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#### CP Text: The United States should fund the appropriation of outer space for the mining of rare earth metals from asteroids by private entities.

### 2

#### The US structurally outcompetes China in the status quo and primacy can be sustained, but it’s not a given

Kroenig 20 [(Matthew, is the author of The Return of Great Power Rivalry: Democracy Versus Autocracy From the Ancient World to the U.S. and China, a professor of government and foreign service at Georgetown University, and the deputy director of the Scowcroft Center for Strategy and Security at the Atlantic Council) “Why the U.S. Will Outcompete China,” 4-3-2020, https://www.theatlantic.com/ideas/archive/2020/04/why-china-ill-equipped-great-power-rivalry/609364/] TDI

National-security analysts see China as one of the greatest threats facing the United States and its allies. According to an emerging conventional wisdom, China has the leg up on the U.S. in part because its authoritarian government can strategically plan for the long term, unencumbered by competing branches of government, regular elections, and public opinion. Yet this faith in autocratic ascendance and democratic decline is contrary to historical fact. China may be able to put forth big, bold plans—the kinds of projects that analysts think of as long term—but the visionary projects of autocrats don’t usually pan out.

Yes, democratic governments are obligated to answer to their citizens on regular intervals and are sensitive to public opinion—that’s actually democracies’ greatest source of strength. Democratic leaders have a harder time advancing big, bold agendas, but the upside of that difficulty is that the plans that do make it through the system have been carefully considered and enjoy domestic support. Historically speaking, once a democracy comes up with a successful strategy, it sticks with the plan, even through a succession of leadership.

Washington has arguably followed the same basic, three-step geopolitical plan since 1945. First, the United States built the current, rules-based international system by providing security in important geopolitical regions, constructing international institutions, and promoting free markets and democratic politics within its sphere of influence. Second, it welcomed into the club any country that played by the rules, even former adversaries, like Germany and Japan. And, third, the U.S. worked with its allies to defend the system from those countries or groups that would challenge it, including competitors such as Russia and China, rogue states such as Iran and North Korea, and terrorist networks.

America can pursue long-term strategy in part because it enjoys domestic political stability. While new politicians seek to improve on their predecessor’s policies, the United States is unlikely to see the drastic shifts in strategy that come from the fall of one political system and the rise of another. Democratic elections may be messy, but they’re not as messy as coups or civil wars.

Open societies have many other advantages as well. They facilitate innovation, trust in financial markets, and economic growth. Because democracies tend to be more reliable partners, they are typically skillful alliance builders, and they can accumulate resources without frightening their neighbors. They tend to make thoughtful, informed decisions on matters of war and peace, and to focus their security forces on external enemies, not their own populations. Autocratic systems simply cannot match this impressive array of economic, diplomatic, and military attributes.

David Leonhardt recently wrote in The New York Times, “Chinese leaders stretching back to Deng Xiaoping have often thought in terms of decades.” Commonly cited examples of that long-term thinking include the Belt and Road Initiative, a program that invests in infrastructure overseas; Made in China 2025, an effort to subsidize China’s giant tech companies to become world leaders in 21st-century technologies, such as artificial intelligence; and Beijing’s promise to be a global superpower by 2049.

Since putting in place sound economic reforms in the 1970s, China has seen its economy expand at eye-popping rates, to become the world’s second largest. Many economists predict that China could even surpass the United States within the decade, and some have suggested that China’s model of state-led capitalism will prove more successful, in terms of economic growth, than the U.S. template of free markets and open politics.

I doubt these predictions. Because autocratic leaders are unconstrained and do not have to contend with a legislature or courts, they have an easier time taking their countries in new and radically different directions. Then, when the dictator changes his mind, he can do it again.

Mao’s autocratic China ricocheted from one failed policy to another: the Great Leap Forward, then the Hundred Flowers Campaign, then the Cultural Revolution. Mao aligned with the Soviet Union in 1950 only to nearly fight a nuclear war with Moscow in the next decade. Beginning in the time of Deng Xiaoping, China pursued a fairly constant strategy of liberalizing its economy at home and “hiding its capabilities and biding its time” abroad. But President Xi Jinping abandoned these dictums when he took over. As the most powerful leader since Mao—he has changed China’s constitution to set himself up as dictator for life—he could once again jerk China in several new directions, according to his whims, and back again.

According to the Asia Society, he has stalled or reversed course on eight of 10 categories of economic reform promised by the Chinese Communist Party (CCP) itself. Moreover, Xi is baring China’s teeth militarily, taking contested territory from neighbors in the South China Sea and conducting military exercises with Russia in Europe.

The problem for Beijing is that stalled reforms will stymie its economic potential and its confrontational policies are provoking an international coalition to contain them. The 2017 U.S. National Security Strategy declared great-power competition with China the foremost security threat to the U.S.; the European Union labeled China a “systemic rival”; and Japan, Australia, India, and the United States have formed a new “quad” of powers to balance China in the Pacific.

Furthermore, the plans often cited as evidence of China’s farsighted vision, the Belt and Road Initiative and Made in China 2025, were announced by Xi only in 2013 and 2015, respectively. Both are way too recent to be celebrated as brilliant examples of successful, long-term strategic planning.

A certain level of domestic political stability is a prerequisite for charting a steady strategic course in foreign and domestic affairs. But autocratic regimes are notoriously brittle. While institutionalized political successions in democracies typically lead to changes of policy, political successions in autocracies are likely to result in regime collapse and war. China’s “5,000 years of history” were pockmarked by rebellion, revolution, and new dynasties. Fearing internal threats to domestic political stability—consider the protests this year in Hong Kong and Xinjiang—the CCP spends more on domestic security than on its national defense. If you follow the money, the CCP is demonstrating that the government is more afraid of its own people than of the Pentagon. This domestic fragility will frustrate China’s efforts to design and execute farsighted plans. If threats to Chinese domestic stability were to materialize and the CCP were to collapse tomorrow, for example, Chinese grand strategy could undergo another seismic shift, including possibly opting out of competition with the United States altogether.

Autocracies have other vulnerabilities as well. State-led planning has never produced high rates of economic growth over the long term. Autocrats are poor alliance builders who fight with their supposed allies more than with their enemies. And the highest priority of autocratic security forces is repressing their own people, not defending the country.

The world has undergone drastic changes in just the past few years, but these enduring patterns of international affairs have not. Some fear that Trump’s nationalist tendencies will erode the U.S. position, but the momentum of America’s successful grand strategy has kept the country on a fairly steady course. Despite Trump’s criticism of NATO, for example, two new countries have joined the alliance on his watch, including North Macedonia this week. The coronavirus has upended a sense of security in the U.S., leading many people into the familiar trap of lauding autocratic China’s firm response in contrast to the halting and patchwork measures in the United States. But there is good reason to believe that this assessment will be updated in America’s favor with the benefit of hindsight. Already we are seeing evidence that conditions are much worse in China than CCP officials are letting on and that China’s attempts at international “disaster diplomacy” are backfiring. It has been revealed that the CCP has continually misrepresented the numbers of COVID-19 infections and deaths in China, and European nations have rejected and returned faulty Chinese coronavirus testing kits.

The great political theorist Niccolò Machiavelli considered a similar line of thinking in the 16th century, about whether republics or dictators charted a more stable course. He wrote, “I, therefore, disagree with the common opinion that a populace in power is unstable [and] changeable … The prince … unchecked by laws, will be more … unstable, and imprudent than a populace.”

The U.S. political system certainly has problems. But democracy is the best machine ever invented for generating enormous power, wealth, and prestige on the international stage.

#### Link 1 is space dominance - the balance is delicate in space—abandoning public private military partnerships in space flips it

Broad 21 [(William J, is a science journalist and senior writer.) "How Space Became the Next ‘Great Power’ Contest Between the U.S. and China," 1-24-2021 updated 5-6-2018, https://www.nytimes.com/2021/01/24/us/politics/trump-biden-pentagon-space-missiles-satellite.html] TDI

Among the most important national security issues now facing President Biden is how to contend with the threat that China poses to the American military in space and, by extension, terrestrial forces that rely on the overhead platforms.

The Biden administration has yet to indicate what it plans to do with President Donald J. Trump’s legacy in this area: the Space Force, a new branch of the military that has been criticized as an expensive and ill-advised escalation that could lead to a dangerous new arms race.

Mr. Trump presented the initiative as his own, and it now suffers from an association with him and remains the brunt of jokes on television. But its creation was also the culmination of strategic choices by his predecessors, Presidents George W. Bush and Barack Obama, to counter an emboldened China that raised bipartisan alarm.

“There’s been a dawning realization that our space systems are quite vulnerable,” said Greg Grant, a Pentagon official in the Obama administration who helped devise its response to China. “The Biden administration will see more funding — not less — going into space defense and dealing with these threats.”

The protective goal is to create an American presence in orbit so resilient that, no matter how deadly the attacks, it will function well enough for the military to project power halfway around the globe in terrestrial reprisals and counterattacks. That could deter Beijing’s strikes in the first place. The hard question is how to achieve that kind of strong deterrence.

Lloyd J. Austin III, a retired four-star Army general who was confirmed last week as Mr. Biden’s secretary of defense, told the Senate that he would keep a “laserlike focus” on sharpening the country’s “competitive edge” against China’s increasingly powerful military. Among other things, he called for new American strides in building “space-based platforms” and repeatedly referred to space as a war-fighting domain.

“Space is already an arena of great power competition,” Mr. Austin said, with China “the most significant threat going forward.”

The new administration has shown interest in tapping the innovations of space entrepreneurs as a means of strengthening the military’s hand — what Mr. Austin in his Senate testimony called “partnerships with commercial space entities.” The Obama and Trump administrations both adopted that strategy as a uniquely American way of sharpening the military’s edge.

#### Our claims accurately reflect Chinese attempts at great power competition in space.

Broad 21 [(William J, is a science journalist and senior writer.) "How Space Became the Next ‘Great Power’ Contest Between the U.S. and China," 1-24-2021 updated 5-6-2018, https://www.nytimes.com/2021/01/24/us/politics/trump-biden-pentagon-space-missiles-satellite.html] TDI

For years, the Chinese studied — with growing anxiety — the American military, especially its invasions of Afghanistan in 2001 and Iraq in 2003. The battlefield successes were seen as rooted in space dominance. Planners noted that thousands of satellite-guided bombs and cruise missiles had rained down with devastating precision on Taliban forces and Iraqi defenses.

While the Pentagon’s edge in orbital assets was clearly a threat to China, planners argued that it might also represent a liability.

“They saw how the U.S. projected power,” said Todd Harrison, a space analyst at the Center for Strategic and International Studies, a Washington think tank. “And they saw that it was largely undefended.”

China began its antisatellite tests in 2005. It fired two missiles in two years and then made headlines in 2007 by shattering a derelict weather satellite. There was no explosion. The inert warhead simply smashed into the satellite at blinding speed. The successful test reverberated globally because it was the first such act of destruction since the Cold War.

The whirling shards, more than 150,000 in all, threatened satellites as well as the International Space Station. Ground controllers raced to move dozens of spacecraft and astronauts out of harm’s way.

The Bush administration initially did little. Then, in a show of force meant to send Beijing a message, in 2008, it fired a sophisticated missile to shoot down one of its own satellites.

Beijing conducted about a dozen more tests, including ones in which warheads shot much higher, in theory putting most classes of American spacecraft at risk.

China also sought to diversify its antisatellite force. A warhead could take hours to reach a high orbit, potentially giving American forces time for evasive or retaliatory action. Moreover, the speeding debris from a successful attack might endanger Beijing’s own spacecraft.

In tests, China began firing weak laser beams at satellites and studying other ways to strike at the speed of light. However, all the techniques were judged as requiring years and perhaps decades of development.

Then came the new idea. Every aspect of American space power was controlled from the ground by powerful computers. If penetrated, the brains of Washington’s space fleets might be degraded or destroyed. Such attacks, compared with every other antisatellite move, were also remarkably inexpensive.

In 2005, China began to incorporate cyberattacks into its military exercises, primarily in first strikes against enemy networks. Increasingly, its military doctrine called for ~~paralyzing~~ early attacks.

In 2008, hackers seized control of a civilian imaging satellite named Terra that orbited low, like the military’s reconnaissance craft. They did so twice — first in June and again in October — roaming control circuits with seeming impunity. Remarkably, in both cases, the hackers achieved all the necessary steps to command the spacecraft but refrained from doing so, apparently to reduce their fingerprints.

#### Link 2 is resources - Chinese REM gatekeeping coming now

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](https://www.scmp.com/news/china/diplomacy/article/3122501/china-raises-rare-earth-quotas-goodwill-trade-signal-us) to the Joe Biden administration. But other sources say that China may ultimately ban the export of the rare earths altogether on “[security concerns](https://www.bloomberg.com/news/articles/2021-02-19/china-may-ban-rare-earth-technology-exports-on-security-concerns?sref=QYxyklwO).” What’s really going on here?

There are 17 elements considered [rare earths](https://www.bloomberg.com/news/articles/2021-02-16/why-rare-earths-are-achilles-heal-for-europe-u-s-quicktake) — 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](https://thediplomat.com/2020/02/afghanistans-mineral-resources-are-a-lost-opportunity-and-a-threat/) have assessed that they sit atop $1 trillion to $3 trillion in a wide variety of minerals, including rare earths. Some [estimates](https://www.fraserinstitute.org/article/afghanistans-rare-earth-element-bonanza) 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](https://www.wsj.com/articles/china-trade-fight-raises-specter-of-rare-earth-shortage-11559304000) 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](https://www.state.gov/wp-content/uploads/2019/06/Energy-Resource-Governance-Initiative-ERGI-Fact-Sheet.pdf) 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](https://www.bloomberg.com/opinion/articles/2019-10-30/china-is-determined-to-reshape-the-globe) 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](https://www.bloomberg.com/opinion/articles/2021-02-22/china-weaponizing-rare-earths-technology-will-probably-backfire) 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](https://www.commerce.gov/news/press-releases/2019/06/department-commerce-releases-report-critical-minerals) 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

#### Link 3 is readiness – flexible supremacy requires capitalist expansion – this impact turns the aff

Frankowski 17 [(Paweł, assistant Professor at the Chair of International Relations and Foreign Policy, Institute of Political Science and International Relations, Jagiellonian University) “Outer Space and Private Companies: Consequences for Global Security,” 2017, pg. 133-134] TDI

Literature on privatization of military services has expanded, especially after 2002 and involvement of private companies in Iraqi operation. When appreciating an outlook of different scholars dealing with private military companies it is worth to follow Prado7 and argue that transferring provisions of services to private hands or acquiring from private entities without developing independent system on state’s behalf can be beneficial for the state for at least four reasons. First reason is price, and cost of private provisions could be lower because private companies can provide services with fewer people, with outsourced services, also to third countries. Price of military service, to far extent depends on costs of trained personnel, when private companies hire former soldiers, with completed training before. Moreover, the cost of public security services is based on the benefits coming to soldiers after their years of service. For example for overall military budget of the United States (1 trillion USD), more than 200 billion USD, has been spent for pensioners, veterans’ benefits or retiree health services.

Secondly, the push for private security may result in more efficient usage of financial and human resources, and soldiers may perform more valuable duties.8 Therefore, PMCs can provide better service for the same price or the same services lowering the price. This will allow moving financial resources to another public service or arguing that public money has been better spent. Thirdly, with private security providers, states can avoid lengthy red tape procedures, with for example standardization of military procurements, time for mobilization and deployment. While such problems are important during armed conflict, they have also become more and more important during the planning of infrastructure, using assets, and regulating activity. The demand for more flexible and less troublesome activity in security realm is constantly increasing, both in Europe and in the Western Hemisphere.

Finally, governments may turn for private resources for the lack of choice, when the state does not have necessary technical or material capabilities to provide security services in a timely fashion.9 However, some authors suggest that looking for private solutions in security cannot be analysed in isolation from pressure coming from political processes in larger scale.10 Nevertheless, distinguishing between economic power of private actors, and lack of capacity on behalf of the state, as driving factors for privatization of security services not necessarily answers the question why space assets, crucial for power of any important state in the world politics, are developed by private actors, being to some extent neglected by governments.

#### Space dominance solves nuclear war. Hegemony de-escalates all conflict scenarios.

**Yoo 18** [(Emanuel S. Heller Professor of Law at the University of California, Berkeley, and a visiting scholar at AEI since 2003. He served as a deputy assistant attorney general in the Office of the Legal Counsel of the U.S. Department of Justice from 2001 to 2003, where he worked on constitutional and national security matters, as General Counsel of the U.S. Senate Committee on the Judiciary from 1995-96, and as a law clerk to Justice Clarence Thomas of the U.S. Supreme Court (John, Winning the Space Race, October 15th, <http://www.aei.org/publication/winning-the-space-race/>)] \*edited for offensive language

President Donald Trump’s National Security Strategy set a new course by focusing on rebuilding the domestic economy as central to national security and aiming at “rival powers, Russia and China, that seek to challenge American influence, values, and wealth.” Critics observed that the White House seemed to reverse past presidents’ emphasis on advancing democracy and liberal values and elevating American sovereignty over international cooperation.1

Less noticed but perhaps equally revisionist, the Trump administration reversed its predecessor’s course on outer space. Even as American military and civilian networks increased their dependence on satellites, the Obama White House had deferred to European efforts to develop a space “Code of Conduct.” The Trump administration instead relies on unilateralism: “any harmful interference with or an attack upon critical components of our space architecture that directly affects this vital US interest will be met with a deliberate response at a time, place, manner, and domain of our choosing.” On June 18, 2018, President Trump announced a new branch of the military: the United States Space Force.

Control of space already underlies the United States’ predominance in nuclear and conventional warfare. Intercontinental and submarine launched ballistic missiles, the heart of the US nuclear deterrent, pass through space to reach their targets. Reconnaissance satellites monitor rival nations for missile launches, strategic deployments, and major troop movements. Communications satellites provide the high-speed data transfer that stitches the US Armed Forces together, from generals issuing commands to pilots controlling drones. With economic rivals such as China and India, and rogue states like Iran and North Korea developing space programs that pursue similar missions, the importance of space technology to US interests and international peace will only increase.

Space not only enhances military operations, but also exposes new vulnerabilities. Anti-satellite missiles can make an opponent’s space-based communication networks easier to disable than purely ground-based systems. Losing reconnaissance satellites could blind gut the US’s strategic monitoring and disabling the GPS system would degrade its operational and tactical abilities. Space invites asymmetric warfare because anti-satellite attacks could even the technological odds against western powers that have become dependent on information-enhanced operations. As the nation most dependent on space-based networks, **the United States may have the most to lose.**

Strategists divide competition in this emerging arena into four categories. First is space support, which refers to the launching and management of satellites in orbit. The second is force enhancement, which seeks to improve the effectiveness of terrestrial military operations. The importance of these basic missions is well-established. Indeed, the very first satellites performed a critical surveillance role in the strategic competition between the United States and the Soviet Union. Spy satellites replaced dangerous aerial reconnaissance flights in providing intelligence on rival nuclear missile arsenals. Later space-based systems provided the superpowers with early warnings of ballistic missile launches. These programs bolstered stability and aided progress in nuclear arms reduction talks. Satellites created “national technical means” of verification: the capability to detect compliance with arms control treaties without the need to intrude on territorial sovereignty. They reduced the chances of human miscalculation by increasing the information available to decision makers about the intentions of other nations.

The US has made the most progress in the second mission, force enhancement, by using space to boost conventional military abilities. GPS enables the exact deployment of units, the synchronization of combat maneuvers, clearer identification of friend and foe, and precision targeting. In its recent wars, the US has used satellite information to find the enemy, even to the level of individual leaders, deploy on-station air or ground forces, and fire precision-guided munitions to destroy targets with decreased risk of collateral damage. American military leaders have argued that continued integration of space and conventional strike capabilities will allow the US to handle the twenty-first century threats—**terrorism, rogue nations, asymmetric warfare, and regional challengers**—more effectively with less resources.

The third and fourth space missions focus on space itself. Space control involves freely using space to one’s benefit while denying access to opponents. Conceptually akin to air superiority, space control begins with defense: hardening command, control, communications and reconnaissance facilities to prevent enemy interference. It includes shielding satellite components, giving them the ability to avoid collisions, disguising their location, and arming satellites to destroy attackers.2

Such forms of active defense can blend into the fourth mission: space force. Space force envisions weapons systems based in orbit that can strike targets on the ground, in the air, or in space. In an important respect, **space control and force application demand a greater exercise of power than air or naval superiority**. While air and naval superiority can be achieved through rapid deployment of assets for the duration of a conflict, dominance in space requires a broader geographic scope and longer-term duration—a constellation of space weapons would circle the globe for years.3It is in this realm that new weapons technologies are emerging, prompting questions of whether space-faring nations like the United States should treat space as another area for great power competition. “The reality of confrontation in space politics pervades the reality of the ideal of true cooperation and political unity in space, which has never been genuine, and in the near term seems unlikely,” argues Everett Dolman.4 The US certainly has taken such concerns to heart. In the decade ending in 2008, for example, the US increased its space budget from $33.7 billion to $43 billion in constant dollars. The entirety of this spending increase went to the Defense Department.

These weapons systems take several forms. Already operational, the US national missile defense system relies upon satellites to track ballistic missile launches and help guide ground-launched kill vehicles. Space-based lasers, like those in development by the US today, remain the only viable method to destroy ballistic missiles in their initial boost phase, when they are easiest to destroy.

American reliance on space-based intelligence and communication for its startling conventional military advantages has made its satellites a **target of potential rivals**. In 2007, for example, China tested a ground-launched missile to destroy a weather satellite in low earth orbit—the same region inhabited by commercial satellites. “For countries that can never win a war with the United States by using the methods of tanks and planes, attacking an American space system may be an irresistible and most tempting choice,” Chinese analyst Wang Hucheng has written, in a much-noticed comment.5

Though the 2007 ASAT (Anti-satellite weapon) test sparked international controversy, China had only followed the footsteps of the superpowers. The United States had carried out a primitive anti-satellite weapon test as early as 1959. During the Eisenhower, Kennedy, and Johnson administrations, the US continued to test anti-ballistic missile systems in an anti-satellite role. The Soviet Union followed suit. The superpowers temporarily dropped these programs with the signing of the Anti-Ballistic Missile Treaty of 1972, only to restart them in the 1990s. As rivals and rogue nations begin to mimic American development of force enhancement and space control abilities, the US will naturally develop anti-satellite weapons to restore its advantage and deter attacks. Such anti-satellite weapons may become even more common due to the vulnerability of satellites and the spread of ballistic missile technology.

Critics question whether the benefits of space weapons are worth the possibility of strategic instability. They argue that only arms control agreements and international institutions can head off a disastrous military race in space. But space will become an arena for pre-emptive deterrence. Every environment—land, air, water, and now space—has become an arena for combat. The US could deter destabilizing space threats from rivals by advancing its defensive capabilities. Some realist strategists argue not just in favor of protecting US space assets, but seeking US space supremacy. Because great power competition has already spread to space, the United States should capitalize on its early lead to control the ultimate high ground, that of outer space.

Criticisms of space weapons overlook the place of force in international politics. Advances in space technology can have greater humanitarian outcomes that outweigh concerns with space weapons themselves. Rather than increase the likelihood of war, space-based systems reduce the probability of destructive conflicts and limit both combatant and civilian casualties. Reconnaissance satellites reduce the chances that war will break out due to misunderstanding of a rival’s deployments or misperception of another nation’s intentions. Space-based communications support the location of targets for smart weapons on the battlefield, which lower harm to combatants and civilians. Space-based weapons may bring unparalleled speed and precision to the strategic use of force that could reduce the need for more harmful, less discriminate conventional weapons that spread greater destruction across a broader area. New weapons might bring war to a timely conclusion or even help nations **avoid armed conflict in the first place**. We do not argue that one nation’s overwhelming superiority in arms will prevent war from breaking out, though deterrence can have this effect. At the very least, space weapons, like other advanced military technologies, could help nations settle their disputes without resort to wider armed conflict, and hence bolster, rather than undermine, international security.

#### 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.

#### Pursuit inevitable---decline causes global war

Beckley 15 (Michael Beckley is a research fellow in the International Security Program at Harvard Kennedy School’s Belfer Center for Science and International Affairs., “The Myth of Entangling Alliances Michael Beckley Reassessing the Security Risks of U.S. Defense Pacts”, <http://live.belfercenter.org/files/IS3904_pp007-048.pdf>)

The finding that U.S. entanglement is rare has important implications for international relations scholarship and U.S. foreign policy. For scholars, it casts doubt on classic theories of imperial overstretch in which great powers exhaust their resources by accumulating allies that free ride on their protection and embroil them in military quagmires.22 The U.S. experience instead suggests that great powers can dictate the terms of their security commitments and that allies often help their great power protectors avoid strategic overextension.

For policy, the rarity of U.S. entanglement suggests that the United States’ current grand strategy of deep engagement, which is centered on a network of standing alliances, does not preclude, and may even facilitate, U.S. military restraint. Since 1945 the United States has been, by some measures, the most militarily active state in the world. The most egregious cases of U.S. overreach, however, have stemmed not from entangling alliances, but from the penchant of American leaders to define national interests expansively, to overestimate the magnitude of foreign threats, and to underestimate the costs of military intervention. Scrapping alliances will not correct these bad habits. In fact, disengaging from alliances may unleash the United States to intervene recklessly abroad while leaving it without partners to share the burden when those interventions go awry.

#### For them to win an impact turn, they need to defend and robustly define their alternative to US primacy

Kagan ’18 - Stephen & Barbara Friedman Senior Fellow with the Project on International Order and Strategy in the Foreign Policy program at Brookings. Robert Kagan, “The World America Made—and Trump Wants to Unmake,” POLITICO Magazine, September 28, 2018, <https://politi.co/2zB3qCg>.

So, yes, the liberal order has been flawed, with its share of failure and hypocrisy. Liberal goals have sometimes been pursued by illiberal means. Power, coercion and violence have played a big part. The order has been the product of American hegemony and it has also served to reinforce that hegemony. But to note these facts is hardly to condemn the order. No order of any kind can exist without some element of hegemony. The Roman order was based on the hegemony of Rome; the British order of the 18th and 19th centuries was based on the hegemony of the Royal Navy; such order as existed briefly in Europe after the defeat of Napoleon—the so-called Concert of Europe—rested on the collective hegemony of the four victorious great powers. The idea of a peaceful, stable multipolar world where no power or powers enjoy predominance is a dream that exists only in the minds of one-world idealists and international relations theorists.

The same is true of those who would condemn the liberal world order because of the persistence of violence, coercion, hypocrisy, selfishness, stupidity and all the other evils and foibles endemic to human nature. Perhaps in the confines of academia it is possible to imagine a system of international relations where our deeply flawed humanness is removed from the equation. But in the real world, even the best and most moral of international arrangements are going to have their dark, immoral aspects.

The question is, as always, compared to what? Patrick Porter, the author of a widely discussed critique of the liberal world order, acknowledges that “if there was to be a superpower emerging from the rubble of world war in midcentury, we should be grateful it was the United States, given the totalitarian alternatives on offer. Under America’s aegis, there were islands of liberty where prosperous markets and democracies grew.” Indeed, that would seem to be the key point. At any given time there are only so many alternatives, and usually the choice is between the bad and the worse.

Are the alternatives on offer so much better now? Graham Allison, dismissing any return to the “imagined past” when the United States shaped an international liberal order, proposes that we instead make the world “safe for diversity” and accommodate ourselves to “the reality that other countries have contrary views about governance and seek to establish their own international orders governed by their own rules.” Others, such as Peter Beinart, similarly argue that we should accommodate Russian and Chinese demands for their own spheres of interest, even if that entails the sacrifice of sovereign peoples such as Ukrainians and Taiwanese. This wonderfully diverse world would presumably be run partly by Xi Jinping, partly by Vladimir Putin, and partly, too, by the Ayatollah Khamenei and by Kim Jong Un, who would also like to establish orders governed by their own rules. We have not enjoyed such diversity since the world was run partly by Hitler, Stalin and Mussolini.

The idea that this is the solution to our problems is laughable. Porter points out American policy has led to “multiplying foreign conflicts” and put the United States “on a collision course with rivals.” Setting aside the fact that multiplying foreign conflicts and collisions between rivals is the natural state of international relations in any era, it is hard for any student of history to imagine that these problems would lessen if only we returned to the competitive multipolar world of the 19th and early 20th centuries. To suggest that there could be a world with no collisions and no foreign conflicts, if only the United States would pursue an intelligent policy, is the very opposite of realism.

Strikingly absent from all these critiques of the liberal world order, too, is any suggestion of an alternative approach. The critiques end with lists of questions that need to be answered. Allison calls for a “surge of strategic thinking.” Others call for “new thinking” about “difficult trade-offs.” Some critics even complain that so long as people continue to talk about a U.S.-dominated liberal order, it will be “impossible for us to construct a reasonable alternative for the future.”

The most the critiques will offer are suggestions that sound more like attitudes than policies. They throw around words like “realism,” “restraint” and “retrenchment.” Allison proposes that the United States “limit its efforts to ensuring sufficient order abroad.” Beinart comes closest to offering an alternative, but he clearly has not yet thought it through fully. He wants to grant other powers their spheres of interest, for instance, but he mentions only Russia and China. Does this mean Russia should be granted full sway in, say, Ukraine, the Balkans, the Baltics and the Caucuses? Should China be able to impose its will on the Philippines and Vietnam?

And what of the other great powers? Does Japan get its own sphere of interest? Does India? Do Germany, France and Britain? They all had their spheres a century ago, and of course it was the clashes over those inevitably overlapping spheres that led to all the great wars. Is Beinart suggesting we should return to that past?

Of course, we may be moving toward that world, anyway. That is the implication of Trump’s “America First” foreign policy philosophy, his attacks on “globalism” and his recent suggestion that all nations look out strictly for themselves. Trump’s speech at the U.N. was an invitation to global anarchy, a struggle of all against all. His boasting about American power put the world on notice that the United States was turning from supporter of a liberal order to rogue superpower. This breakdown may be our future, but it seems odd to choose that course as a deliberate strategy, as Allison and others seem to do. Little wonder that they don’t wish to spell out the details of their alternative but prefer to carp at the inevitable failures and imperfections of the liberal world we have. As John Hay once remarked, “Our good friends are wiser when they abuse us for what we do, than when they try to say what ought to be done.”

No honest person would deny that the liberal world order has been flawed and will continue to be flawed in the future. The League of Nations was also flawed, as was Woodrow Wilson’s vision of collective security. Yet the world would have been better had the United States joined in upholding it, given the genuine alternative. The enduring truth about the liberal world order is that, like Churchill’s comment about democracy, it is the worst system—except for all the others.

### 3

#### The Supreme Court of the United States should rule in favor of a prohibition on the appropriation of outer space by private entities. Other states should prohibit the appropriation of outer space by private entities.

#### “Resolved:” refers to a legislative debate – congress is the only legislative US body – its normal means

Louisiana State Legislature 16, “Glossary of Legislative Terms,” http://www.legis.state.la.us/glossary2.htm

#### Resolution: A legislative instrument that generally is used for making declarations, stating policies, and making decisions where some other form is not required. A bill includes the constitutionally required enacting clause; a resolution uses the term "resolved". Not subject to a time limit

### 4

#### Infrastructure bill is on the brink – bipartisan support is key

Pramuk and Frank 7/22 [(Jacob, politics reporter for CNBC BA from Harvard) (Thomas, BA in journalism and political sciences, CNBC economics and policy writer) “Bipartisan infrastructure plan could get another chance after Senate setback,” CNBC, July 22, 2021, <https://www.cnbc.com/2021/07/22/biden-infrastructure-plan-senate-could-vote-on-bipartisan-bill.html>] TDI

A failed Senate test vote dealt a blow to the bipartisan infrastructure framework, but the plan could have a chance to move forward again as soon as Monday. The Republicans working to craft the $1.2 trillion proposal voted Wednesday against advancing it as they draft final legislation. Despite the setback, the 22 Democratic and GOP senators drawing up the plan said they hope to release and push ahead with a bill “in the coming days.” The vote leaves President [Joe Biden](https://www.cnbc.com/video/2019/04/25/joe-biden-enters-2020-presidential-race.html)’s top legislative priority in flux. If the bipartisan deal to revamp transportation, broadband and utilities falls apart, Democrats will have to consider whether to pair physical infrastructure plans with their separate $3.5 trillion package to address climate change, child care and health care. Biden considers both plans critical to boosting the economy and preparing the country to face a warming planet. Asked Wednesday during a CNN town hall, Biden said he believes the Senate will vote Monday to advance the bipartisan framework he negotiated with senators. Senate Majority Leader Chuck Schumer, D-N.Y., has said he wants to make progress on both fronts before the chamber leaves Washington in August. He aims to pass the bipartisan infrastructure plan and approve the budget resolution that would allow Democrats to get their bill through the evenly split Senate with a simple majority. “My colleagues on both sides should be assured: as majority leader I have every intention of passing both major infrastructure packages: the bipartisan infrastructure framework, and a budget resolution with reconciliation instructions, before we leave for the August recess,” he said Thursday. Ohio Sen. Rob Portman, the lead Republican negotiator in the bipartisan group, has said Democrats’ plans to move forward with the reconciliation measure will not affect his support for the infrastructure bill. “Well, it’s not linked, not just with regard to the negotiators, but with regard to the White House and with regard to our leadership over here,” he told CNBC on Wednesday. “It’s totally unlinked. It has nothing to do with one another. They’re going to go ahead with reconciliation no matter what, Joe. And they always were, and we understand that.”Portman said he thinks “we’ll be ready to go” with the bipartisan plan on Monday.

#### The plan’s partisan nature splits the Senate down the middle – wrecks any shot at bipartisanship on infrastructure

Graham 21 [Jennifer: Reporter at Deseret News; “The Optics of Billionaires in space”; July 15, 2021; <https://www.deseret.com/2021/7/15/22577444/the-optics-of-billionaires-in-space-jeff-bezos-richard-branson-virgin-galactic>] TDI

Critics have slammed Branson and Bezos for “not reading the room,” saying that this is an especially cringeworthy time to be joyfully cavorting in space as income inequality rises, the West is burning, the Taliban is advancing, and COVID-19 cases are edging upward again. And predictably, there is a partisan divide on the subject, with Sen. Bernie Sanders, I-Vt., in March chiding Tesla founder Elon Musk for pledging to help make human life “multiplanetary.” (Musk’s SpaceX wants to colonize Mars.) Calling today’s income inequality “obscene,” Sanders said on Twitter, “Space travel is an exciting idea, but right now we need to focus on Earth and create a progressive tax system so that children don’t go hungry, people are not homeless and all Americans have health care.” However, essayists in the conservative website National Review Online have lauded private ventures into space, saying that they have already brought the cost of space exploration down. Before SpaceX, the U.S. was paying Russia $90 million to get one American astronaut to the International Space Station, Andrew Follett wrote for NRO. Reusable rockets developed by SpaceX can do that for $55 million, he said, adding “Musk has demonstrated that the American private sector can do what its government cannot.” Richard Branson hovers weightlessly inside Virgin Galactic’s VSS Unity space plane during its flight into space on Sunday, June 11, 2021. Richard Branson hovers weightlessly inside Virgin Galactic’s VSS Unity space plane during its flight into space on Sunday, June 11, 2021. Virgin Galactic And Brandon J. Weichert argued in NRO that that the privatization of space is a critical component of American competition with China. “Whichever nation wins the new space race will determine the future of the earth below,” Weichert wrote. He added, “Whatever one’s opinion about Bezos or Musk, the fact is that their private space companies are inspiring greater innovation today in the space sector after years of its being left in the sclerotic hands of the U.S. government.” In a recent survey about Americans’ views of space exploration, Pew found that Democrats are more likely than Republicans to say the government should be involved in space ventures. “Conversely, Republicans (41%) are more likely than Democrats (28%) to say private companies will ensure that enough progress is made.”

#### Infrastructure investment beats China in the tech-race

Anderson 2/22 [(Norman, Chairman & CEO of CG/LA Infrastructure, a firm focused on global infrastructure project development, driving productivity across countries, and maximizing the benefits of infrastructure for people in the U.S. and around the world) “The Biden Infrastructure Plan - 5 Actions To Jolt Us Awake, Now,” *Forbes*, 2-22-2021, <https://www.forbes.com/sites/normananderson/2021/02/22/the-biden-infrastructure-plan5-actions-to-jolt-us-awake-now/?sh=1d72f17b2ebd>] TDI

The Focus Needs to be on Creating Project Results. Producing immediate results is necessary for our political system - how does this work, when the average highway project takes 9.5 years to move through the approval process, and 4.5 years after that for results - say cars, or autonomous trucks, zipping down the freeway? Lucky for us we are not starting from scratch - we have an enormous pent-up backlog of projects that can start showing results… this year.

By results I don’t just mean creating new and well-paying jobs, or saving the thousands of struggling professional service firms that are in danger of turning off their computers, rather what I mean is addressing the Administration’s priorities in the way that infrastructure professionals think about investment (yes, these people exist - and they are as smart as economists!):

* Brownfield projects - you can revitalize Army Corps reservoirs, or put 5G on interstate highways, or authorize the Gateway tunnel, or make rural broadband really fast, right now, tomorrow,
* Greenfield projects - infrastructure is a ‘thinking short, thinking long’ business, so while you are speeding up investment in ultra high voltage transmission lines, you can also get moving on the Brent Spence Bridge, and by the end of 2024 you can get butts in seats on the Dallas/Houston high speed rail project, and the Great Lakes Basin highway project, and
* New Infrastructure - this is the low-hanging fruit, and the battlefield between China and the U.S. for global influence, period. Largely private, and almost wholly environmentally friendly, this is where our economy has tremendous strengths that we are not seeing. It’s also the battlefield - AI, Machine Learning, 5G, Autonomy, High Voltage Transmission, along with high speed rail - that is critical to the achievement of every single goal that our country can set for the future.

Every infrastructure person - and every citizen - across the country can tell you the five projects that they’d like to see happen. The map above is a 500 project stimulus map that my firm, CG/LA infrastructure, created by polling people around the country. Why not engage citizens now, and show results this year, picking up steam in 2022 and in 2023? Infrastructure is 5G/AI and Electrification, and it Needs a Budget. The infrastructure of the future is going to be as different as cellular is from fixed line telephony, and that future is coming at us extremely fast… The 2020’s will be a decade of disruption - the greatest period of disruption in 100 years or more. We can either continue our course, and try and weather the storm, or we can make the kind of strategic investments that will allow us to lead - with enormous environmental and equity benefits, coupled with the kind of productivity increases that come from rapid innovation. There couldn’t be a bigger difference between the way that China is going about new infrastructure creation, with their top down, devil may care about the individual approach, and our celebration of the individual. The problem - in democracies around the world - is that we are absent, and so China is winning. Leaders Set Goals, Achieve Goals - and Create Trust. Who is in charge of infrastructure? Without an infrastructure office it is hard to tell, and this is a fatal flaw problem. The presidency needs to to bring everyone together to discuss what world we want to create, what our infrastructure vision going forward will look like. This needs to happen fast - and then we need to set goals that we all agree to: projects completed, time to project approvals, life expectancy, reduction of traffic congestion, reduction in carbon by sector, even increases in infrastructure equity. I am a business guy - everything is opportunity. Then we (all of us) need to row hard in the same direction, and achieve those goals. Action This Day. If we can get this right, the results for all of us will be extraordinary - domestic growth, environmental leadership and an injection of strength into the global democratic model. Unimaginable things can quickly be envisioned, and developed, including the return of manufacturing (advanced and distributed manufacturing) to our newly digitized and electrified heartland. Infrastructure can bring us together, but it is a very heavy lift - as in war, the first thing a president things about in the morning, and the last thing he thinks about before going to bed at night.

#### Chinese tech leadership leads to nuclear war

Kroenig 18 (Matthew, Deputy Director for Strategy, Scowcroft Center for Strategy and Security Associate Professor of Government and Foreign Service, Georgetown University) “Will disruptive technology cause nuclear war?” *BAS*, Nov 12, 2018, <https://thebulletin.org/2018/11/will-disruptive-technology-cause-nuclear-war>

Recently, analysts have argued that emerging technologies with military applications may undermine nuclear stability (see here, here, and here), but the logic of these arguments is debatable and overlooks a more straightforward reason why new technology might cause nuclear conflict: by upending the existing balance of power among nuclear-armed states. This latter concern is more probable and dangerous and demands an immediate policy response. For more than 70 years, the world has avoided major power conflict, and many attribute this era of peace to nuclear weapons. In situations of mutually assured destruction (MAD), neither side has an incentive to start a conflict because doing so will only result in its own annihilation. The key to this model of deterrence is the maintenance of secure second-strike capabilities—the ability to absorb an enemy nuclear attack and respond with a devastating counterattack. Recently analysts have begun to worry, however, that new strategic military technologies may make it possible for a state to conduct a successful first strike on an enemy. For example, Chinese colleagues have complained to me in Track II dialogues that the United States may decide to launch a sophisticated cyberattack against Chinese nuclear command and control, essentially turning off China’s nuclear forces. Then, Washington will follow up with a massive strike with conventional cruise and hypersonic missiles to destroy China’s nuclear weapons. Finally, if any Chinese forces happen to survive, the United States can simply mop up China’s ragged retaliatory strike with advanced missile defenses. China will be disarmed and US nuclear weapons will still be sitting on the shelf, untouched. If the United States, or any other state acquires such a first-strike capability, then the logic of MAD would be undermined. Washington may be tempted to launch a nuclear first strike. Or China may choose instead to use its nuclear weapons early in a conflict before they can be wiped out—the so-called “use ‘em or lose ‘em” problem. According to this logic, therefore, the appropriate policy response would be to ban outright or control any new weapon systems that might threaten second-strike capabilities. This way of thinking about new technology and stability, however, is open to question. Would any US president truly decide to launch a massive, bolt-out-of-the-blue nuclear attack because he or she thought s/he could get away with it? And why does it make sense for the country in the inferior position, in this case China, to intentionally start a nuclear war that it will almost certainly lose? More important, this conceptualization of how new technology affects stability is too narrow, focused exclusively on how new military technologies might be used against nuclear forces directly. Rather, we should think more broadly about how new technology might affect global politics, and, for this, it is helpful to turn to scholarly international relations theory. The dominant theory of the causes of war in the academy is the “bargaining model of war.” This theory identifies rapid shifts in the balance of power as a primary cause of conflict. International politics often presents states with conflicts that they can settle through peaceful bargaining, but when bargaining breaks down, war results. Shifts in the balance of power are problematic because they undermine effective bargaining. After all, why agree to a deal today if your bargaining position will be stronger tomorrow? And, a clear understanding of the military balance of power can contribute to peace. (Why start a war you are likely to lose?) But shifts in the balance of power muddy understandings of which states have the advantage. You may see where this is going. New technologies threaten to create potentially destabilizing shifts in the balance of power. For decades, stability in Europe and Asia has been supported by US military power. In recent years, however, the balance of power in Asia has begun to shift, as China has increased its military capabilities. Already, Beijing has become more assertive in the region, claiming contested territory in the South China Sea. And the results of Russia’s military modernization have been on full display in its ongoing intervention in Ukraine. Moreover, China may have the lead over the United States in emerging technologies that could be decisive for the future of military acquisitions and warfare, including 3D printing, hypersonic missiles, quantum computing, 5G wireless connectivity, and artificial intelligence (AI). And Russian President Vladimir Putin is building new unmanned vehicles while ominously declaring, “Whoever leads in AI will rule the world.” If China or Russia are able to incorporate new technologies into their militaries before the United States, then this could lead to the kind of rapid shift in the balance of power that often causes war. If Beijing believes emerging technologies provide it with a newfound, local military advantage over the United States, for example, it may be more willing than previously to initiate conflict over Taiwan. And if Putin thinks new tech has strengthened his hand, he may be more tempted to launch a Ukraine-style invasion of a NATO member. Either scenario could bring these nuclear powers into direct conflict with the United States, and once nuclear armed states are at war, there is an inherent risk of nuclear conflict through limited nuclear war strategies, nuclear brinkmanship, or simple accident or inadvertent escalation. This framing of the problem leads to a different set of policy implications. The concern is not simply technologies that threaten to undermine nuclear second-strike capabilities directly, but, rather, any technologies that can result in a meaningful shift in the broader balance of power. And the solution is not to preserve second-strike capabilities, but to preserve prevailing power balances more broadly. When it comes to new technology, this means that the United States should seek to maintain an innovation edge. Washington should also work with other states, including its nuclear-armed rivals, to develop a new set of arms control and nonproliferation agreements and export controls to deny these newer and potentially destabilizing technologies to potentially hostile states. These are no easy tasks, but the consequences of Washington losing the race for technological superiority to its autocratic challengers just might mean nuclear Armageddon.

### Case

No solvency analytic

No alt analytic

#### Global capitalism k2 to peace – empirics prove.

**Kollias 17** [(Christos, Professor of Applied Economics at the University of Thessaly, Suzanna-Maria Paleologou), “The Globalization and Peace Nexus: Findings Using Two Composite Indices”, Social Indicators Research, Volume 131, Issue 3, pg. 871-888] TDI

Using two composite indices that quantify the level of peacefulness (internal and external) in a country as well as the degree of its integration in the globalization process, this paper empirically examined the nexus between the two. To the best of our knowledge, this nexus has not been examined before using the composite GPI and KOF indices. Both allow for a variety of channels through which globalization can affect the level of peacefulness in a country and vice versa i.e. increasing levels of internal and external peace that facilitate the integration of a country in the globalization process in all its facets: economic, political, social. The empirical investigation involved a sample of 132 countries over the period 2008–2012 and employed panel estimation techniques. In line with the findings of other studies such as Huang and Throsby (2011), Seitz et al. (2015), the obtained results seem to offer mild evidence in support of a peace promoting hypothesis but these are weakened by the finding that lower levels of peacefulness can coexist with a higher than the sample average integration in the globalization process. Clearly, the findings reported herein must be viewed with caution given the limited time period for which the nexus was estimated. Although the timeframe of the preceding analysis was driven by data availability, it nevertheless could bear an impact on the results obtained and hence they should be treated cautiously especially in view of the fact that globalization and the achievement of peace are long terms processes. Furthermore, their validity also depends upon the ability of the two composite indices to quantify on the one hand the multidimensionality of globalization and on the other hand peace, a particularly difficult to define state that affects many spheres. The construction of the indexes, the indicators used to derive the overall composite globalization and peace index, the weights assigned to each of the indicators included in the construction are factors that can clearly affect the findings and the inferences drawn. Further analysis that proves into these issues and addresses the sensitivity of the results to such factors is clearly warranted before more robust assertions can be made. Nevertheless, given these words of warning and in view of the absence of better and more comprehensive indicators, the results reported above may be treated as offering a further useful insight into an admittedly complex relationship that nevertheless warrants more detailed empirical scrutiny.

#### Extinction from warming requires 12 degrees and intervening actors will solve before then

Farquhar 17 [(Sebastian, leads the Global Priorities Project (GPP) at the Centre for Effective Altruism) “Existential Risk: Diplomacy and Governance,” 2017, <https://www.fhi.ox.ac.uk/wp-content/uploads/Existential-Risks-2017-01-23.pdf>] TDI

The most likely levels of global warming are very unlikely to cause human extinction.15 The existential risks of climate change instead stem from tail risk climate change – the low probability of extreme levels of warming – and interaction with other sources of risk. It is impossible to say with confidence at what point global warming would become severe enough to pose an existential threat. Research has suggested that warming of 11-12°C would render most of the planet uninhabitable,16 and would completely devastate agriculture.17 This would pose an extreme threat to human civilisation as we know it.18 Warming of around 7°C or more could potentially produce conflict and instability on such a scale that the indirect effects could be an existential risk, although it is extremely uncertain how likely such scenarios are.19 Moreover, the timescales over which such changes might happen could mean that humanity is able to adapt enough to avoid extinction in even very extreme scenarios. The probability of these levels of warming depends on eventual greenhouse gas concentrations. According to some experts, unless strong action is taken soon by major emitters, it is likely that we will pursue a medium-high emissions pathway.20 If we do, the chance of extreme warming is highly uncertain but appears non-negligible. Current concentrations of greenhouse gases are higher than they have been for hundreds of thousands of years,21 which means that there are significant unknown unknowns about how the climate system will respond. Particularly concerning is the risk of positive feedback loops, such as the release of vast amounts of methane from melting of the arctic permafrost, which would cause rapid and disastrous warming.22 The economists Gernot Wagner and Martin Weitzman have used IPCC figures (which do not include modelling of feedback loops such as those from melting permafrost) to estimate that if we continue to pursue a medium-high emissions pathway, the probability of eventual warming of 6°C is around 10%

,23 and of 10°C is around 3%.24 These estimates are of course highly uncertain. It is likely that the world will take action against climate change once it begins to impose large costs on human society, long before there is warming of 10°C. Unfortunately, there is significant inertia in the climate system: there is a 25 to 50 year lag between CO2 emissions and eventual warming,25 and it is expected that 40% of the peak concentration of CO2 will remain in the atmosphere 1,000 years after the peak is reached.26 Consequently, it is impossible to reduce temperatures quickly by reducing CO2 emissions. If the world does start to face costly warming, the international community will therefore face strong incentives to find other ways to reduce global temperatures.

#### Life is a prerequisite to generate value and ponder secondary questions of ethics

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