# 1

#### Space Commercialization drives Tech Innovation in the Status Quo – it provides a unique impetus.

Hampson 17 Joshua Hampson 1-25-2017 “The Future of Space Commercialization” <https://republicans-science.house.gov/sites/republicans.science.house.gov/files/documents/TheFutureofSpaceCommercializationFinal.pdf> (Security Studies Fellow at the Niskanen Center)//Elmer

The size of the space economy is far larger than many may think. In 2015 alone, the global market amounted to $323 billion. Commercial infrastructure and systems accounted for 76 percent of that 9 total, with satellite television the largest subsection at $95 billion. The global space launch market’s 10 11 share of that total came in at $6 billion dollars. It can be hard to disaggregate how space benefits 12 particular national economies, but in 2009 (the last available report), the Federal Aviation Administration (FAA) estimated that commercial space transportation and enabled industries generated $208.3 billion in economic activity in the United States alone. Space is not just about 13 satellite television and global transportation; while not commercial, GPS satellites also underpin personal navigation, such as smartphone GPS use, and timing data used for Internet coordination.14 Without that data, there could be problems for a range of Internet and cloud-based services.15 There is also room for growth. The FAA has noted that while the commercial launch sector has not grown dramatically in the last decade, there are indications that there is latent demand. This 16 demand may catalyze an increase in launches and growth of the wider space economy in the next decade. The Satellite Industry Association’s 2015 report highlighted that their section of the space economy outgrew both the American and global economies. The FAA anticipates that growth to 17 continue, with expectations that small payload launch will be a particular industry driver.18 In the future, emerging space industries may contribute even more the American economy. Space tourism and resource recovery—e.g., mining on planets, moons , and asteroids—in particular may become large parts of that industry. Of course, their viability rests on a range of factors, including costs, future regulation, international problems, and assumptions about technological development. However, there is increasing optimism in these areas of economic production. But the space economy is not just about what happens in orbit, or how that alters life on the ground. The growth of this economy can also contribute to new innovations across all walks of life. Technological Innovation Innovation is generally hard to predict; some new technologies seem to come out of nowhere and others only take off when paired with a new application. It is difficult to predict the future, but it is reasonable to expect that a growing space economy would open opportunities for technological and organizational innovation. In terms of technology, the difficult environment of outer space helps incentivize progress along the margins. Because each object launched into orbit costs a significant amount of money—at the moment between $27,000 and $43,000 per pound, though that will likely drop in the future —each 19 reduction in payload size saves money or means more can be launched. At the same time, the ability to fit more capability into a smaller satellite opens outer space to actors that previously were priced out of the market. This is one of the reasons why small, affordable satellites are increasingly pursued by companies or organizations that cannot afford to launch larger traditional satellites. These small 20 satellites also provide non-traditional launchers, such as engineering students or prototypers, the opportunity to learn about satellite production and test new technologies before working on a full-sized satellite. That expansion of developers, experimenters, and testers cannot but help increase innovation opportunities. Technological developments from outer space have been applied to terrestrial life since the earliest days of space exploration. The National Aeronautics and Space Administration (NASA) maintains a website that lists technologies that have spun off from such research projects. Lightweight 21 nanotubes, useful in protecting astronauts during space exploration, are now being tested for applications in emergency response gear and electrical insulation. The need for certainty about the resiliency of materials used in space led to the development of an analytics tool useful across a range of industries. Temper foam, the material used in memory-foam pillows, was developed for NASA for seat covers. As more companies pursue their own space goals, more innovations will likely come from the commercial sector. Outer space is not just a catalyst for technological development. Satellite constellations and their unique line-of-sight vantage point can provide new perspectives to old industries. Deploying satellites into low-Earth orbit, as Facebook wants to do, can connect large, previously-unreached swathes of 22 humanity to the Internet. Remote sensing technology could change how whole industries operate, such as crop monitoring, herd management, crisis response, and land evaluation, among others. 23 While satellites cannot provide all essential information for some of these industries, they can fill in some useful gaps and work as part of a wider system of tools. Space infrastructure, in helping to change how people connect and perceive Earth, could help spark innovations on the ground as well. These innovations, changes to global networks, and new opportunities could lead to wider economic growth.

#### Strong Innovation solves Extinction.

Matthews 18 Dylan Matthews 10-26-2018 “How to help people millions of years from now” <https://www.vox.com/future-perfect/2018/10/26/18023366/far-future-effective-altruism-existential-risk-doing-good> (Co-founder of Vox, citing Nick Beckstead @ Rutgers University)//Re-cut by Elmer

If you care about improving human lives, you should overwhelmingly care about those quadrillions of lives rather than the comparatively small number of people alive today. The 7.6 billion people now living, after all, amount to less than 0.003 percent of the population that will live in the future. It’s reasonable to suggest that those quadrillions of future people have, accordingly, hundreds of thousands of times more moral weight than those of us living here today do. That’s the basic argument behind Nick Beckstead’s 2013 Rutgers philosophy dissertation, “On the overwhelming importance of shaping the far future.” It’s a glorious mindfuck of a thesis, not least because Beckstead shows very convincingly that this is a conclusion any plausible moral view would reach. It’s not just something that weird utilitarians have to deal with. And Beckstead, to his considerable credit, walks the walk on this. He works at the Open Philanthropy Project on grants relating to the far future and runs a charitable fund for donors who want to prioritize the far future. And arguments from him and others have turned “long-termism” into a very vibrant, important strand of the effective altruism community. But what does prioritizing the far future even mean? The most literal thing it could mean is preventing human extinction, to ensure that the species persists as long as possible. For the long-term-focused effective altruists I know, that typically means identifying concrete threats to humanity’s continued existence — like unfriendly artificial intelligence, or a pandemic, or global warming/out of control geoengineering — and engaging in activities to prevent that specific eventuality. But in a set of slides he made in 2013, Beckstead makes a compelling case that while that’s certainly part of what caring about the far future entails, approaches that address specific threats to humanity (which he calls “targeted” approaches to the far future) have to complement “broad” approaches, where instead of trying to predict what’s going to kill us all, you just generally try to keep civilization running as best it can, so that it is, as a whole, well-equipped to deal with potential extinction events in the future, not just in 2030 or 2040 but in 3500 or 95000 or even 37 million. In other words, caring about the far future doesn’t mean just paying attention to low-probability risks of total annihilation; it also means acting on pressing needs now. For example: We’re going to be better prepared to prevent extinction from AI or a supervirus or global warming if society as a whole makes a lot of scientific progress. And a significant bottleneck there is that the vast majority of humanity doesn’t get high-enough-quality education to engage in scientific research, if they want to, which reduces the **odds that we have enough trained scientists to come up with the breakthroughs** we need as a civilization to survive and thrive. So maybe one of the best things we can do for the far future is to improve school systems — here and now — to harness the group economist Raj Chetty calls “lost Einsteins” (potential innovators who are thwarted by poverty and inequality in rich countries) and, more importantly, the hundreds of millions of kids in developing countries dealing with even worse education systems than those in depressed communities in the rich world. What if living ethically for the far future means living ethically now? Beckstead mentions some other broad, or very broad, ideas (these are all his descriptions): Help make computers faster so that people everywhere can work more efficiently Change intellectual property law so that technological innovation can happen more quickly Advocate for open borders so that people from poorly governed countries can move to better-governed countries and be more productive Meta-research: improve incentives and norms in academic work to better advance human knowledge Improve education Advocate for political party X to make future people have values more like political party X ”If you look at these areas (economic growth and technological progress, access to information, individual capability, social coordination, motives) a lot of everyday good works contribute,” Beckstead writes. “An implication of this is that a lot of everyday good works are good from a broad perspective, even though hardly anyone thinks explicitly in terms of far future standards.” Look at those examples again: It’s just a list of what normal altruistically motivated people, not effective altruism folks, generally do. Charities in the US love talking about the lost opportunities for innovation that poverty creates. Lots of smart people who want to make a difference become scientists, or try to work as teachers or on improving education policy, and lord knows there are plenty of people who become political party operatives out of a conviction that the moral consequences of the party’s platform are good. All of which is to say: Maybe effective altruists aren’t that special, or at least maybe we don’t have access to that many specific and weird conclusions about how best to help the world. If the far future is what matters, and generally trying to make the world work better is among the best ways to help the far future, then effective altruism just becomes plain ol’ do-goodery.

# 2

#### Counterplan: The appropriation of outer space by private entities except for Brazil is unjust. The Republic of Brazil ought to increase appropriation of outer space by private entities.

#### Brazil’s commercial space industry is flourishing.

**Nakahodo 21** [Sidney Nakao Nakahodo, Sidney Nakao Nakahodo is a Lecturer at Columbia University where he specializes in Political, Social, and Economic Development in Brazil. In parallel to his academic responsibilities he is currently involved in a number of technology startups, both as co-founder and advisor. Previously he was based in Washington DC and worked in private sector development and low carbon projects at the World Bank. Prior to joining the Bank he served as senior researcher for a major think tank in Brazil and consulted for the United Nations Development Programme. Sidney holds a Master of International Affairs from Columbia University's School of International and Public Affairs and a Bachelor of Materials Science and Engineering from the University of Sao Paulo (Brazil). He is also a graduate of the Advanced Studies Program in International Economic Policy at the Kiel Institute for the World Economy (Germany). 03-19-2021, "Should Space Be Part of a Development Strategy? Reflections Based Upon the Brazilian Experience," New Space,  [[http://doi.org/10.1089/space.2021.0002](https://doi.org/10.1089/space.2021.0002) accessed 12/14/21](https://www.liebertpub.com/doi/full/10.1089/space.2021.0002%20accessed%2012/14/21)] Adam

* AEB – Brazilian Space Agency
* AIAB – Aerospace Industries Association of Brazil

Lately, there has been a surge of interest in commercial space in Brazil due to institutional development, private sector engagement, and entrepreneurial activities. A Committee of Development of the Brazilian Space Program (CDPEB) was established in 2018 and comprises representatives of several Ministries. The CDPEB has the mandate to advise the President on the implementation of the Brazilian Space Program. Among its primary responsibilities is the elaboration of the General Law of Space, which is expected to provide the guidelines for commercial space activities.[13](https://www.liebertpub.com/doi/full/10.1089/space.2021.0002#B13) In May 2020, Brazilian Space Agency (AEB) issued a public call inviting local and foreign companies to use its civilian launch facilities.[14](https://www.liebertpub.com/doi/full/10.1089/space.2021.0002#B14)

The private sector has been actively promoting commercial space. An industrial cluster now constitutes a “Space Valley” around the Sao Jose dos Campos Technology Park (PqTec), with spin-off companies impacting both space and nonspace sectors. The Aerospace Industries Association of Brazil (AIAB) is a trade organization of traditional space companies and defense contractors such as Avibras, Akaer (Opto), Atech, Fibraforte, Orbital, and SIATT. According to its website, AIAB has 30 members working in small satellites, satellite structures, payloads, satellite equipment, ground systems, propulsion, sounding rockets, and launchers.[15](https://www.liebertpub.com/doi/full/10.1089/space.2021.0002#B15) Braskem, the world's leading biopolymer producer, has partnered with Silicon Valley-born startup Made in Space to produce recyclable plastic objects in the ISS.[16](https://www.liebertpub.com/doi/full/10.1089/space.2021.0002#B16)

Since 2017, AEB has organized the Brazilian Space Industry Forum, an annual event that congregates stakeholders, fosters the exchange of ideas, and promotes collaboration between domestic and international participants. The U.S.-Brazil CEO Forum, which brings together 12 U.S. and 12 Brazilian CEOs to develop joint recommendations for both governments on how to increase bilateral trade, proposed the development of a framework for joint space research programs in 2019.

A small but vibrant New Space startup community is rapidly forming. The Alliance of Brazilian Space Startups was launched in 2020. Although some companies target low earth orbit and beyond, others are creating solutions to our planet using space technologies. PION has commercial products focusing on space and education. CRON and EMSIS have developed software and hardware for CubeSat missions, whereas Alya Nanosatellites aims to launch a constellation and tap into the earth's observation market. DeltaV, a spin-off from INPE, specializes in propulsion systems. ACRUX and VSAT are working on small satellite launchers. Airvantis sent multiple educational experiments to the ISS and has partnerships with companies and space agencies worldwide. The startup is carrying out Brazil's first lunar mission.[17](https://www.liebertpub.com/doi/full/10.1089/space.2021.0002#B17) In parallel, Agrosmart, Solinftec, and Strider are harnessing the power of space assets to provide remote sensing, weather forecast, and image processing services to the agricultural sector.[18](https://www.liebertpub.com/doi/full/10.1089/space.2021.0002#B18) Data companies such as Storm have incorporated open source algorithms developed by NASA for security applications.[19](https://www.liebertpub.com/doi/full/10.1089/space.2021.0002#B19)

#### Strong space sector cements Brazilian prestige and international influence AND solves alt causes

Dr. Robert C. Harding 17, Professor of Political Science at Valdosta State University, PhD in Political Science from the University of Miami, MA from the University of Louisville, Space Policy in Developing Countries: The Search for Security and Development on the Final Frontier, Paperback Edition, p. 1-4

Change in the post-Cold War period has become the standard of our time. Whether it be the changing power structure of the international system, climate change, the speed of technological innovation, or changes within our societies, the current international situation is one of constant, accelerating transformation. One area that has certainly evolved is the importance and priority given to space-related programs by a growing number of countries around the world. As the various captains of Star Trek fame have somberly declared, space really is the final frontier. But while it has been the basis for engaging science fiction, outer space nonetheless has a very down-to-Earth feature—it has become the ultimate venue for the growth of national power and socioeconomic development among a number of the world’s emergent states.

This new paradigm of international relations has been evolving for over 50 years. From the Soviet Union’s launch of Sputnik in 1957, many states began to include space-based security concerns in their foreign policies, which forced them to consider what the then-new operations in space meant for national security; they also began to integrate space-based assets into their approaches to a wide range of national development challenges, from agriculture to health improvement to the development of natural resources. Though the importance of space to national power, prestige, and potential has been less obvious in the intervening years since the heady days of the Cold War’s space race, its significance has never waned and continues to increase as many states increase national space budgets. Space has, in fact, earned a permanent place at the table in matters of international conflict, peace, national and international development, and international law.

Space was at one time the sole domain of the wealthiest developed countries. The United States and the Soviet Union/Russia, and to some extent the European Union, dominated the use of space and the associated technology in the first decades after World War II. But the last couple of decades of the twentieth century and the first decade of the twenty-first witnessed an increase in the number of countries with state-supported space programs. At this writing, no fewer than 25 developing states, including the rapidly emerging economic powers of Brazil (the sixth largest), China (second largest), and India (fourth largest), possess active national space programs with proven independent launch capability or concrete plans to achieve it soon. Space programs and their related technologies are now an integral part of the strategic and developmental policies of many relatively wealthy developing states that aspire to elevate their international status, security, and economic future. A multitude of other developing states as diverse as Mexico, Nigeria, and Malaysia have established and elevated their own space policy through the creation of national space agencies and the purchase and/or production of satellites and related space technology either through state, private, or joint efforts. For these smaller and rising middle powers, the acquisition of space capabilities is now an integral component of their national policies.

Though commercial enterprise is not a focus of this study, it must be noted that as the cost of space-related technology has decreased dramatically, the expanding number of national state actors in space has been paced by the equally impressive expansion in the number of strictly commercial space companies. Communications, geospatial information, and a wide variety of other services provided by commercial satellites affect much of modern life, and also provide vital information to governments, their agencies, and business interests worldwide. This information covers many of the same areas that national governments find important to national well-being, such as weather and climate monitoring, water management, environmental observation, topographic mapping, natural disaster planning, and crop management. These services are provided commercially by a growing cadre of companies that build satellites, create the associated technologies, and are beginning to provide basic launch services, all areas that were previously the exclusive domain of state-owned space agencies.

The growth of commercial space services has been a double-edged sword for states. By 2010, the global space industry was estimated to be worth US$276.52 billion, an 18 percent increase over 2009.2 Of this total, worldwide commercial satellite industry revenues rose 11 percent to US$160.9 billion in 2010.3 Despite sporadic attempts to control its proliferation, commercial satellite imagery has become so good and so broadly disseminated that many national governments, for example Israel, have complained that its existence endangers national security because potential terrorists now have access to the detailed satellite imagery necessary to plan precise attacks. Until the 1990s, such high-resolution satellite imagery was almost exclusively the domain of the militaries of developed space powers, which, for national security reasons, did not generally make their data public. And since there were a limited number of states with the capability to launch surveillance satellites, the potential sources were likewise limited.

Those civilian satellites that did operate before the 1990s provided imagery of a much lower spatial resolution than their military counterparts, typically not showing clear images of objects smaller than 10 meters across. However, that situation changed with the launch of the US company Lockheed Martin’s Ikonos satellite in 1999. Its spatial resolution of one meter meant that for the first time, no country could depend on geographic distance and national borders to ensure state secrets. The situation became even more fluid through the 1990s and into the 2000s as the transfer of space technology—satellites and associated technology— became a commercially viable avenue for major satellite producers. Today, imagery services such as Google Earth have revolutionized access to satellite imagery in the same way that cell phones have changed communications access for hundreds of millions of people around the world—they have democratized it.

Nonetheless, the growing actual importance of space policy stands in stark contrast to the popular perception of the significance of space in the modern world. Indeed, more than 50 years after the launch of Sputnik, the exploration of near space via the moon-landings, and various robotic missions to the solar system’s planets, surveys have shown that few people in the West still consider space as anything novel. The popular mindset has moved on to the wonders of the “information age” and the benefits (or detriments) of globalization. The generations of technology spawned by those earlier days of space exploration have been indispensable in the creation of our high-tech, instantaneous world, but space and its benefits are now so integrated into our daily infrastructure that most people do not give it a second thought. The reactions to the Challenger and Columbia space shuttle tragedies aside, public complacency toward the importance of space has become the rule, rather than the exception.

Despite these popular sentiments, the recent expansion of space programs in the developing world demonstrates that national governments have never altered their view of the importance of space for achieving and expanding national power—militarily or socioeconomically. This expansion of space programs is especially noteworthy because it reflects an emergent democratization of space, which is one of the most important factors in the changing distribution of power in the current international arena. Many countries now use satellites for communications and obtaining weather data, through ownership or simply purchase of the data. In fact, this broadening and expansion of the usage of space and the attendant transformation of power distribution is seen by some observers as leading to a new space race, albeit one that has yet to gain the high profile that the previous contest had during the Cold War. This competition is emerging as the catalyst for a new generation of space-related policies and innovations in both established and emerging space-faring countries. Consider how one recent space-related event affected the dynamic of interstate relations.

In January 2007, the news that China had successfully tested an anti-satellite ballistic missile sent shockwaves around the world’s foreign policy community. By shooting down one of its own aging satellites from low Earth orbit, China—a country that only a generation before was seen as poor by most measures—demonstrated its intent to join the existing space powers, thus attracting attention, if not commanding respect as a potential world power. China plans to land a nuclear-powered unmanned rover on the moon by 2013, and to have in place an orbital military space station later in the second decade of this century.4

But while China’s space policy is more ambitious and better funded than those of other developing states, it is by no means unique. The next year of this twenty-first century space race saw India following up on the Chinese success by launching its own successful probe to the moon. Around the world, increasing numbers of developing countries are investing in space-related technologies, seeking partners for space projects, and even constructing launch facilities that may one day rival the established space powers of the United States, Russia, the European Union, and more recently Japan.

But what motivates a developing country, which by definition is relatively poor, to spend the comparatively large amounts of money required for these space adventures? The short answer is that, like the United States and the Soviet Union before them, developing countries pursue active space policies because of the recognition that space is, in many ways, the ultimate measure of national power, international prestige, and demonstrated national potential. Moreover, space-based assets allow states to more fully utilize their national resources and to expand the reach of domestic socioeconomic programs into areas as diverse as agriculture, education, medicine, and economic development. Thus a space program figures as an integral facet of any capable state’s national security and developmental policies. The benefits of a successful space program include advanced communications, a platform for technology improvement, greatly enhanced geographic information, and, for some, expanded defensive and intelligence capabilities. Equally important, space programs can provide the host state with increased international prestige, which accrues both domestic and international advantages. Hence, developing countries are merely being rational state actors and following the path pioneered by those space-faring states that preceded them.

#### It's key to project success AND overcome historical domination

Dr. Robert C. Harding 17, Professor of Political Science at Valdosta State University, PhD in Political Science from the University of Miami, MA from the University of Louisville, Space Policy in Developing Countries: The Search for Security and Development on the Final Frontier, Paperback Edition, p. 23

Space programs bestow equally important soft power, especially those that involve human space flight. Every major space power has spent considerable funds to achieve the ability to put humans in space for both tangible and intangible benefits. Logsdon (2007) has argued that human space flight ranks among the most intensely patriotic symbols of modern times.27 Some of the emerging space actors have pursued or are pursuing human space flight as a demonstration of their programs’ sophistication, and their astronauts are held up by their governments as national patriotic icons. As will be discussed in Chapter 3, for the largest EMSAs—Brazil, China, and India—their space programs have been touted not only as national accomplishments but as a national catharsis to overcome histories of direct and indirect domination by outside powers and to project to others a sense of greatness.

#### Brazilian leadership solves multiple existential threats

**Huck 20** [Luciano Huck, from the Law School of the University of São Paulo, Host of Rede Globo, Founder of Joá Investments 1/15/2020, "This country is vital to 'global survival'," World Economic Forum, <https://www.weforum.org/agenda/2020/01/what-happens-next-in-brazil-has-global-consequences-here-are-three-priorities-for-the-next-decade/> accessed 12/14/21] recut Adam

From spiralling geopolitical tensions in the Middle East to raging forest fires in Australia, 2020 certainly started with a bang. A shortlist of some of our biggest existential threats includes accelerating climate change, staggering inequalities and the failure of nation-states to cooperate to mitigate shared global risks. With all the bad news, it is hard to see the incredible possibilities on the horizon, not least advances in health, education and the boundless potential of new technologies. A growing number of businesses including huge asset managers like BlackRock are also becoming greener. All of these challenges and opportunities are apparent in Brazil, the world’s fourth-largest democracy and its ninth biggest economy.

Brazil will play a leading role in how the next decade unfolds. A big reason for this is its immense natural resources - including over 40% of the world’s tropical forests and 20% of the planet's fresh-water supply. The Amazon is often described as the "lungs of the world" - for good reason. But the lungs are collapsing as a result of man-made fires and runaway deforestation. With more than 210 million citizens, Brazil also has an impressive stock of human resources. But it is also convulsed by breathtaking inequality and grinding poverty. Complicating matters, we are facing a crisis of political leadership and shirking our international responsibilities.

What happens next in Brazil has far-reaching consequences for global survival. The decisions adopted by Latin America's largest country - whether in relation to protecting the Amazon, reducing inequality or strengthening multilateral cooperation - will help determine whether this is the world's best century or its last one. The sheer scope of the challenges facing Brazilians can feel overwhelming. Without a transformative vision and narrative, a renewal of political leadership, and tangible improvement, people feel rudderless and afraid.

For the past 20 years, I've been taking the pulse of Brazil. I produce and present a popular television program reaching roughly 30 million Brazilians every week. Most of the time, I travel across the country listening to the inspiring and heartbreaking stories of my countrymen and women. They remind me every day why I need to contribute to building a better Brazil. So here are three challenges that I firmly believe Brazilians can turn into opportunities.

Amazon 4.0

Dramatic fires and deforestation in the Amazon made global headlines in 2019. Despite the best efforts of the Brazilian authorities to conceal the problem, the Science Ministry's own satellite data showed that deforestation rates were at the highest levels in two decades. While falling out of the international news cycle, the destruction continues. If deforestation persists at current rates, irreversible die-off could convert the world’s largest tropical forests into its largest savannah. This would release up to 140 billion tons of stored carbon into the atmosphere, effectively scuppering efforts to meet the Paris Agreement targets.

A radical new paradigm is needed to ensure the sustainable stewardship of Brazil's stunning cultural and biodiversity. It must harness the Amazon's most powerful resource - the 25 million people who live there. For one, there has to be zero tolerance for deforestation and a concerted focus on improving the productivity of areas where forests have already been cut down. Roughly 90% of deforestation in the Amazon is illegal and at least two-thirds of the 80 million hectares of cleared land are under-used, degraded and abandoned. Just as important as sustainable agri-business, the expansion of eco-tourism, investment in biotechnology research and the development of fairly-traded rainforest products.

In a survey conducted in August of 2019, the majority of Brazilians thought that the Amazon rainforest was a reason for national pride. At that time, up to 68 percent of respondents in Brazil strongly agreed with the sentence

Reducing inequality

Deepening social and economic inequality within countries is fundamentally reconfiguring domestic and international politics. In some cases, governments are retreating from multilateral cooperation and reverting to reactionary nationalism and protectionism. These dynamics are apparent in Brazil, among the world’s most unequal countries. Although Brazil made important advances in reducing poverty since the 2000s, inequality remained stubbornly high. And in recent years, per capita income plunged and the gap between the rich and poor started rising, wiping out many social gains of the previous three decades. Today, the average monthly income of the wealthiest one per cent is more than 33 times the income of the poorest 50%. Inequality not only hinders economic growth, but it also fuels polarization and populism.

Brazil needs to put inequality reduction at the top of the national agenda in 2020. A combination of common-sense interventions are required: ensuring the fairer collection of taxes, reducing subsidies for the wealthy, rolling-out more equal opportunity policies, and stimulating opportunities for the most vulnerable. Most important of all is dramatically improving the quality of basic public education, especially early childhood schooling. Brazil's education system is failing poorer families. Wealth inequality is reinforcing inequality of opportunity for the next generation. To win the war on inequality, Brazil needs an inclusive growth strategy, one that is not limited to growing income and smart deregulation but also ensures that quality public services delivering security, education, health, sanitation and transportation reach all citizens, not just those who pay a premium for them.

Restoring leadership

After years of corruption and stagnation, Brazil is suffering from sharp societal divisions and simmering tensions. In 2013, well before the street protests that flared up in Bolivia, Chile, Colombia and Ecuador, Brazil experienced the largest demonstrations since the restoration of democracy in 1985. The impeachment of President Dilma in 2016, the unprecedented unpopularity of the Temer administration and the election of far-right Jair Bolsonaro in 2018 revealed the extent of dissatisfaction with the status quo. Bolsonaro was partly elected because the credibility of Brazil's political establishment was demolished by ongoing “Car Wash” investigations into government corruption. Exhausted by scandal and stagnation, Brazilians voted for change.

To tackle the big challenges of the next decade, Brazil needs to restore and renew its political leaders from the top to bottom. Accountable, responsible and representative leadership and public service are fundamental to revitalizing the social contract. This won't happen spontaneously. It requires a conscious effort to attract and invest in talent. it also demands that each and every Brazilian gets involved. In 2017, I joined Agora, one of several dynamic civic movements investing in a new generation of leaders committed to a more inclusive and sustainable Brazil. And in 2018, I co-founded RenovaBR, attracting over 4,600 submissions from people who'd never been involved in politics for training in governance and ethics. Of the 120 successful applicants, 17 were elected to federal office that year.

Brazil is a country of infinite possibility. It has achieved breathtaking gains over the last generation - bringing tens of millions of people out of poverty. But these improvements were fragile. As we’ve seen in other parts of the world, when societies and living standards start moving backwards, social protest and unrest are not far behind. This is dangerous. Irresponsible leaders can take advantage of the fear and uncertainty that result. But we can also fight back. We will start rewriting the Brazilian story in 2020, first by acknowledging our most intractable problems and then by leveraging our tremendous creativity, scientific prowess and expertise. This means stepping out of our comfort zones. Powered by civic and social entrepreneurs from across the political spectrum, we can rebuild a positive vision for the future in Brazil.

# 3

#### OST Credibility is high now – no violations.

Stuart 17 Jill Stuart 1-27-2017 "The Outer Space Treaty has been remarkably successful – but is it fit for the modern age?" <https://theconversation.com/the-outer-space-treaty-has-been-remarkably-successful-but-is-it-fit-for-the-modern-age-71381> (Visiting Fellow, Department of Government, London School of Economics and Political Science)//Elmer

Space exploration is governed by a complex series of international treaties and agreements which have been in place for years. The first and probably most important of them celebrates its 50th anniversary on January 27 – The Outer Space Treaty. This treaty, which was signed in 1967, was agreed through the United Nations, and today it remain as the “constitution” of outer space. It has been signed and made official, or ratified, by 105 countries across the world. The treaty has worked well so far but challenges have increasingly started to crop up. So will it survive another 50 years? The Outer Space Treaty, like all international law, is technically binding to those countries who sign up to it. But the obvious lack of “space police” means that it cannot be practically enforced. So a country, individual or company could simply ignore it if they so wished. Implications for not complying could include sanctions, but mainly a lack of legitimacy and respect which is of importance in the international arena. However it is interesting that, over the 50 years of it’s existence, the treaty has never actually been violated. Although many practical challenges have been made – these have always been made with pars of the treaty in mind, rather than seeking to undermine it entirely.

#### Normal Means requires amending the OST – that causes a runaway amendment convention.

Vedda 18 Jim Vedda May 2018 <https://aerospace.org/sites/default/files/2018-05/OuterSpaceTreaty.pdf> (senior policy analyst, PhD in Political Science at University of Florida)//Elmer

Treaty Amendment. If decisionmakers conclude that the Outer Space Treaty isn’t broken but is just showing its age, targeted changes are an obvious solution—especially in the areas of orbital debris, space salvage, and resource rights, as noted earlier; however, the process of reaching consensus on changes would entail years of diplomatic effort, with no guarantee that the end result would be better than (or as good as) what exists today. The amendment process may not remain limited to the one or two issues that prompted it. The U.N. Committee on the Peaceful Uses of Outer Space has 84 member countries,11 any of which could bring up its own amendments, which could be objectionable to the major stakeholders. Several countries, including China and Russia, have proposed treaty language that would ban all weapons in space,12 a position opposed by the United States. There is a strong possibility that similar language would be submitted as an amendment if the treaty were to be opened for revision. This could bog down the process and derail prospects for achievement in the specific areas originally targeted. In May 2017, the Senate space subcommittee held a hearing on the Outer Space Treaty,13 specifically asking whether it needed amendment to remove roadblocks to space commerce. All seven witnesses—with backgrounds in law, business consulting, and space entrepreneurship—testified that there is no need to amend the treaty, and attempting to do so could leave industry worse off. They described the treaty as minimally burdensome, and emphasized that priority should be given instead to making the U.S. licensing and regulation regime for space commerce more stable, predictable, and transparent. This is not to suggest that amendments should never be attempted, but rather that the amendment process must be undertaken with eyes wide open. The Outer Space Treaty and other space agreements exist in a dynamic environment. Technology continues to advance, and the amount and type of space activity keeps changing— so treaties may need periodic updating. But at present, higher priority should be assigned to development of a well-reasoned and comprehensive national space strategy.

#### That wrecks the OST.

Melroy 17 Pamela Melroy 5-23-2017 “Reopening the American Frontier: Exploring How the Outer Space Treaty Will Impact American Commerce and Settlement in Space” <https://www.hsdl.org/?abstract&did=807259> (Retired NASA Astronaut)//Elmer

There are many exciting activities and proposals in commercial space. With respect to the Outer Space Treaty, I am deeply concerned that we would be opening a Pandora’s Box by attempting to change it. My concern is that the likely outcome would be a lack of consensus, resulting in no amendments. Instead, we will have a weakened dedication to the Principles of the Treaty and the sustainability of space. Great changes are occurring and many countries are developing capabilities that previously were the purview of only a few nation states. Our ability to compete both economically and technologically in space is crucial. These Principles form the basis for the dialog that we have with other countries about what is appropriate and what is not. Without them, the dialog becomes chaos.

#### Credible OST solves Space War.

Johnson 17 Christopher Johnson 1-23-2017 “The Outer Space Treaty at 50” , <http://thespacereview.com/article/3155/1> (graduate of Leiden University’s International Institute of Air and Space Law and the International Space University)//Elmer

As mentioned, many of the provisions of the Outer Space Treaty were borrowed from previous UN General Assembly resolutions. But as resolutions alone, these documents were non-binding and did not require states to alter their behavior. And while UN General Assembly resolutions are not normally law-making exercises, they do record the commonly-held expression of intentions by the states in the General Assembly, and make political recommendations to UNGA Members (or to the UN Security Council). UNGA Resolutions can also set priorities and mold opinion for inclusion in subsequent treaties. The prohibition on the placement of nuclear weapons and other weapons of mass destruction in outer space or their installation on celestial bodies was taken from UNGA Resolution 1884 of 1963. The resolution: [s]olemnly calls upon all States… [t]o refrain from placing in orbit around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, installing such weapons on celestial bodies, or stationing such weapons in outer space in any other manner. This prohibition was transferred to the Outer Space Treaty, and thereby remade into international treaty law. As President Johnson pointed out in his recommendation to Congress to ratify the Outer Space Treaty, “the realms of space should forever remain realms of peace.”5 He continued: We know the gains of cooperation. We know the losses of the failure to cooperate. If we fail now to apply the lessons we have learned, or even if we delay their application, we know that the advances into space may only mean adding a new dimension to warfare. If, however, we proceed along the orderly course of full cooperation we shall, by the very fact of cooperation, make the most substantial contribution toward perfecting peace.6 The agreement contained in Article IV of the Outer Space Treaty reflects an agreement between the US and the USSR, as obligations restricting their freedom of action. Why would a state intentionally place a restriction on itself? Isn’t it better to merely keep outer space as unregulated as possible? Since there were only two states then capable of venturing into outer space, why did either state agree to rules governing its actions? It may seem counterintuitive, but the deeper rationale behind security arrangements like this is that the parties actually benefit in the long-term from placing mutual restrictions on their behavior. Agreeing to restrict your freedom of action has deep links to the usefulness or utility of law itself. Consider driving a car: in order to get a license, you agree to observe certain rules, and the license signals your obligation to obey these rules. However, sometimes adhering to those rules is not only inconvenient (such as stopping at stop signs when there’s nobody else at the intersection), it is also against your short term-interests (you have an appointment or will otherwise suffer from observing the rules.) However, agreeing to operate within a system where your freedoms are sometimes restricted can have the effect of actually increasing your freedom over the long term. Wouldn’t you rather live in a state where traffic laws exist, and other drivers agree to observe them? Isn’t that system preferable to living in a state without traffic rules? Indeed, a system with traffic rules increases not just freedom in general, but overall safety and orderliness. Consequently, because the system with rules is preferable to the system without rules, your willingness to use the roads allows you to travel with greater security and ease. You are better assured of the likelihood that you will get to your intended destination without some other driver crashing into you. Knowing that safe travel is likely, you are more willing to take trips more often, and to farther destinations. Your freedom is actually increased over the long term because you are willing to suffer temporary, short-term restrictions such as inconvenient red lights. Long-term rationality warrants adherence to efficient systems of law. Correctly-balanced rules help increase long-term benefits (like safety and security) that would otherwise be unattainable without a system of rules. It is this rationale that also underpins international treaty-making. Today, the current absence of nuclear weapons or other weapons of mass destruction in outer space attests to the bargain struck in the Outer Space Treaty being a successful one, where security (and the liberty and freedom possible with security) were furthered by the mutual exchange of restrictions that states placed upon themselves. The more than 50 years of peaceful uses of outer space, including cooperation between states who remain rivals elsewhere, are the rich long-term gains resulting from the Outer Space Treaty.

#### Space War cause Nuclear War.

Gallagher 15 “Antisatellite warfare without nuclear risk: A mirage” <http://thebulletin.org/space-weapons-and-risk-nuclear-exchanges8346> (interim director of the Center for International and Security Studies in Maryland, previous Executive Director of the Clinton Administration’s CTBT Treaty Committee, an arms control specialist at the State Dept., and a faculty member at Wesleyan)//Elmer

In recent decades, however, as space-based reconnaissance, communication, and targeting capabilities have become integral elements of modern military operations, strategists and policy makers have explored whether carrying out antisatellite attacks could confer major military advantages without increasing the risk of nuclear war. In theory, the answer might be yes. In practice, it is almost certainly no. Hyping threats. No country has ever deliberately and destructively attacked a satellite belonging to another country (though nations have sometimes interfered with satellites' radio transmissions). But the United States, Russia, and China have all tested advanced kinetic antisatellite weapons, and the United States has demonstrated that it can modify a missile-defense interceptor for use in antisatellite mode. Any nation that can launch nuclear weapons on medium-range ballistic missiles has the latent capability to attack satellites in low Earth orbit. Because the United States depends heavily on space for its terrestrial military superiority, some US strategists have predicted that potential adversaries will try to neutralize US advantages by attacking satellites. They have also recommended that the US military do everything it can to protect its own space assets while maintaining a capability to disable or destroy satellites that adversaries use for intelligence, communication, navigation, or targeting. Analysis of this sort often exaggerates both potential adversaries’ ability to destroy US space assets and the military advantages that either side would gain from antisatellite attacks. Nonetheless, some observers are once again advancing worst-case scenarios to support arguments for offensive counterspace capabilities. In some other countries, interest in space warfare may be increasing because of these arguments. If any nation, for whatever reason, launched an attack on a second nation's satellites, nuclear retaliation against terrestrial targets would be an irrational response. But powerful countries do sometimes respond irrationally when attacked. Moreover, disproportionate retaliation following a deliberate antisatellite attack is not the only way in which antisatellite weapons could contribute to nuclear war. It is not even the likeliest way. As was clearly understood by the countries that negotiated the Outer Space Treaty, crisis management would become more difficult, and the risk of inadvertent deterrence failure would increase, if satellites used for reconnaissance and communication were disabled or destroyed. But even if the norm against attacking another country’s satellites is never broken, developing and testing antisatellite weapons still increase the risk of nuclear war. If, for instance, US military leaders became seriously concerned that China or Russia were preparing an antisatellite attack, pressure could build for a pre-emptive attack against Chinese or Russian strategic forces. Should a satellite be struck by a piece of space debris during a crisis or a low-level terrestrial conflict, leaders might mistakenly assume that a space war had begun and retaliate before they knew what had actually happened. Such scenarios may seem improbable, but they are no more implausible than the scenarios that are used to justify the development and use of antisatellite weapons.

# 4

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

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

In China, however, growth has come in the context of stable communist rule, suggesting that democracy and growth are not inevitably mutually dependent. In fact, many Chinese believe that the country’s recent economic achievements—large-scale poverty reduction, huge infrastructure investment, and development as a world-class tech innovator—have come about because of, not despite, China’s authoritarian form of government. Its aggressive handling of Covid-19—in sharp contrast to that of many Western countries with higher death rates and later, less-stringent lockdowns—has, if anything, reinforced that view.

China has also defied predictions that its authoritarianism would inhibit its capacity to [innovate](https://hbr.org/2011/06/what-the-west-doesnt-get-about-china). It is a global leader in AI, biotech, and space exploration. Some of its technological successes have been driven by market forces: People wanted to buy goods or communicate more easily, and the likes of Alibaba and Tencent have helped them do just that. But much of the technological progress has come from a highly innovative and well-funded military that has invested heavily in China’s burgeoning new industries. This, of course, mirrors the role of U.S. defense and intelligence spending in the development of Silicon Valley. But in China the consumer applications have come faster, making more obvious the link between government investment and products and services that benefit individuals. That’s why ordinary Chinese people see Chinese companies such as Alibaba, Huawei, and TikTok as sources of national pride—international vanguards of Chinese success—rather than simply sources of jobs or GDP, as they might be viewed in the West.

Thus July 2020 polling data from the Ash Center at Harvard’s Kennedy School of Government revealed 95% satisfaction with the Beijing government among Chinese citizens. Our own experiences on the ground in China confirm this. Most ordinary people we meet don’t feel that the authoritarian state is solely oppressive, although it can be that; for them it also provides opportunity. A cleaner in Chongqing now owns several apartments because the CCP reformed property laws. A Shanghai journalist is paid by her state-controlled magazine to fly around the world for stories on global lifestyle trends. A young student in Nanjing can study propulsion physics at Beijing’s Tsinghua University thanks to social mobility and the party’s significant investment in scientific research.

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

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

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

That all changed this past decade as the costs of making satellites and launching rockets plunged. In 2014, a year after Xi Jinping took over as the new leader of China, the Chinese government decided to treat civil space development as a key area of innovation, as it had already begun doing with AI and solar power. It issued a policy directive called [Document 60](https://archive.md/o/bc9l4/www.cpppc.org/en/zy/994006.jhtml) that year to enable large private investment in companies interested in participating in the space industry.

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

As a result, there are now 78 commercial space companies operating in China, according to a[2019 report by the Institute for Defense Analyses](https://archive.md/o/bc9l4/https:/www.ida.org/-/media/feature/publications/e/ev/evaluation-of-chinas-commercial-space-sector/d-10873.ashx). More than half have been founded since 2014, and the vast majority focus on satellite manufacturing and launch services.

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

Spacety, founded in 2016, wants to turn around customer orders to build and launch its small satellites in just six months. In December it launched a miniaturized version of a satellite that uses 2D radar images to build 3D reconstructions of terrestrial landscapes. Weeks later, it [released the first images taken by the satellite](https://archive.md/o/bc9l4/https:/spacenews.com/spacety-releases-first-sar-images/), Hisea-1, featuring three-meter resolution. Spacety wants to launch a constellation of these satellites to offer high-quality imaging at low cost.

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

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

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

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

Making friends

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

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

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

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

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

Populist pressures might tempt the **party leadership** to encourage **diversionary nationalism**. The logic of this concern is straightforward: the Communist Party might seek to **distract a restless domestic population** with **adventurism abroad**.19 The **Xi** administration wants to **appear tough** in its **defense of foreign encroachments** against China’s interests. This need stems from a long-running narrative about how a weak Qing dynasty was unable to defend China in the face of European imperial expansion, epitomized by the Opium Wars and the subsequent treaties imposed on China in the nineteenth century. The party is **particularly sensitive** to **perceptions of weakness** because much of its **claim to legitimacy**—manifested in **Xi’s Chinese Dream** campaign today—stems from the party’s claims of leading the **restoration of Chinese greatness**. For example, the May Fourth Movement, a popular protest in 1919 that helped catalyze the CPC, called into question the legitimacy of the Republic of China government running the country at that time because the regime was seen as not having effectively defended China’s territorial and sovereignty interests at the Versailles Peace Conference. **Diversionary nationalist frictions** would likely occur if the Chinese leadership portrayed a foreign adversary as having made the first move, thus forcing Xi to stand up for China’s interests. An example is the 2012 attempt by the nationalist governor of Tokyo, Shintaro Ishihara, to buy the Senkaku/Diaoyu Islands from a private owner.20 Although the Japanese central government sought to avert a crisis by stepping in to purchase the islands—having them bought and administered by Ishihara’s Tokyo metropolitan government would have dragged Japan into a confrontation with China—China saw this move as part of a deliberate orchestration by Japan to nationalize the islands. Xi seemingly had no choice but to defend China’s claims against an attempt by Japan to consolidate its position on the dispute.21 This issue touched off a period of heated tensions between China and Japan, lasting more than two years.22 Such dynamics are not limited to Japan. Other possible areas of conflict include, but are not necessarily limited to, **Taiwan**, **India**, and the **South China Sea** (especially with the **Philippines** and **Vietnam**). The Chinese government will use such tactics if it believes that the costs are relatively low. Ideally, China would like to appear tough while avoiding material repercussions or a serious diplomatic breakdown. Standing up against foreign encroachment—without facing much blowback—could provide Xi’s administration with a tempting source of noneconomic legitimacy. However, over the next few years, Xi will probably not be actively looking to get embroiled abroad. Cushioning the fallout from slower growth while managing a structural economic transition will be difficult enough. Courting potential international crises that distract the central leadership would make this task even more daunting. Even if the top leadership did not wish to provoke conflict, a smaller budgetary allotment for security could cause **military interests** in China to **deliberately instigate trouble** to **justify** their **claims over increasingly scarce resources**. For example, an air force interested in ensuring its funding for a midair tanker program might find the existence of far-flung territorial disputes to be useful in making its case. Such a case would be made even stronger by a pattern of recent frictions that highlights the necessity of greater air power projection. Budgetary pressures may be partly behind a recent People’s Liberation Army reorganization and headcount reduction. A slowing economy might cause a further deceleration in China’s military spending, thus increasing such pressures as budgetary belts tighten. Challenges to Xi’s Leadership Xi Jinping’s efforts to address economic challenges could fail, unleashing consequences that extend well beyond China’s economic health. For example, an **economic collapse** could give rise to a Vladimir **Putin–like redemption figure** in China. Xi’s approach of centralizing authority over a diverse, complex, and massive social, political, and economic system is a **recipe for brittleness**. Rather than designing a resilient, decentralized governance structure that can gracefully cope with localized failures at particular nodes in a network, a highly centralized architecture **risks catastrophic**, **system-level failure**. Although centralized authority offers the tantalizing chimera of stronger control from the center, it also puts all the responsibility squarely on Xi’s shoulders. With China’s ascension to great power status, the consequences of internecine domestic political battles are increasingly playing out on the world stage. The international significance of China’s domestic politics is a new paradigm for the Chinese leadership, and one can expect an adjustment period during which the outcome of what had previously been relatively insulated domestic political frictions will likely generate **unintended international repercussions**. Such dynamics will influence Chinese foreign policy and security behavior. Domestic arguments over ideology, bureaucratic power struggles, and strategic direction could all have **ripple effects abroad**. Many of China’s party heavyweights still employ a narrow and exclusively domestic political calculus. Such behavior increases the possibility of international implications that are not fully anticipated, **raising the risks** of **strategic miscalculation** on the world stage. For example, the factional power struggles that animated the Cultural Revolution were largely driven by domestic concerns, yet manifested themselves in Chinese foreign policy for more than a decade. During this period, China was not the world’s second largest economy and, for much of this time, did not even have formal representation at the United Nations. If today’s globally interconnected China became engulfed in similar domestic chaos,

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

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

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

# 5

#### **The standard is maximizing expected well being.**

Prefer:

#### **1**] use epistemic modesty – multiply probability of the fwk times the magnitude of the impacts A) clash – encourages both substantive and phil debates so that we talk about all the offense B) leads to the net most morality and proves that only beating fwk is not enough to win the debate

#### **2] extinction first**

Pummer 15 [Theron, Junior Research Fellow in Philosophy at St. Anne's College, University of Oxford. “Moral Agreement on Saving the World” Practical Ethics, University of Oxford. May 18, 2015] AT

There appears to be lot of disagreement in moral philosophy. Whether these many apparent disagreements are deep and irresolvable, I believe there is at least one thing it is reasonable to agree on right now, whatever general moral view we adopt: that it is very important to reduce the risk that all intelligent beings on this planet are eliminated by an enormous catastrophe, such as a nuclear war. How we might in fact try to reduce such existential risks is discussed elsewhere. My claim here is only that we – whether we’re consequentialists, deontologists, or virtue ethicists – should all agree that we should try to save the world. According to consequentialism, we should maximize the good, where this is taken to be the goodness, from an impartial perspective, of outcomes. Clearly one thing that makes an outcome good is that the people in it are doing well. There is little disagreement here. If the happiness or well-being of possible future people is just as important as that of people who already exist, and if they would have good lives, it is not hard to see how reducing existential risk is easily the most important thing in the whole world. This is for the familiar reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. There are so many possible future people that reducing existential risk is arguably the most important thing in the world, even if the well-being of these possible people were given only 0.001% as much weight as that of existing people. Even on a wholly person-affecting view – according to which there’s nothing (apart from effects on existing people) to be said in favor of creating happy people – the case for reducing existential risk is very strong. As noted in this seminal paper, this case is strengthened by the fact that there’s a good chance that many existing people will, with the aid of life-extension technology, live very long and very high quality lives. You might think what I have just argued applies to consequentialists only. There is a tendency to assume that, if an argument appeals to consequentialist considerations (the goodness of outcomes), it is irrelevant to non-consequentialists. But that is a huge mistake. Non-consequentialism is the view that there’s more that determines rightness than the goodness of consequences or outcomes; it is not the view that the latter don’t matter. Even John Rawls wrote, “All ethical doctrines worth our attention take consequences into account in judging rightness. One which did not would simply be irrational, crazy.” Minimally plausible versions of deontology and virtue ethics must be concerned in part with promoting the good, from an impartial point of view. They’d thus imply very strong reasons to reduce existential risk, at least when this doesn’t significantly involve doing harm to others or damaging one’s character. What’s even more surprising, perhaps, is that even if our own good (or that of those near and dear to us) has much greater weight than goodness from the impartial “point of view of the universe,” indeed even if the latter is entirely morally irrelevant, we may nonetheless have very strong reasons to reduce existential risk. Even egoism, the view that each agent should maximize her own good, might imply strong reasons to reduce existential risk. It will depend, among other things, on what one’s own good consists in. If well-being consisted in pleasure only, it is somewhat harder to argue that egoism would imply strong reasons to reduce existential risk – perhaps we could argue that one would maximize her expected hedonic well-being by funding life extension technology or by having herself cryogenically frozen at the time of her bodily death as well as giving money to reduce existential risk (so that there is a world for her to live in!). I am not sure, however, how strong the reasons to do this would be. But views which imply that, if I don’t care about other people, I have no or very little reason to help them are not even minimally plausible views (in addition to hedonistic egoism, I here have in mind views that imply that one has no reason to perform an act unless one actually desires to do that act). To be minimally plausible, egoism will need to be paired with a more sophisticated account of well-being. To see this, it is enough to consider, as Plato did, the possibility of a ring of invisibility – suppose that, while wearing it, Ayn could derive some pleasure by helping the poor, but instead could derive just a bit more by severely harming them. Hedonistic egoism would absurdly imply she should do the latter. To avoid this implication, egoists would need to build something like the meaningfulness of a life into well-being, in some robust way, where this would to a significant extent be a function of other-regarding concerns (see chapter 12 of this classic intro to ethics). But once these elements are included, we can (roughly, as above) argue that this sort of egoism will imply strong reasons to reduce existential risk. Add to all of this Samuel Scheffler’s recent intriguing arguments (quick podcast version available here) that most of what makes our lives go well would be undermined if there were no future generations of intelligent persons. On his view, my life would contain vastly less well-being if (say) a year after my death the world came to an end. So obviously if Scheffler were right I’d have very strong reason to reduce existential risk. We should also take into account moral uncertainty. What is it reasonable for one to do, when one is uncertain not (only) about the empirical facts, but also about the moral facts? I’ve just argued that there’s agreement among minimally plausible ethical views that we have strong reason to reduce existential risk – not only consequentialists, but also deontologists, virtue ethicists, and sophisticated egoists should agree. But even those (hedonistic egoists) who disagree should have a significant level of confidence that they are mistaken, and that one of the above views is correct. Even if they were 90% sure that their view is the correct one (and 10% sure that one of these other ones is correct), they would have pretty strong reason, from the standpoint of moral uncertainty, to reduce existential risk. Perhaps most disturbingly still, even if we are only 1% sure that the well-being of possible future people matters, it is at least arguable that, from the standpoint of moral uncertainty, reducing existential risk is the most important thing in the world. Again, this is largely for the reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. (For more on this and other related issues, see this excellent dissertation). Of course, it is uncertain whether these untold trillions would, in general, have good lives. It’s possible they’ll be miserable. It is enough for my claim that there is moral agreement in the relevant sense if, at least given certain empirical claims about what future lives would most likely be like, all minimally plausible moral views would converge on the conclusion that we should try to save the world. While there are some non-crazy views that place significantly greater moral weight on avoiding suffering than on promoting happiness, for reasons others have offered (and for independent reasons I won’t get into here unless requested to), they nonetheless seem to be fairly implausible views. And even if things did not go well for our ancestors, I am optimistic that they will overall go fantastically well for our descendants, if we allow them to. I suspect that most of us alive today – at least those of us not suffering from extreme illness or poverty – have lives that are well worth living, and that things will continue to improve. Derek Parfit, whose work has emphasized future generations as well as agreement in ethics, described our situation clearly and accurately: “We live during the hinge of history. Given the scientific and technological discoveries of the last two centuries, the world has never changed as fast. We shall soon have even greater powers to transform, not only our surroundings, but ourselves and our successors. If we act wisely in the next few centuries, humanity will survive its most dangerous and decisive period. Our descendants could, if necessary, go elsewhere, spreading through this galaxy…. Our descendants might, I believe, make the further future very good. But that good future may also depend in part on us. If our selfish recklessness ends human history, we would be acting very wrongly.” (From chapter 36 of On What Matters)

3] extinction controls the i/l

#### 4] It’s excluded by traditional policymaking apparatuses: our brains are psychologically biased against high magnitude scenarios since we’re emotionally unable to understand the suffering of millions of pople

Dunn 07

[Elizabeth Dunn and Claire Ashton, “On emoitional innumeracy: Predicted and actual affective responses to grand-scale tragedies”, May 29 2007 Journal of Experimental Social Psychology]

The present research demonstrates that people overestimate the intensity of their emotional responses to grand-scale tragedies. Participants predicted that they would feel significantly worse if thousands of people were killed in a disaster than if only a few people were killed, and yet they exhibited an ‘‘emotional flatline,’’ feeling equally sad regardless of the number of people killed. This unforeseeable emotional flatline was demonstrated in response to deaths stemming from human violence and natural disasters, both close to home and far away (including hurricanes in the United States, a forest fire in Spain, and the Iraq War). Participants’ actual emotional responses were calibrated with fatalities only when abstract death tolls were translated into concrete images. We argue that affective forecasts and emotional experiences may arise from separate systems, leading to reliable forecasting errors, as well as influencing subsequent judgments. 2007 Elsevier Inc. All rights reserved. Keywords: Affective forecasting; Scope sensitivity; Temporal discounting; Cognitive experiential self theory Would you be more upset about a hurricane in which 5000 people were killed than one in which 5 people were killed? Although most people might predict feeling worse in response to the larger scale tragedy, most people might be wrong; recent research demonstrates that people often go astray in imagining their own future emotional responses to events (e.g., Dunn & Laham, 2006; Dunn, Biesanz, Human, & Finn, 2007; Wilson & Gilbert, 2003; Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000). Such predictions (or affective forecasts) may be inaccurate in part because affective forecasts and actual emotional experiences are likely to be driven by different modes of information processing. According to Epstein’s (1994, 1998) cognitive-experiential self theory (CEST), humans apprehend reality through the operation of two distinct information processing systems: the rational system, which is relatively slow and logical and represents a recent evolutionary development, and the experiential system, which is relatively fast and holistic and evolutionarily ancient (for similar dual-process theories, see Chaiken & Trope, 1999; Sloman, 1996). As a uniquely human capacity that relies on logical reasoning, affective forecasting should stem primarily from the operation of the rational system. Because the rational system is responsive to abstract symbols, words, and numbers (Epstein, 1998), affective forecasts should be sensitive to the scope of a tragedy; that is, people should predict feeling worse as a function of the number of individuals killed. Emotions, however, are a signature product of the experiential system, which responds not to abstract numbers, but to concrete images, metaphors, and narratives (Epstein, 1998). Therefore, actual emotional experiences may be relatively insensitive to the scope of a tragedy. Existing research suggests that people are largely insensitive to scope when they make economic or policy-oriented decisions; people place little weight on the number of individuals a program will help or the amount of a good to be 0022-1031/$ - see front matter 2007 Elsevier Inc. All rights reserved. doi:10.1016/j.jesp.2007.04.011 \* Corresponding author. Fax: +1 604 822 6923. E-mail address: edunn@psych.ubc.ca (E.W. Dunn). www.elsevier.com/locate/jesp Available online at www.sciencedirect.com Journal of Experimental Social Psychology 44 (2008) 692–698 provided in deciding how much they are willing to pay or what tradeoffs they are willing to accept (e.g., Baron & Greene, 1996; Fetherstonhaugh, Slovic, Johnson, & Friedrich, 1997; Hsee, Rottenstreich, & Xiao, 2005). Decisions become particularly scope insensitive when people are led to rely on their feelings during decision-making (Hsee & Rottenstreich, 2004), suggesting that scope-insensitive decisions may be rooted in scope-insensitive emotional responses (for related arguments, see Loewenstein, Weber, Hsee, & Welch, 2001; Slovic, Finucane, Peters, & MacGregor, 2002). Thus, recent research on decision-making provides indirect support for the idea that emotions—as a product of the experiential system—are relatively unresponsive to abstract numbers, such that people may exhibit an ‘‘emotional flatline’’ in the face of increasing death tolls. To the extent that affective forecasting is supported by the rational system, however, affective forecasts should be relatively sensitive to scope (operationally defined here as death toll), such that people may predict feeling increasingly negative as a function of the number of people killed in a disaster. As a result, affective forecasts and emotional experiences should diverge as the scope of a disaster increases, leading to greater forecasting errors with regard to grand-scale versus small-scale disasters. We tested this idea in a series of studies by asking participants to predict how they would feel or to report their actual feelings regarding specific tragedies, given various death tolls. In Study 1, we conducted an initial real-world demonstration of this idea by manipulating the perceived scope of US hurricanes.

# Case

The ROB is to vote for the better debater

#### No extinction from neoliberalism.

Kaletsky ’11 (Anatole, editor-at-large of *The Times* of London, where he writes weekly columns on economics, politics, and international relationsand on the governing board of the New York-based Institute for New Economic Theory (INET), a nonprofit created after the 2007-2009 crisis to promote and finance academic research in economics, Capitalism 4.0: The Birth of a New Economy in the Aftermath of Crisis, p. 19-21)

Democratic capitalism is a system built for survival. It has adapted successfully to shocks of every kind, to upheavals in technology and economics, to political revolutions and world wars. Capitalism has been able to do this because, unlike communism or socialism or feudalism, it has an inner dynamic akin to a living thing. It can adapt and refine itself in response to the changing environment. And it will evolve into a new species of the same capitalist genus if that is what it takes to survive. In the panic of 2008—09, many politicians, businesses, and pundits forgot about the astonishing adaptability of the capitalist system. Predictions of global collapse were based on static views of the world that extrapolated a few months of admittedly terrifying financial chaos into the indefinite future. The self-correcting mechanisms that market economies and democratic societies have evolved over several centuries were either forgotten or assumed defunct. The language of biology has been applied to politics and economics, but rarely to the way they interact. Democratic capitalism’s equivalent of the biological survival instinct is a built-in capacity for solving social problems and meeting material needs. This capacity stems from the principle of competition, which drives both democratic politics and capitalist markets. Because market forces generally reward the creation of wealth rather than its destruction, they direct the independent efforts and ambitions of millions of individuals toward satisfying material demands, even if these demands sometimes create unwelcome by-products. Because voters generally reward politicians for making their lives better and safer, rather than worse and more dangerous, democratic competition directs political institutions toward solving rather than aggravating society’s problems, even if these solutions sometimes create new problems of their own. Political competition is slower and less decisive than market competition, so its self-stabilizing qualities play out over decades or even generations, not months or years. But regardless of the difference in timescale, capitalism and democracy have one crucial feature in common: Both are mechanisms that encourage individuals to channel their creativity, efforts, and competitive spirit into finding solutions for material and social problems. And in the long run, these mechanisms work very well. If we consider democratic capitalism as a successful problem-solving machine, the implications of this view are very relevant to the 2007-09 economic crisis, but diametrically opposed to the conventional wisdom that prevailed in its aftermath. Governments all over the world were ridiculed for trying to resolve a crisis caused by too much borrowing by borrowing even more. Alan Greenspan was accused of trying to delay an inevitable "day of reckoning” by creating ever-bigger financial bubbles. Regulators were attacked for letting half-dead, “zombie” banks stagger on instead of putting them to death. But these charges missed the point of what the democratic capitalist system is designed to achieve. In a capitalist democracy whose raison d’etre is to devise new solutions to long-standing social and material demands, a problem postponed is effectively a problem solved. To be more exact, a problem whose solution can be deferred long enough is a problem that is likely to be solved in ways that are hardly imaginable today. Once the self-healing nature of the capitalist system is recognized, the charge of “passing on our problems to our grand-children”—whether made about budget deficits by conservatives or about global warming by liberals—becomes morally unconvincing. Our grand-children will almost certainly be much richer than we are and will have more powerful technologies at their disposal. It is far from obvious, therefore, why we should make economic sacrifices on their behalf. Sounder morality, as well as economics, than the Victorians ever imagined is in the wistful refrain of the proverbially optimistic Mr. Micawber: "Something will turn up."

#### They don’t solve environment and no impact – it’s incorrect assume synergistic effects of tech

Bailey 18 [Ronald Bailey, shortlisted by the editors of Nature Biotechnology as one of the personalities who have made the "most significant contributions" to biotechnology. From 1987 to 1990, Bailey was a staff writer for Forbes magazine, covering economic, scientific and business topics. His articles and reviews have appeared in The New York Times, The Wall Street Journal, The Washington Post, Commentary, The Public Interest, Smithsonian, and many other publications. Prior to joining Reason in 1997, Bailey produced several weekly national public television series including Think Tank and TechnoPolitics, as well as several documentaries for PBS television and ABC News. In 1993, he was the Warren T. Brookes Fellow in Environmental Journalism at the Competitive Enterprise Institute. Climate Change Problems Will Be Solved Through Economic Growth. March 12, 2018. https://reason.com/blog/2018/03/12/climate-change-problems-will-be-solved-t]

In an essay for The Breakthrough Journal, Pinker notes that such optimism "is commonly dismissed as the 'faith that technology will save us.' In fact, it is a skepticism that the status quo will doom us—that knowledge and behavior will remain frozen in their current state for perpetuity. Indeed, a naive faith in stasis has repeatedly led to prophecies of environmental doomsdays that never happened." In his new book, Enlightenment Now, Pinker points out that "as the world gets richer and more tech-savvy, it dematerializes, decarbonizes, and densifies, sparing land and species." Economic growth and technological progress are the solutions not only to climate change but to most of the problems that bedevil humanity.

Boisvert, meanwhile, tackles and rebuts the apocalyptic prophecies made by eco-pessimists like Wallace-Wells, specifically with regard to food production and availabilty, water supplies, heat waves, and rising seas.

"No, this isn't a denialist screed," Boisvert writes. "Human greenhouse emissions will warm the planet, raise the seas and derange the weather, and the resulting heat, flood and drought will be cataclysmic. Cataclysmic—but not apocalyptic. While the climate upheaval will be large, the consequences for human well-being will be small. Looked at in the broader context of economic development, climate change will barely slow our progress in the effort to raise living standards."

Boisvert proceeds to show how a series of technologies—drought-resistant crops, cheap desalination, widespread adoption of air-conditioning, modern construction techniques—will ameliorate and overcome the problems caused by rising temperatures. He is entirely correct when he notes, "The most inexorable feature of climate-change modeling isn't the advance of the sea but the steady economic growth that will make life better despite global warming."

#### We’re past tipping points---only tech solves---the Aff causes dictatorship.

Eric Levitz 21. Senior Writer at New York Magazine. MA Johns Hopkins. "We’ll Innovate Our Way Out of the Climate Crisis or Die Trying". Intelligencer. 5-17-2021. https://nymag.com/intelligencer/2021/05/climate-biden-green-tech-innovation.html

Today’s best-case ecological scenario was a horror story just three decades ago. In 1993, Bill Clinton declared that global warming presented such a profound threat to civilization that the U.S. would have to bring its “emissions of greenhouse gases to their 1990 levels by the year 2000.” Instead, we waited until 2020 to do so; in the interim, humanity burned more carbon than it had since the advent of agriculture. Now, it will take a historically unprecedented, worldwide economic transformation to freeze warming at “only” 2 degrees — a level of temperature rise that will turn “once in a century” storms into annual events, drown entire island nations, and render major cities in the Middle East uninhabitable in summertime (at least for those whose lifestyles involve “walking outdoors without dying of heatstroke”). This is what passes for a utopian vision in 2021. If we confine ourselves to mere optimism — and assume that every Paris Agreement signatory meets its current pledged target for decarbonization — then warming will hit 2.4 degrees by century’s end.

The reality of our ecological predicament invites denial of our political one. Put simply, it is hard to reconcile the scale of the climate crisis with the limits of contemporary American politics. Delusions rush in to fill the gap. Among these is the fantasy of national autonomy; the notion that the United States can save the planet or destroy it, depending on the precise timeline of its domestic decarbonization. A rapid energy transition in the U.S. is a vital cause, not least for its potential to expedite similar transformations abroad. But the battle for a sustainable planet will be won or lost in the developing world. Although American consumption played a central role in the history of the climate crisis, it is peripheral to the planet’s future: Over the coming century, U.S. emissions are expected to account for only 5 percent of the global total.

There is also the delusion of “de-growth’s” viability. The fact that there is no plausible path for global economic expansion that won’t entail climate-induced death and displacement has led some environmentalists to insist on global stagnation. Yet there is neither a mass constituency for this project, nor any reason to believe that there will be any time soon. Freeze the status-quo economy in amber, and you’ll condemn nearly half of humanity to permanent poverty. Divide existing GDP into perfectly even slices, and every person on the planet will live on about $5,500 a year. American voters may express a generalized concern about the climate in surveys, but they don’t seem willing to accept even a modest rise in gas prices — let alone a total collapse in living standards — to address the issue. Meanwhile, any Chinese or Indian leader who attempted to stymy income growth in the name of sustainability would be ousted in short order. It’s conceivable that one could radically reorder advanced economies in a manner that enabled living standards to rise even as GDP fell; Americans might well find themselves happier and more secure in an ultra-low-carbon communal economy in which individual car ownership is heavily restricted, and housing, healthcare, and myriad low-carbon leisure activities are social rights. But nothing short of an absolute dictatorship could affect such a transformation at the necessary speed. And the specter of eco-Bolshevism does not haunt the Global North. Humanity is going to find a way to get rich sustainably, or die trying.

Thus, the chasm between the ecologically necessary and the politically possible can only be bridged by technological advance. And on that front, the U.S. actually has the resources to make a decisive contribution to global decarbonization — and some political will to leverage those resources. Unfortunately, due to some combination of fiscal superstitions and misplaced priorities, the Biden administration’s proposed investments in green innovation remain paltry. An American Jobs Plan with much higher funding for green R&D is both imminently winnable and environmentally imperative. U.S. climate hawks should make securing such legislation a top priority.

#### No space col coming

Szocik 18 (Konrad Szocik, Assistant Professor at the University of Information Technology and Management in Rzeszow, Poland (Department of Philosophy and Cognitive Science), 2018. “Should and could humans go to Mars? Yes, but not now and not in the near future”. Futures. doi:10.1016/j.futures.2018.08.004)

11. Conclusions Deep faith in power of human reason supported by experience and experiments is not enough to organize safe and effective human mission to Mars. The main obstacle to go to Mars now and in the near future is a technological barrier. Future technological advancement may be counterbalanced by increasing threats. The risk of catastrophes and threats is increasing every year. Challenges associated with overpopulation, limited resources and climate changes including extensive fires probably will inhibit any serious investing in human space program. Only an urgent, real, and serious rationale would be able to argue for need for current longterm, deep-space human interplanetary program, but there is no such urgent rationale now and probably it will not appear in the near future. Human interplanetary missions look more like an extravagant display of human creativity, complacency, and high self-esteem than like a real need of humanity and a real possibility. The multi-generational international collaboration that seems to be necessary for effective human mission to Mars is problematic for political and financial reasons. Last but not least. I did not find in papers discussing the idea of refuge (Baum et al. 2015; Jebari 2015; Turchin and Green 2017) any deep analysis of the psychological challenge of living in a close, confined shelter or capsule, whether in an earthly or a space habitat. This challenge may be greater in space refuge but we may expect that many years of isolation in nuclear submarine may be psychologically deleterious as well.12 Margaret Boone Rappaport and Christopher Corbally (2019) in excellent and detailed way show how challenging psychologically will be every minute of life in confined Mars base. Their analysis may be referred to Earth refuge as well. This psychological harm raises ethical questions. Among them one of the most important is the basic question of the ethics of quality of life: is such kind of life worth to be alive?

#### No solvency, Capitalism will expand elsewhere if not in space bcz simply minimizing private entities in space they’re just allowing capitalism to expand in other ways

#### Private entities working with governments better address the symptoms of capitalism by collaborating to solve climate change.

Maanas **Sharma, 21** - ("The Space Review: The privatized frontier: the ethical implications and role of private companies in space exploration," No Publication, 9-7-2021, 12-6-2021https://www.thespacereview.com/article/4238/1)//AW

In recent years, private companies have taken on a larger role in the space exploration system. With lower costs and faster production times, they have displaced some functions of government space agencies. Though many have levied criticism against privatized space exploration, it also allows room for more altruistic actions by government space agencies and the benefits from increased space exploration as a whole. Thus, we should encourage this development, as the process is net ethical in the end. Especially if performed in conjunction with adequate government action on the topic, private space exploration can overcome possible shortcomings in its risky and capitalistic nature and ensure a positive contribution to the general public on Earth. Critics contend that companies must answer to their shareholders and justify their profits. This contributes to a larger overall psyche that prioritizes cost and speed above all else, resulting in significantly increased risks The implications of commercial space exploration have been thrust into the limelight with the successes and failures of billionaire Elon Musk’s company SpaceX. While private companies are not new to space exploration, their prominence in American space exploration efforts has increased rapidly in recent years, fueled by technological innovations, reductions in cost, and readily available funding from government and private sources.[1] In May 2020, SpaceX brought American astronauts to space from American soil for the first time in almost 10 years.[2] Recognizing the greatly reduced costs of space exploration in private companies, NASA’s budget has shifted to significantly relying on private companies.[3] However, private space companies are unique from government space agencies in the way they experience unique sets of market pressures that influence their decision-making process. Hence, the expansion of private control in the space sector turns into a multifaceted contestation of its ethicality. The most obvious ethical concern is the loss of human life. Critics contend that companies must answer to their shareholders and justify their profits. This contributes to a larger overall psyche that prioritizes cost and speed above all else, resulting in significantly increased risks.[4] However, the possible increase in mishaps is largely overstated. Companies recognize the need for safety aboard their expeditions themselves.[5] After all, the potential backlash from a mishap could destroy the company’s reputation and significantly harm their prospects. According to Dr. Nayef Al-Rodhan, Head of the Geneva Centre for Security Policy’s Geopolitics and Global Futures Programme, “because there were no alternatives to government space programs, accidents were seen to some degree as par for the course… By comparison, private companies actually have a far more difficult set of issues to face in the case of a mishap. In a worst case scenario, a private company could make an easy scapegoat.” [6] Another large ethical concern is the prominence capitalism may have in the future of private space exploration and the impacts thereof. The growth of private space companies in recent years has been closely intertwined with capitalism. Companies have largely focused on the most profitable projects, such as space travel and the business of space.[7] Many companies are funded by individual billionaires, such as dearMoon, SpaceX’s upcoming mission to the Moon.[8] Congress has also passed multiple acts for the purpose of reducing regulations on private space companies and securing private access to space. From this, many immediately jump to the conclusion that capitalism in space will recreate the same conditions in outer space that plague Earth today, especially with the increasing push to create a “space-for-space” economy, such as space tourism and new technologies to mine the Moon and asteroids. Critics, such as Jordan Pearson of VICE, believe that promises of “virtually unlimited resources” are only for the rich, and will perpetuate the growing wealth inequality that plagues the world today.[9] However, others contend that just because private space exploration has some capitalist elements, it is by no means an embodiment of unrestricted capitalism. A healthy

#### Continued private space development is the only way to make sustainable energy feasible – empirics prove. Autry 19:

Greg Autry {the director of the Southern California Commercial Spaceflight Initiative at the University of Southern California, vice president at the National Space Society, and chair of the International Space Development Conference, }, 19 - ("Space Research Can Save the Planet—Again," Foreign Policy, 7-20-2019, <https://foreignpolicy.com/2019/07/20/space-research-can-save-the-planet-again-climate-change-environment/)//marlborough-wr/>

Today conservationists and other critics are more likely to see space programs as militaristic splurges that squander billions of dollars better applied to solving problems on Earth. These well-meaning complaints are misguided, however. Earth’s problems—most urgently, climate change—can be solved only from space. That’s where the tools and data already being used to tackle these issues were forged and where the solutions of the future will be too. Space research has already been critical in averting one major environmental disaster. It was NASA satellite data that revealed a frightening and growing hole in the ozone layer over the South Pole, galvanizing public concern that, in 1987, produced the Montreal Protocol: the first international agreement addressing a global environmental problem. Since then, thanks to worldwide restrictions on damaging chlorofluorocarbons, the ozone situation has stabilized, and a full planetary recovery is expected. As this case showed, space can provide the vital information needed to understand a problem—

# 2N