## 1

#### Ethics must begin a priori and the meta-ethic is bindingness.

#### [1] Uncertainty – our experiences are inaccessible to others which allows people to say they don’t experience the same, however a priori principles are universally applied to all agents.

#### [2] Bindingness – I can keep asking “why should I follow this” which results in skep since obligations are predicated on ignorantly accepting rules. Only reason solves since asking “why reason?” requires reason which is self-justified.

#### That means we must universally will maxims— any non-universalizable norm justifies someone’s ability to impede on your ends.

#### Thus, the standard is consistency with the categorical imperative.

#### Prefer –

#### [1] All other frameworks collapse—non-Kantian theories source obligations in extrinsically good objects, but that presupposes the goodness of the rational will.

#### [2] Theory – Frameworks are topicality interps of the word ought so they should be theoretically justified. Prefer on resource disparities—a focus on evidence and statistics privileges debaters with the most preround prep which excludes lone-wolfs who lack huge evidence files. A debate under my framework can easily be won without any prep since huge evidence files aren’t required.

#### [3] No 1AR Framework: It moots 7 minutes of the 1NC and exacerbates the AFF infinite prep time so I should be able to compensate by choosing. They justify substantive skews by shifting frame of offense.

#### Negate:

#### [1] A model of freedom mandates a market-oriented approach to space—that negates

Broker 20 [(Tyler, work has been published in the Gonzaga Law Review, the Albany Law Review and the University of Memphis Law Review.) “Space Law Can Only Be Libertarian Minded,” Above the Law, 1-14-20, <https://abovethelaw.com/2020/01/space-law-can-only-be-libertarian-minded/>] TDI

The impact on human daily life from a transition to the virtually unlimited resource reality of space cannot be overstated. However, when it comes to the law, a minimalist, dare I say libertarian, approach appears as the only applicable system. In the words of NASA, “2020 promises to be a big year for space exploration.” Yet, as Rand Simberg points out in Reason magazine, it is actually private American investment that is currently moving space exploration to “a pace unseen since the 1960s.” According to Simberg, due to this increase in private investment “We are now on the verge of getting affordable private access to orbit for large masses of payload and people.” The impact of that type of affordable travel into space might sound sensational to some, but in reality the benefits that space can offer are far greater than any benefit currently attributed to any major policy proposal being discussed at the national level. The sheer amount of resources available within our current reach/capabilities simply speaks for itself. However, although those new realities will, as Simberg says, “bring to the fore a lot of ideological issues that up to now were just theoretical,” I believe it will also eliminate many economic and legal distinctions we currently utilize today. For example, the sheer number of resources we can already obtain in space means that in the rapidly near future, the distinction between a nonpublic good or a public good will be rendered meaningless. In other words, because the resources available within our solar system exist in such quantities, all goods will become nonrivalrous in their consumption and nonexcludable in their distribution. This would mean government engagement in the public provision of a nonpublic good, even at the trivial level, or what Kevin Williamson defines as socialism, is rendered meaningless or impossible. In fact, in space, I fail to see how any government could even try to legally compel collectivism in the way Simberg fears. Similar to many economic distinctions, however, it appears that many laws, both the good and the bad, will also be rendered meaningless as soon as we begin to utilize the resources within our solar system. For example, if every human being is given access to the resources that allows them to replicate anything anyone else has, or replace anything “taken” from them instantly, what would be the point of theft laws? If you had virtually infinite space in which you can build what we would now call luxurious livable quarters, all without exploiting human labor or fragile Earth ecosystems when you do it, what sense would most property, employment, or commercial law make? Again, this is not a pipe dream, no matter how much our population grows for the next several millennia, the amount of resources within our solar system can sustain such an existence for every human being. Rather than panicking about the future, we should try embracing it, or at least meaningfully preparing for it. Currently, the Outer Space Treaty, or as some call it “the Magna Carta of Space,” is silent on the issue of whether private individuals or corporate entities can own territory in space. Regardless of whether governments allow it, however, private citizens are currently obtaining the ability to travel there, and if human history is any indicator, private homesteading will follow, flag or no flag. We Americans know this is how a Wild West starts, where most regulation becomes the impractical pipe dream. But again, this would be a Wild West where the exploitation of human labor and fragile Earth ecosystem makes no economic sense, where every single human can be granted access to resources that even the wealthiest among us now would envy, and where innovation and imagination become the only things we would recognize as currency. Only a libertarian-type system, that guarantees basic individual rights to life, liberty, and the pursuit of happiness could be valued and therefore human fidelity to a set of laws made possible, in such an existence.

#### [2] Banning private space appropriation inhibits the sale and use of spacecraft and fuel- that’s a form of restricting the free economic choices of individuals

**Richman 12**, Sheldon. “The free market doesn’t need government regulation.” Reason, August 5, 2012. // AHS RG

Order grows from market forces. But where do **market forces** come from? They **are the result of human action. Individuals select ends and act to achieve them by adopting suitable means.** Since means are scarce and ends are abundant, **individuals economize in order to accomplish more rather than less.** And they always seek to exchange lower values for higher values (as they see them) and never the other way around. In a world of scarcity, tradeoffs are unavoidable, so one aims to trade up rather than down. (One’s trading partner does the same.) **The result of this**, along with other **features of human action**, and the world at large **is what we call market forces. But really, it is just men and women acting rationally in the world.**

#### [3] Acquisition of property can never be unjust – to create rights violations, there must already be an owner of the property being violated, but that presupposes its appropriation by another entity.

Feser 1, (Edward Feser, 1-1-2005, accessed on 12-15-2021, Cambridge University Press, "THERE IS NO SUCH THING AS AN UNJUST INITIAL ACQUISITION | Social Philosophy and Policy | Cambridge Core", Edward C. Feser is an American philosopher. He is an Associate Professor of Philosophy at Pasadena City College in Pasadena, California. [https://www.cambridge.org/core/journals/social-philosophy-and-policy/article/abs/there-is-no-such-thing-as-an-unjust-initial-acquisition/5C744D6D5C525E711EC75F75BF7109D1)[brackets](https://www.cambridge.org/core/journals/social-philosophy-and-policy/article/abs/there-is-no-such-thing-as-an-unjust-initial-acquisition/5C744D6D5C525E711EC75F75BF7109D1)%5bbrackets) for gen lang]//phs st

There is a serious difficulty with this criticism of Nozick, however. It is just this: There is no such thing as an unjust initial acquisition of resources; therefore, there is no case to be made for redistributive taxation on the basis of alleged injustices in initial acquisition. This is, to be sure, a bold claim. Moreover, in making it, I contradict not only Nozick’s critics, but Nozick himself, who clearly thinks it is at least possible for there to be injustices in acquisition, whether or not there have in fact been any (or, more realistically, whether or not there have been enough such injustices to justify continual redistributive taxation for the purposes of rectifying them). But here is a case where Nozick has, I think, been too generous to the other side. Rather than attempt —unsatisfactorily, in the view of his critics—to meet the challenge to show that initial acquisition has not in general been unjust, he ought instead to have insisted that there is no such challenge to be met in the first place. Giving what I shall call “the basic argument” for this audacious claim will be the task of Section II of this essay. The argument is, I think, compelling, but by itself it leaves unexplained some widespread intu- itions to the effect that certain specific instances of initial acquisition are unjust and call forth as their remedy the application of a Lockean proviso, or are otherwise problematic. (A “Lockean proviso,” of course, is one that forbids initial acquisitions of resources when these acquisitions do not leave “enough and as good” in common for others.) Thus, Section III focuses on various considerations that tend to show how those intuitions are best explained in a way consistent with the argument of Section II. Section IV completes the task of accounting for the intuitions in question by considering how the thesis of self-ownership itself bears on the acqui- sition and use of property. Section V shows how the results of the previ- ous sections add up to a more satisfying defense of Nozickian property rights than the one given by Nozick himself, and considers some of the implications of this revised conception of initial acquisition for our under- standing of Nozick’s principles of transfer and rectification. II. The Basic Argument The reason there is no such thing as an unjust initial acquisition of resources is that there is no such thing as either a just or an unjust initial acquisition of resources. The concept of justice, that is to say, simply does not apply to initial acquisition. It applies only after initial acquisition has already taken place. In particular, it applies only to transfers of property (and derivatively, to the rectification of injustices in transfer). This, it seems to me, is a clear implication of the assumption (rightly) made by Nozick that external resources are initially unowned. Consider the following example. Suppose an individual A seeks to acquire some previously unowned resource R. For it to be the case that A commits an injustice in acquiring R, it would also have to be the case that there is some individual B (or perhaps a group of individuals) against whom A commits the injustice. But for B to have been wronged by A’s acquisi- tion of R, B would have to have had a rightful claim over R, a right to R. By hypothesis, however, B did not have a right to R, because no one had a right to it—it was unowned, after all. So B was not wronged and could not have been. In fact, the very first person who could conceivably be wronged by anyone’s use of R would be, not B, but A himself, since A is the first one to own R. Such a wrong would in the nature of the case be an injustice in transfer—in unjustly taking from A what is rightfully his—not in initial acquisition. The same thing, by extension, will be true of all unowned resources: it is only after some- one has initially acquired them that anyone could unjustly come to possess them, via unjust transfer. It is impossible, then, for there to be any injustices in initial acquisition.7

## 2

#### Xi is tightening control over the PLA but completing goals are critical.

Krishnan 21 – Ananth, 11/18/21, [‘Xi tightened control over the PLA’, TheHindu, <https://www.thehindu.com/news/international/xi-tightened-control-over-the-pla/article37549460.ece>] Justin

The new resolution on history passed last week by China’s ruling Communist Party has said that President Xi Jinping had tightened control over the military to address the party’s “obviously lacking” leadership of the armed forces under his predecessors.

The full text of the resolution, released on Tuesday evening, listed some of the actions taken by the People’s Liberation Army (PLA) under Mr. Xi, who is also the chairman of the Central Military Commission. These included what the document described as “major operations related to border defence”.

No specifics

It did not specify what those major operations were. China has unresolved land borders with India and Bhutan. In April 2020, the PLA mobilised two divisions and carried out multiple transgressions across the Line of Actual Control (LAC) in Eastern Ladakh, sparking the worst crisis along the border in many years. Talks to resolve the tensions are still on-going.

“The armed forces have remained committed to carrying out military struggles in a flexible manner to counter military provocations by external forces, and they have created a strong deterrent against separatist activities seeking ‘Taiwan independence,’” the resolution said.

“They have conducted major operations related to border defence, protecting China’s maritime rights, countering terrorism and maintaining stability, disaster rescue and relief, fighting COVID-19, peacekeeping and escort services, humanitarian assistance, and international military cooperation.”

Last week’s resolution on history was only third such document putting forth the official view on party history, following resolutions passed by Mao Zedong in 1945 and Deng Xiaoping in 1981.

The new resolution dealt more with the future than the past. It essentially reaffirmed the official view on history, saying that the “basic points and conclusions” of past resolutions “remain valid to this day.”

It repeated the conclusion reached in 1981 on Mao’s errors noting that “mistakes were made” and that “Mao Zedong’s theoretical and practical errors concerning class struggle in a socialist society became increasingly serious” leading to the disasters of the Cultural Revolution.

Criticism of predecessors

Much of the new resolution focuses on emphasising Mr. Xi’s leadership and calling for the party to support his “core” status. It only briefly mentioned Mr. Xi’s predecessors Jiang Zemin and Hu Jintao, and implicitly critcised some aspects of their leadership including on military matters.

“For a period of time, the party’s leadership over the military was obviously lacking,” it noted. “If this problem had not been completely solved, it would not only have diminished the military’s combat capacity, but also undermined the key political principle that the party commands the gun.”

The document said Mr. Xi’s leadership had tightened supervision on the military including boosting “troop training and battle preparedness”, and it repeated China’s stated goals of completing the modernisation of its armed forces by 2035 and building a “world class” military by 2050, which observers see as meaning on par with the U.S.

‘Working vigorously’

“To build strong people’s armed forces, it is of paramount importance to uphold the fundamental principle and system of absolute party leadership over the military, to ensure that supreme leadership and command authority rest with the party Central Committee and the Central Military Commission (CMC), and to fully enforce the system of the CMC chairman assuming overall responsibility,” the resolution said, adding that “setting their sights on this problem, the Central Committee and the CMC have worked vigorously to govern the military with strict discipline in every respect.”

#### The commercial space sector is one of the PLAs central goals – the plan is a 180.

Bartholomew & Cleveland 19 – Carolyn and Robin, 4/25/19, Chairmen and Vice Chairmen. Section is written from Michael A. McDevitt, US Congressperson, [“HEARING ON CHINA IN SPACE: A STRATEGIC COMPETITION?,” <https://www.uscc.gov/sites/default/files/transcripts/April%2025%2C%202019%20Hearing%20Transcript%20%282%29.pdf>] Justin

As the Chairman said, China is determined to become a leading space power, which requires continuing to boost its innovation capabilities, both in its civilian and military sectors. The People’s Liberation Army is closely involved in most if not every aspect of China’s space program, from helping formulate and execute national space goals to overseeing China’s human spaceflight program. Coverage of China’s space program must treat seriously the implications of the reality that in many cases the boundaries between the military and civil silos of China’s program are thin, if they exist at all.

Our second panel today will address the application of what China calls its “military-civil fusion” strategy to its space sector. Military-civil fusion, a strategic concept designed to harness civilian sector innovation to power China’s military and technological modernization with the goal of leapfrogging the United States and becoming a technological powerhouse. Space has been designated as an especially important sector for military-civil fusion, and the impacts of this campaign on China’s burgeoning commercial space sector—itself a recipient of generous government support and protection—will be crucial as Chinese companies increasingly seek to compete in the international marketplace. Military-civil fusion is especially worthy of attention due to its continued reliance on technology transfer, by hook or by crook, to fuel China’s industrial and military growth.

Our third and final panel today will examine China’s military space and counterspace activities. Since its direct-ascent kinetic antisatellite test in 2007, which was responsible for a large amount of all space debris currently in Earth’s orbit, China has continued to invest in a variety of offensive antisatellite capabilities. Indeed, China’s counterspace arsenal contains many options: earlier this month, Acting Secretary of Defense Patrick Shanahan said China “has exercised and continues to develop” jamming capabilities; is deploying directed-energy counterspace weapons; has deployed an operational ground-based antisatellite missile system; and is prepared to use cyberattacks against U.S. space systems.

#### China wants to colonize mars – the plan decks Xi’s legitimacy and causes lashout

Hong 20 [Brendon Hong [Brendon Hong is the pseudonym of a longtime contributor to The Daily Beast based in Hong Kong.] “China Wants to Be First to Colonize the Moon and Mars” Space Race Updated Jul. 29, 2020 4:00AM ET / Published Jul. 28, 2020 4:35AM ET https://www.thedailybeast.com/china-wants-to-be-first-to-colonize-the-moon-and-mars?ref=scroll SJMS](file://C:\\Users\\MAStu\\Desktop\\Brendon Hong [Brendon Hong is the pseudonym of a longtime contributor to The Daily Beast based in Hong Kong.] \“China Wants to Be First to Colonize the Moon and Mars\” Space Race Updated Jul. 29, 2020 4:00AM ET \\ Published Jul. 28, 2020 4:35AM ET https:\\www.thedailybeast.com\\china-wants-to-be-first-to-colonize-the-moon-and-mars?ref=scroll SJMS)

HONG KONG—[China](https://www.thedailybeast.com/donald-trumps-new-space-force-will-have-trouble-catching-up-with-chinas) launched its most ambitious space mission last week, with a trio consisting of an orbiter, lander, and rover loaded onto a massive rocket that is heading to [Mars](https://www.thedailybeast.com/scientists-found-oil-on-mars-or-truffles). The mission is an impressive scientific feat, one that is entangled with Chinese Communist Party leader Xi Jinping’s push to define China as a [conquering superpower in space](https://www.thedailybeast.com/what-the-hell-is-china-doing-on-the-dark-side-of-the-moon). Called Tianwen-1, the Chinese Mars mission involves a seven-month journey to the red planet. When the rocket nears its destination after traveling 39 million miles, it will release the orbiter to scan and map Mars from above, while the lander will carry the rover to the planet’s surface. If everything goes according to plan and the rover maintains communication with ground control on Earth, China will be the second nation to successfully place an operational robot on Martian soil—a significant achievement for a country that is attempting to establish technological supremacy on a global and now interplanetary scale. Yet that triumph comes loaded with CCP officials’ desire for space colonization. One senior aerospace engineer and the head of China’s lunar exploration program, Ye Peijian, indicated two years ago that his country’s designs for space expedition mirror Beijing’s plan for the South China Sea—that is, the party seeks to [occupy the moon and Mars](https://www.thedailybeast.com/chinas-looming-land-grab-in-outer-space) at any cost. “The universe is an ocean, the moon is the Diaoyu Islands, Mars is Huangyan Island,” Ye said at the CCP’s annual plenary session in Beijing two years ago, referencing geological formations that are also known as Senkaku and Scarborough Shoal, and are claimed by Japan, Taiwan, as well as the Philippines. “If we do not go there now even though we can, then we will be blamed by our descendants,” Ye also said. “If others go there, then they will take over, and you will not be able to go even if you want to. This is reason enough.” The message was clear then: it’s a zero-sum game. The party’s officials see space as a place to be conquered, so they are compelled to stake a claim—fast. China has designs to become an astral superpower. Details about state funding for space missions are opaque, but in 2018, Beijing earmarked at least $8 billion for the China National Space Administration, second only to the U.S. That amount has almost certainly increased every year since then, with Beijing hastening efforts to establish a permanent presence in space. China already has rovers on the moon. It will likely launch the core module of a space station to low Earth orbit next year. It is laying the groundwork for a crewed lunar mission in the 2030s, with plans to build a base near the lunar south pole. And Mars? If we take Ye’s words at face value, then the plan is to seize, annex, and build on top of it. NASA’s Perseverance Mars rover is scheduled to launch this week, on July 30. Like Tianwen-1’s as yet unnamed rover, it will hunt for carbon-containing molecules that may point to Martian life in the past, as well as collect dirt samples for scientific analysis. After Tianwen-1 left its launchpad, NASA administrator Jim Bridenstine [tweeted](https://twitter.com/JimBridenstine/status/1286177196491575297) out well wishes, welcoming China to a small, elite group of nations that are exploring Mars. Yet it is impossible to ignore that the current confrontations between China and the U.S. look more and more like a Cold War with each passing day, and the competing space programs resemble a page out of the ideological showdown between the U.S. and Soviet Union. Beijing and Washington have locked horns on every front. The two largest economies in the world are trapped in a spiral of tariffs. China’s military is looking to project its power in new places around the globe, grating against American spheres of influence, particularly in East Asia and the Middle East. And tech companies on either side of the Pacific Ocean are racing to one-up each other, fueled by bonfires of cash from venture capital funds that place bets on both coasts. The competition between China and the United States is multi-pronged, extending beyond the stratosphere too. If Tianwen-1 is a success, Xi Jinping will score a major win within the party’s hierarchy, and feed the justification of his decree to remain [president for life](https://www.thedailybeast.com/trump-on-chinas-president-for-life-power-grab-maybe-we-should-try-that). Space exploration in any form is an inspiration, and the pride shared by Chinese people while watching a rocket built by their country fly to Mars is pure. Many young people will no doubt heed the call to build careers in STEM fields, or even dream of becoming the first Chinese person to leave footprints on another planet. But the CCP’s extra dimension of conquest taints this legacy, and even maps the potential for conflict beyond our world.

#### That triggers backlash – they don’t support restrictions on the space sector and will do everything to convince leaders not to do the plan.

Cheng 14 [Dean Cheng, Senior Research Fellow in the Asia Studies Center at the Heritage Foundation, Former Senior Analyst at the China Studies Division of the Center for Naval Analyses, Former Senior Analyst with Science Applications International Corporation, “Prospects for U.S.-China Space Cooperation”, Testimony before the Committee on Commerce, Science, and Transportation, United States Senate, 4/9/2014, https://www.heritage.org/testimony/prospects-us-china-space-cooperation]

At the same time, space is now a sector that enjoys significant political support within the Chinese political system. Based on their writings, the PLA is clearly intent upon developing the ability to establish “space dominance,” in order to fight and win “local wars under informationized conditions.”[8] The two SOEs are seen as key parts of the larger military-industrial complex, providing the opportunities to expose a large workforce to such areas as systems engineering and systems integration. It is no accident that China’s commercial airliner development effort tapped the top leadership of China’s aerospace corporations for managerial and design talent.[9] From a bureaucratic perspective, this is a powerful lobby, intent on preserving its interests. China’s space efforts should therefore be seen as political, as much as military or economic, statements, directed at both domestic and foreign audiences. Insofar as the PRC has scored major achievements in space, these reflect positively on both China’s growing power and respect (internationally) and the CCP’s legitimacy (internally). Efforts at inducing Chinese cooperation in space, then, are likely to be viewed in terms of whether they promote one or both objectives. As China has progressed to the point of being the world’s second-largest economy (in gross domestic product terms), it becomes less clear as to why China would necessarily want to cooperate with other countries on anything other than its own terms. Prospects for Cooperation Within this context, then, the prospects for meaningful cooperation with the PRC in the area of space would seem to be extremely limited. China’s past experience of major high-technology cooperative ventures (Sino–Soviet cooperation in the 1950s, U.S.–China cooperation in the 1980s until Tiananmen, and Sino–European space cooperation on the Galileo satellite program) is an unhappy one, at best. The failure of the joint Russian–Chinese Phobos–Grunt mission is likely seen in Beijing as further evidence that a “go-it-alone” approach is preferable. Nor is it clear that, bureaucratically, there is significant interest from key players such as the PLA or the military industrial complex in expanding cooperation.[10] Moreover, as long as China’s economy continues to expand, and the top political leadership values space efforts, there is little prospect of a reduction in space expenditures—making international cooperation far less urgent for the PRC than most other spacefaring states. [FOOTNOTE] [10]It is worth noting here that the Chinese Ministry of Foreign Affairs is not a part of the CCP Politburo, a key power center in China. Thus, the voice of the Ministry of Foreign Affairs is muted, at best, in any internal debate on policy. [END FOOTNOTE] If there is likely to be limited enthusiasm for cooperation in Chinese circles, there should also be skepticism in American ones. China’s space program is arguably one of the most opaque in the world. Even such basic data as China’s annual space expenditures is lacking—with little prospect of Beijing being forthcoming. As important, China’s decision-making processes are little understood, especially in the context of space. Seven years after the Chinese anti-satellite (ASAT) test, exactly which organizations were party to that decision, and why it was undertaken, remains unclear. Consequently, any effort at cooperation would raise questions about the identity of the partners and ultimate beneficiaries—with a real likelihood that the PLA would be one of them.

#### An unhinged PLA triggers Himalayan war – goes global

Chellaney 17 [Dr. Brahma Chellaney, Professor of Strategic Studies at the Center for Policy Research and Fellow at the Robert Bosch Academy, PhD in International Studies from Jawaharlal Nehru University, “Why the Chinese Military’s Rising Clout Troubles Xi Jinping”, The National, 9/9/2017, https://www.thenational.ae/opinion/why-the-chinese-military-s-rising-clout-troubles-xi-jinping-1.626815?videoId=5754807360001]

China’s president Xi Jinping has stepped up his domestic political moves in the run-up to the critical 19th national congress of the Chinese Communist Party next month, but he is still struggling to keep the People’s Liberation Army (PLA) in line. China’s political system makes it hard to get a clear picture, yet Mr Xi’s actions underscore the troublesome civil-military relations in the country. Take the recent standoff with India that raised the spectre of a Himalayan war, with China threatening reprisals if New Delhi did not unconditionally withdraw its forces from a small Bhutanese plateau, which Beijing claims is Chinese territory. After 10 weeks, the face-off on the Doklam Plateau ended with both sides pulling back troops and equipment from the site on the same day, signalling that Beijing, not New Delhi, had blinked. The mutual-withdrawal deal was struck just after Mr Xi replaced the chief of the PLA’s joint staff department. This key position, equivalent to the chairman of the US joint chiefs of staff, was created only last year as part of Mr Xi’s military reforms to turn the PLA into a force “able to fight and win wars”. The Doklam pullback suggests that the removed chief, Gen Fang Fenghui, who has since been detained for alleged corruption, was an obstacle to clinching a deal with India. To be sure, this was not the first time that the PLA’s belligerent actions in the Himalayas imposed diplomatic costs on China. A classic case happened when Mr Xi reached India on a state visit in September 2014. He arrived on Indian prime minister Narendra Modi’s birthday with a strange gift for his host, a predawn Chinese military encroachment deep into India’s northern region of Ladakh. The encroachment, the worst in many years in terms of the number of intruding troops, overshadowed Mr Xi’s visit. It appeared bizarre that the military of an important power would seek to mar the visit of its own head of state to a key neighbouring country. Yet Chinese premier Li Keqiang’s earlier visit to New Delhi in 2013 was similarly preceded by a PLA incursion into another part of Ladakh that lasted three weeks. Such provocations might suggest that they are intentional, with the Chinese government in the know, thus reflecting a preference for blending soft and hard tactics. But it is also possible that these actions underscore the continuing “disconnect between the military and the civilian leadership” in China that then US defence secretary Robert Gates warned about in 2011. During his 2014 India trip, Mr Xi appeared embarrassed by the accompanying PLA encroachment and assured Mr Modi that he would sort it out upon his return. Soon after he returned, the Chinese defence ministry quoted Mr Xi as telling a closed-door meeting with PLA commanders that “all PLA forces should follow the president’s instructions” and that the military must display “absolute loyalty and firm faith in the party”. Recently Xi conveyed that same message yet again when he addressed a parade marking the 90th anniversary of the PLA’s creation on August 1, 1927. Donning military fatigues, Mr Xi exhorted members of his 2.3-million-strong armed forces to “unswervingly follow the absolute leadership of the party.” Had civilian control of the PLA been working well, would Mr Xi repeatedly be demanding “absolute loyalty” from the military or asking it to “follow his instructions”? China does not have a national army; rather the party has an army. So the PLA has traditionally sworn fealty to the party, not the nation. Under Mr Xi’s two immediate predecessors, Hu Jintao and Jiang Zemin, the PLA gradually became stronger at the expense of the party. The military’s rising clout has troubled Mr Xi because it hampers his larger ambition. As part of his effort to reassert party control over the military, Mr Xi has used his anti-corruption campaign to ensnare a number of top PLA officers. He has also cut the size of the ground force and established a new command-and-control structure. But just as a dog’s tail cannot be straightened, asserting full civil control over a politically ascendant PLA is proving unachievable. After all, the party depends on the PLA to ensure domestic order and sustain its own political monopoly. The regime’s legitimacy increasingly relies on an appeal to nationalism. But the PLA, with its soaring budgets and expanding role to safeguard China’s overseas interests, sees itself as the ultimate arbiter of nationalism. To make matters worse, Mr Xi has made many enemies at home in his effort to concentrate power in himself, including through corruption purges. It is not known whether the PLA’s upper echelon respects him to the extent to be fully guided by his instructions. In the past decade, the PLA’s increasing clout has led China to stake out a more muscular role. This includes resurrecting territorial and maritime disputes, asserting new sovereignty claims, and using construction activity to change the status quo. China’s cut-throat internal politics and troubled civil-military relations clearly have a bearing on its external policy. The risks of China’s rise as a praetorian state are real and carry major implications for international security.

#### Extinction.

Caldicott 17 – Helen, 2017, Founder of Physicians for Social Responsibility [“The new nuclear danger: George W. Bush's military-industrial complex,” The New Press]//Elmer

The use of Pakistani nuclear weapons could trigger a chain reac­tion. **Nuclear-armed India, an ancient enemy, could respond** in kind. China, India's hated foe, could react if India used her nuclear weapons, triggering a nuclear [war] ~~holocaust~~ on the subcontinent. If any of either **Russia** or **America**'s 2,250 strategic weapons on hair-trigger alert were launched either **accidentally** or **purposefully** in response, **nuclear winter** would ensue, meaning the **end of most life on earth**.

## 3

#### CP Text: States, except the United States, should ban the appropriation of mars by private entities. The United States should fund the appropriation of mars for the mining of rare earth metals from asteroids by private entities.

#### Biological mining of REMs/REEs on Mars is technically feasible. Proven by microgravity experiments. Cockell et al 20

Cockell, C.S., Santomartino, R., Finster, K. et al. Space station biomining experiment demonstrates rare earth element extraction in microgravity and Mars gravity. Nat Commun 11, 5523 (2020). https://doi.org/10.1038/s41467-020-19276-w

Discussion

**This study investigated the use of microorganisms to extract a group of economically important elements (fourteen REEs) from basalt rock, a material found on** the Moon and **Mars**36,37,38**, under simulated Mars and Earth gravity on the** International Space Station (**ISS**). **Microgravity was investigated as the lowest gravity level possible to explore the effects of a lack of sedimentation on bioleaching,** to understand the role of gravity in influencing microbe–mineral interactions in general, and to gain insights into industrial biomining on asteroids and other very low gravity planetary objects**. A true Earth gravity ground control experiment was also performed.**

The presence of the bacterium S. desiccabilis was found to enhance mean concentrations of leached REEs in all gravity conditions investigated and these enhancements were significant in simulated Mars and Earth gravity on ISS compared to the non-biological controls. Although the S. desiccabilis microgravity samples reached higher mean concentrations than the microgravity non-biological controls for all REEs, the difference was not statistically significant. The statistical result is interpreted to be caused by the greater standard deviations in the leached concentrations of elements in the microgravity biological experiment and non-biological controls and the loss of one of the microgravity control samples owing to contamination, rather than an effect of microgravity on biological leaching.

**The lack of a significant difference in the final concentrations of REEs** leached by S. desiccabilis when the different gravity conditions were compared **is surprising** since microgravity has been reported to influence microbial processes39,40. **However, the results are consistent with our observation that final cell concentrations did not differ between the different gravity conditions** **in the three microorganisms31**. One reason for the lack of statistically significant differences in final concentrations of REEs between gravity conditions might be that the bacterial cultures had sufficient nutrients to reach their maximum cell concentration31, regardless of the different sedimentation rates in each gravity, thus achieving similar leaching concentrations. Hence, the experiments showed that, with the appropriate nutrients, biomining is in principle achievable under a wide range of gravity conditions.

The mechanism for the REE bioleaching in Sphingomonas desiccabilis is unknown. It was not caused by bulk acidification of the growth medium, since the ground experiments showed that the medium had a slightly basic pH profile during the experiment. The microorganism is a prolific producer of extracellular polysaccharide (EPS) and these compounds are known to enhance bioleaching in other organisms by complexing ions in EPS moieties such as uronic acid41,42. A greater biological enhancement in the leaching of heavy compared to light REEs was observed, a pattern consistent with observations by Takahashi et al.43 in laboratory cell cultures and natural microbial biofilms. The authors suggested that phosphate moieties on the cell or EPS might preferentially bind heavy REEs, a distinct property of these biologically produced materials. We also note that the authors suggested that heavy REE enrichments could potentially be used as a biosignature for the activities of life. Beyond applications to biomining, our experiments showed the preferential enhancement of heavy REEs in the liquid phase including in simulated Martian gravity, indicating the production of a potential biosignature under altered gravity, with implications for example for additional methods to test the hypothesis of life on Mars.

Enhanced REEs associated with pelleted S. desiccabilis cells compared to the other two species was not observed. The reduced pH caused during fixation and sample preparation may have unbound any REEs attached to cell surfaces in all three species. Alternatively, the majority of the REEs may have bound to the extracellular EPS or have been released directly into solution. We have observed S. desiccabilis by confocal microscopy to form biofilms on the surfaces and at the edges of cavities on the basalt more pervasively than B. subtilis and C. metallidurans under these growth conditions, which could have enhanced cell-mineral interactions and thus leaching of REEs into solution. The analysis of REEs within biofilms did not form part of this study since we wished to separately examine the biofilms non-destructively.

Unavoidable in this experiment was the potential for continued leaching after fixation and during storage, when the pH was reduced in the chamber. However, during storage, the temperature was kept at 2.1 °C on the ISS and below 7.1 °C during sample return to reduce leaching activity44. Furthermore, a similar reduction of the pH occurred in the non-biological control samples.

In contrast to S. desiccabilis, B. subtilis demonstrated less mean leaching in the biological experiments than the non-biological controls in all three gravity conditions. This cannot be attributed to cells attached to the rock retarding ion release since the microorganisms did not form substantial biofilms on the surface of the rock and the final cell biomass was lower than in the case of S. desiccabilis31. As the pH was likely to be similar to the other organisms during the course of the experiment as shown by our ground-based post-flight pH experiment, differences in pH during the experimental phase cannot explain the results. An alternative explanation could be a chemical effect of cell exudates, such as ligands that retarded leaching or the solubility of REEs. However, despite its previously demonstrated bioleaching activity45,46, and cell wall absorption of REEs47, Kucuker et al.48 showed that B. subtilis was not able to extract tantalum, a transition metal considered similar to a REE, from capacitors.

C. metallidurans did not enhance leaching of REEs. In a 3-month preparatory phase for the BioRock experiments, the leaching of elements from crushed basalt by this organism on the Russian FOTON-M4 capsule was investigated49. In this experiment, C. metallidurans enhanced copper ion release, but other rock elements did not show significantly enhanced leaching. Although the microorganism was suspended in mineral water, the results are consistent with those reported here.

In none of the experiments was a cerium anomaly50 observed. Unlike other REEs that are all trivalent, cerium can be oxidised to the less soluble Ce4+ state, which can cause differences in precipitation and concentration compared to other REEs. The experiments were performed under oxic conditions. However, once the cerium was leached from the rock, its oxidation state would not necessarily have changed its presence in the bulk fluid, potentially explaining the lack of an anomaly.

Comparing the Earth gravity simulation on the ISS with the ground-based experiments (true 1 × g control), no significant difference was observed between biological experiments with B. subtilis and C. metallidurans, but there was a significant difference between the S. desiccabilis biological experiments and between the non-biological controls, with ground-based leaching significantly less in some REEs compared to the Earth gravity simulation on the ISS. Simulated gravity in space is not exactly the same as 1 × g on Earth as shear forces induced by centrifugation in space can create different physical conditions. Furthermore, because of the small radius of the centrifuge rotor in KUBIK, gravity forces vary across the culture chamber. We also note that the ground experiment had a 0.46 °C higher temperature offset than the KUBIKs on the ISS during the main experimental phase. The experiment on the ISS involves the launch and download to Earth of the samples, which could influence them in ways that cannot be easily predicted. Nevertheless, the general trends observed in Earth gravity experiments with respect to biologically enhanced leaching for the three organisms were conserved in space.

**Our experiment has several differences with any proposed large-scale biomining activity. The basalt rock was not crushed** in order to investigate biofilm formation on a flat, contiguous but porous rock surface, another main goal of the BioRock experiment. This may have influenced the total percentage of REEs extracted from the rock, which was generally less than 5 × 10−2 %. **These leaching rates would likely be higher with crushed rocks, which on Earth have been shown to result in leaching efficiencies of REEs** of 8.0 × 10−3% to several tens of percent **under optimised conditions51**,52. Furthermore, we did not stir our reactors as we wanted to investigate the effects of microgravity and Mars gravity on cell growth in the absence of artificial mixing. Understanding which parameters would require adjustments to enhance the process as well as upscaling of the reactor would be the next step. Our experiment demonstrates that the leaching capacities of the three different microorganisms on the Earth53,54 were similar in space. Thus, Earth-based ground experiments provide reliable insights into the biomining capacities of specific organisms in space. Yet, our experiments also confirm that it is important to be careful in the selection of microorganisms for space biomining operations.

**Basaltic material was investigated because it is common** on the Moon and **Mars36**,37,38. Our experiment suggests that other materials could return even higher yields. For example, lunar KREEP rocks have unusually high concentrations of REEs55,56. We did not test lunar gravity (0.16 × g) directly, but it lies between microgravity and Mars gravity. Our results therefore likely reflect the potential efficacy of biomining operations under lunar gravity. We suggest the construction of REE biomining facilities in the Oceanus Procellarum and Mare Imbrium regions of the Moon, where KREEP rocks are abundant. The principle we demonstrate could be applied to other materials of economic importance for In-Situ Resource Utilisation (ISRU). For example, meteoritic material has been shown to be compatible with microbial growth26,57,58,59,60 and thus our microgravity experiments show the potential for biomining in low gravity asteroid environments.

**In conclusion, our results demonstrate the biological mining of economically important elements in space, specifically REEs** and in different extraterrestrial gravity environments. The experiments also demonstrate the novel REE bioleaching ability for the mesophilic, biofilm-forming, and desiccation-resistant bacterium S. desiccabilis, which could be used in biomining applications. **From a technical point of view, our experiment also demonstrated the principles of a miniature space biomining reactor. The experiment thus shows the efficacy of microbe–mineral interactions for advancing the establishment of a self-sustaining permanent human presence beyond the Earth and the technical means to do that.**

#### The PIC is key to beat China and protect against Chinese REM gatekeeping

Stavridis 21 [(James, retired US Navy admiral, chief international diplomacy and national security analyst for NBC News, senior fellow at JHU Applied Physics Library, PhD in Law and Diplomacy from Tufts) “U.S. Needs a Strong Defense Against China’s Rare-Earth Weapon,” Bloomberg Opinion, March 4, 2021, https://www.bloomberg.com/opinion/articles/2021-03-04/u-s-needs-a-strong-defense-against-china-s-rare-earth-weapon] TDI

You could be forgiven if you are confused about what’s going on with rare-earth elements. On the one hand, news reports indicate that China may increase production quotas of the minerals this quarter as a goodwill gesture to the Joe Biden administration. But other sources say that China may ultimately ban the export of the rare earths altogether on “security concerns.” What’s really going on here?

There are 17 elements considered rare earths — lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium, scandium and yttrium — and while many aren’t actually rare in terms of global deposits, extracting them is difficult and expensive. They are used across high-tech manufacturing, including smartphones, fighter aircraft and components in virtually all advanced electronics. Of particular note, they are essential to many of the clean-energy technologies expected to come online in this decade.

I began to focus on rare-earth elements when I commanded the North Atlantic Treaty Organization’s presence in Afghanistan, known as the International Security Assistance Force. While Afghans live in an extremely poor country, studies have assessed that they sit atop $1 trillion to $3 trillion in a wide variety of minerals, including rare earths. Some estimates put the rare-earth levels alone at 1.4 million metric tons.

But every time I tried to visit a mining facility, the answer I got from my security team was, “It’s too dangerous right now, admiral.” Unfortunately, despite a great deal of effort by the U.S. and NATO, those security challenges remain, deterring the large foreign-capital investments necessary to harvest the lodes. Which brings us back to Beijing.

China controls roughly 80% of the rare-earths market, between what it mines itself and processes in raw material from elsewhere. If it decided to wield the weapon of restricting the supply — something it has repeatedly threatened to do — it would create a significant challenge for manufacturers and a geopolitical predicament for the industrialized world.

It could happen. In 2010, Beijing threatened to cut off exports to Japan over the disputed Senkaku Islands. Two years ago, Beijing was reportedly considering restrictions on exports to the U.S. generally, as well as against specific companies (such as defense giant Lockheed Martin Corp.) that it deemed in violation of its policies against selling advanced weapons to Taiwan.

President Donald Trump’s administration issued an executive order to spur the production of rare earths domestically, and created an Energy Resource Governance Initiative to promote international mining. The European Union and Japan, among others, are also aggressively seeking newer sources of rare earths.

Given this tension, it was superficially surprising that China announced it would boost its mining quotas in the first quarter of 2021 by nearly 30%, reflecting a continuation in strong (and rising) demand. But the increase occurs under a shadow of uncertainty, as the Chinese Communist Party is undertaking a “review” of its policies concerning future sales of rare earths. In all probability, the tactics of the increase are temporary, and fit within a larger strategy.

China will go to great lengths to maintain overall control of the global rare-earths supply. This fits neatly within the geo-economic approach of the One Belt, One Road initiative, which seeks to use a variety of carrots and sticks — economic, trade, diplomatic and security — to create zones of influence globally. In terms of rare earths, the strategy seems to be allowing carefully calibrated access to the elements at a level that makes it economically less attractive for competitors to undertake costly exploration and mining operations. This is similar to the oil-market strategy used by Russia and the Organization of Petroleum Exporting Countries for decades.

Some free-market advocates believe that China will not take aggressive action choking off supply because that could precipitate retaliation or accelerate the search for alternate sources in global markets. What seems more likely is a series of targeted shutdowns directed against specific entities such as U.S. defense companies, Japanese consumer electronics makers, or European industrial concerns that have offended Beijing.

The path to rare-earth independence for the U.S. must include: Ensuring supply chains of rare earths necessary for national security; promoting the exploitation of the elements domestically (and removing barriers to responsibly doing so); mandating that defense contractors and other critical-infrastructure entities wean themselves off Chinese rare earths; sponsoring research and development to find alternative materials, especially for clean energy technology; and creating a substantial stockpile of the elements in case of a Chinese boycott.

This is a bipartisan agenda. The Trump administration’s strategic assessment of what needs to be done (which goes beyond just 17 rare earths to include a total of 35 critical minerals) is thoughtful, and should serve as a basis for the Biden administration and Congress.

#### REM access key to military primacy and tech advancement – alternatives fail

Trigaux 12 (David, University Honors Program University of South Florida St. Petersburg) “The US, China and Rare Earth Metals: The Future Of Green Technology, Military Tech, and a Potential Achilles‟ Heel to American Hegemony,” USF St. Petersberg, May 2, 2012, https://digital.stpetersburg.usf.edu/cgi/viewcontent.cgi?article=1132&context=honorstheses] TDI

The implications of a rare earth shortage aren’t strictly related to the environment, and energy dependence, but have distinct military implications as well that could threaten the position of the United States world’s strongest military. The United States place in the world was assured by powerful and decisive deployments in World War One and World War Two. Our military expansion was built upon a large, powerful industrial base that created more, better weapons of war for our soldiers. During the World Wars, a well-organized draft that sent millions of men into battle in a short amount of time proved decisive, but as the war ended, and soldiers drafted into service returned to civilian life, the U.S. technological superiority over its opponents provided it with sustained dominance over its enemies, even as the numerical size of the army declined. New technologies, such as the use of the airplane in combat, rocket launched missiles, radar systems, and later, GPS, precision guided missiles, missile defense systems, high tech tanks, lasers, and other technologies now make the difference between victory and defeat.

The United States military now serves many important functions, deterring threats across the world. The United States projects its power internationally, through a network of bases and allied nations. Thus, the United States is a powerful player in all regions of the world, and often serves as a buffer against conflict in these regions. US military presence serves as a buffer against Chinese military modernization in Eastern Asia, against an increasingly nationalist Russia in Europe, and smaller regional actors, such as Venezuela in South America and Iran in the Middle East. The U.S. Navy is deployed all over the world, as the guarantor of international maritime trade routes. The US Navy leads action against challenges to its maritime sovereignty on the other side of the globe, such as current action against Somali piracy. Presence in regions across the world prevents escalation of potential crisis. These could result in either a larger power fighting a smaller nation or nations (Russia and Georgia, Taiwan and China), religious opponents (Israel and Iran), or traditional foes (Ethiopia and Eretria, Venezuela and Colombia, India and Pakistan). US projection is also key deterring emerging threats such as terrorism and nuclear proliferation. While not direct challenges to US primacy, both terrorism and nuclear proliferation can kill thousands.

The US Air Force has a commanding lead over the rest of the world, in terms of both numbers and capabilities. American ground forces have few peers, and are unmatched in their ability to deploy to anywhere in the world at an equally unmatched pace.

The only perceived challenge to the United States militarily comes from the People’s Republic of China.76 While the United States outspends all other nations in the world put together in terms of military spending, China follows as a close second, and has begun an extensive modernization program to boot.77 The Chinese military however, is several decades behind the United States in air power and nuclear capabilities.78 To compensate, China has begun the construction of access-denial technology, preventing the US from exercising its dominance in China’s sphere of influence.79 Chinese modernization efforts have a serious long-term advantage over the United States; access to rare earth metals, and a large concentration of rare earth chemists doing research.80 This advantage, coupled with the U.S. losing access to rare earth metals, will even the odds much quicker than policymakers had previously anticipated. 81

The largest example is US airpower. With every successive generation of military aircraft, the U.S. Air Force becomes more and more dependent on Rare Earth Metals.82 As planes get faster and faster, they have to get lighter and lighter, while adding weight from extra computers and other features on board.83 To lighten the weight of the plane, scandium is used to produce lightweight aluminum alloys for the body of the plane. Rare Earth metals are also useful in fighter jet engines, and fuel cells.84 For example, rare earths are required to producing miniaturized fins, and samarium is required to build the motors for the F-35 fighter jet.85 F-35 jets are the next generation fighter jet that works together to form the dual plane combination that cements U.S. dominance in air power over the Russian PAK FA.86

Rare earth shortages don’t just affect air power, also compromising the navigation system of Abrams Tanks, which need samarium cobalt magnets. The Abrams Tank is the primary offensive mechanized vehicle in the U.S. arsenal. The Aegis Spy 1 Radar also uses samarium.87 Many naval ships require neodymium. Hell Fire missiles, satellites, night vision goggles, avionics, and precision guided munitions all require rare earth metals. 88

American military superiority is based on technological advancement that outstrips the rest of the world. Command and control technology allows the U.S. to fight multiple wars at once and maintain readiness for other issues, as well as have overwhelming force against rising challengers. This technology helps the U.S. know who, where, and what is going to attack them, and respond effectively, regardless of the source of the threat.

Rare Earth Elements make this technological superiority possible.

To make matters worse, the defense industrial base is often a single market industry, dependent on government contracts for its business. If China tightens the export quotas further, major US defense contractors will be in trouble.89 Every sector of the defense industrial base is dependent on rare earth metals. Without rare earths, these contractors can’t build anything, which collapses the industry.90

Rare Earth shortages are actually already affecting our military, with shortages of lanthanum, cerium, europium and gadolinium happening in the status quo. This prevents us not only from building the next generation of high tech weaponry, but also from constructing more of the weapons and munitions that are needed in the status quo. As current weapon systems age and they can’t be replaced, the US primacy will be undermined. Of special concern is that U.S. domestic mining doesn’t produce “heavy” rare earth metals that are needed for many advanced components of military technologies. Given the nature of many military applications, substitutions aren’t possible. 91

#### Primacy and allied commitments solve arms races and great power war – unipolarity is sustainable, and prevents power vacuums and global escalation

Brands 18 [(Hal, Henry Kissinger Distinguished Professor at Johns Hopkins University's School of Advanced International Studies and a senior fellow at the Center for Strategic and Budgetary Assessments) "American Grand Strategy in the Age of Trump," Page 129-133]

Since World War II, the United States has had a military second to none. Since the Cold War, America has committed to having overwhelming military primacy. The idea, as George W. Bush declared in 2002, that America must possess “strengths beyond challenge” has featured in every major U.S. strategy document for a quarter century; it has also been reflected in concrete terms.6

From the early 1990s, for example, the United States consistently accounted for around 35 to 45 percent of world defense spending and maintained peerless global power-projection capabilities.7 Perhaps more important, U.S. primacy was also unrivaled in key overseas strategic regions—Europe, East Asia, the Middle East. From thrashing Saddam Hussein’s million-man Iraqi military during Operation Desert Storm, to deploying—with impunity—two carrier strike groups off Taiwan during the China-Taiwan crisis of 1995– 96, Washington has been able to project military power superior to anything a regional rival could employ even on its own geopolitical doorstep.

This military dominance has constituted the hard-power backbone of an ambitious global strategy. After the Cold War, U.S. policymakers committed to averting a return to the unstable multipolarity of earlier eras, and to perpetuating the more favorable unipolar order. They committed to building on the successes of the postwar era by further advancing liberal political values and an open international economy, and to suppressing international scourges such as rogue states, nuclear proliferation, and catastrophic terrorism. And because they recognized that military force remained the ultima ratio regum, they understood the centrality of military preponderance.

Washington would need the military power necessary to underwrite worldwide alliance commitments. It would have to preserve substantial overmatch versus any potential great-power rival. It must be able to answer the sharpest challenges to the international system, such as Saddam’s invasion of Kuwait in 1990 or jihadist extremism after 9/11. Finally, because prevailing global norms generally reflect hard-power realities, America would need the superiority to assure that its own values remained ascendant. It was impolitic to say that U.S. strategy and the international order required “strengths beyond challenge,” but it was not at all inaccurate.

American primacy, moreover, was eminently affordable. At the height of the Cold War, the United States spent over 12 percent of GDP on defense. Since the mid-1990s, the number has usually been between 3 and 4 percent.8 In a historically favorable international environment, Washington could enjoy primacy—and its geopolitical fruits—on the cheap.

Yet U.S. strategy also heeded, at least until recently, the fact that there was a limit to how cheaply that primacy could be had. The American military did shrink significantly during the 1990s, but U.S. officials understood that if Washington cut back too far, its primacy would erode to a point where it ceased to deliver its geopolitical benefits. Alliances would lose credibility; the stability of key regions would be eroded; rivals would be emboldened; international crises would go unaddressed. American primacy was thus like a reasonably priced insurance policy. It required nontrivial expenditures, but protected against far costlier outcomes.9 Washington paid its insurance premiums for two decades after the Cold War. But more recently American primacy and strategic solvency have been imperiled.

THE DARKENING HORIZON For most of the post–Cold War era, the international system was— by historical standards—remarkably benign. Dangers existed, and as the terrorist attacks of September 11, 2001, demonstrated, they could manifest with horrific effect. But for two decades after the Soviet collapse, the world was characterized by remarkably low levels of great-power competition, high levels of security in key theaters such as Europe and East Asia, and the comparative weakness of those “rogue” actors—Iran, Iraq, North Korea, al-Qaeda—who most aggressively challenged American power. During the 1990s, some observers even spoke of a “strategic pause,” the idea being that the end of the Cold War had afforded the United States a respite from normal levels of geopolitical danger and competition. Now, however, the strategic horizon is darkening, due to four factors.

First, great-power military competition is back. The world’s two leading authoritarian powers—China and Russia—are seeking regional hegemony, contesting global norms such as nonaggression and freedom of navigation, and developing the military punch to underwrite these ambitions. Notwithstanding severe economic and demographic problems, Russia has conducted a major military modernization emphasizing nuclear weapons, high-end conventional capabilities, and rapid-deployment and special operations forces— and utilized many of these capabilities in conflicts in Ukraine and Syria.10 China, meanwhile, has carried out a buildup of historic proportions, with constant-dollar defense outlays rising from US$26 billion in 1995 to US$226 billion in 2016.11 Ominously, these expenditures have funded development of power-projection and antiaccess/area denial (A2/AD) tools necessary to threaten China’s neighbors and complicate U.S. intervention on their behalf. Washington has grown accustomed to having a generational military lead; Russian and Chinese modernization efforts are now creating a far more competitive environment.