To begin with, just about every major global challenge we face-from economic and environmental issues to food and energy security to nuclear proliferation and terrorism-will be easier to solve if the world's two most important economic powers can act in complementary ways. But these challenges will be almost impossible to address if the U.S. and China work at cross-purposes. If we want to benefit from an expanding global economy, we need the most dynamic growth engines, like China's, to thrive. If we want to prevent the worst climate change outcomes and to preserve our fragile global ecosystems, we need China to solve its massive environmental problems at home and adopt better practices abroad. If we want to keep diseases from our shores, we need Chinaand other countries to use the very best methods to prevent and halt epidemics. If we want to stem the spread of dangerous weapons to those who might harm our citizens, we need nations, including China, to work together to end illicit trafficking. If we want all these things to happen, we must be proactive, frank, and at times forceful with the Chinese while seeking ways to cooperate, to develop complementary policies, and to work to more fully integrate them into a rules-based global order. If we attempt to exclude, ignore, or weaken China, we limit our ability to influence choices made by its leaders and risk turning the worst-case scenarios of China skeptics into a self-fulfilling reality.