**I negate the resolution: Resolved: The appropriation of outer space by private entities is unjust.**

#### **Extinction comes first under any framework**

**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]

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 ggood 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 ndermined 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)

#### **I value justice. The standard is maximizing well being and preventing extinction. consistency with utilitarianism.**

**Goodin 1995** (Professor of Philosophy at the Research School of the Social Sciences at the Australian National University (Robert E., Cambridge University Press, “Utilitarianism As a Public Philosophy” pg 63)

My larger argument turns on the proposition that there is something special about the situation of public officials that makes utilitarianism more plausible for them (or, more precisely, makes them adopt a form of utilitarianism that we would find more acceptable) than private individuals. Before proceeding with that larger argument, I must therefore say what it is that is so special about public officials and their situations that makes it both more necessary and more desirable for them to adopt a more credible form of utilitarianism. Consider, first the argument from necessity. Public officials are obliged to make their choices under uncertainty, and uncertainty of a very special sort at that. All choices-public and private alike- are made under some degree of uncertainty, of course. But in the nature of things, private individuals will usually have more complete information on the peculiarities of their own circumstances and on the ramifications that alternative possible choices might have for them. Public officials, in contrast, at relatively poorly informed as to the effects that their choices will have on individuals, one by one. What they typically do know are generalities: averages and aggregates. They know what will happen most often to most people as a result of their various possible choices. But that is all. That is enough to allow public policy makers to use the utilitarian calculus – if they want to use it at all – to choose general rules of conduct. Knowing aggregates and averages, they can proceed to calculate the utility payoffs from adopting each alternative possible general rule. But they cannot be sure what the payoff will be to any given individual or on any particular occasion. Their knowledge of generalities, aggregates and averages is just not sufficiently fine-grained for that.

#### **CP text: we advocate for public-private partnerships in space in line with the ISS model or a sponsored program model**

**ISS National Lab** [International Space Station National Laboratory – Center for the Advancement of Science in Space, “Research on the ISS, No Date, <https://www.issnationallab.org/research-on-the-iss/public-private-partnerships-in-space/>] /Triumph Debate

Public-private partnerships are a key component to driving innovation and national leadership. With the potential to address a wide array of modern challenges from technology development to infrastructure modernization, and from education to the economic development of space, public-private partnerships unlock new possibilities unavailable when we rely solely on public or private investment. The International Space Station (ISS) National laboratory is a great example of a public-private partnership model that is working in space. The ISS National Lab opens up the incredible possibilities of the space station research environment to a diverse range of researchers, entrepreneurs, and innovators that could create entirely new markets in space. The ISS National Laboratory – Accelerating Utilization of the ISS The ISS offers a unique research and development platform, unlike any on Earth, enabling research that benefits both exploration and life on Earth. In an effort to expand the research opportunities this unparalleled platform provides to the nation, the ISS United States Orbital Segment, through bipartisan legislation, was designated as a U.S. National Laboratory in 2005, enabling research and development access to a broad range of commercial, academic, and government users. After final assembly of the ISS in 2011, the Center for the Advancement of Science in Space, a (501)(c)(3) organization, was selected by NASA to manage the ISS U.S. National Laboratory. The ISS National Lab fulfills its mission to accelerate space-based research by engaging a variety of nontraditional space users, operating in the fields of life science, physical science, technology development, and remote sensing. The ISS National Lab engages primarily with organizations that pay toward the value obtained on the ISS, as well as with other organizations addressing national science and research priorities. This research serves commercial and entrepreneurial needs and other important goals such as the pursuit of new knowledge and education. Since 2011, the ISS National Lab has stewarded more than 200 ISS research projects, ranging from developing new drug therapies, to monitoring tropical cyclones, to improving equipment for first-responders, to producing unique fiber-optics materials in space. Working together with NASA, the ISS National Lab aims to advance the nation’s leadership in commercial space, pursue groundbreaking science not possible on Earth, and leverage the space station to inspire the next generation. Prior to the ISS National Lab model, NASA traditionally funded all aspects of ISS research, whether it was research needed to further exploration, or discovery-based space research that expanded upon its scientific agenda. As the ISS evolved into a National Laboratory, the ISS National Lab has increased the diversity of users by accelerating utilization of the ISS as an innovation platform for a wide variety of partners. These include Fortune 500 organizations, small businesses, educational institutions, philanthropic and research foundations, federal and state government agencies, and other thought leaders in pursuit of groundbreaking technology and innovation who are interested in leveraging microgravity to solve complex research problems on Earth. The ISS National Lab plays a role in not only attracting a diverse set of users, including private companies, to utilize the ISS, but also in engaging the private sector through various research and cost-sharing arrangements. Sponsored Programs – Accelerating Third-Party Funding for Space Research The ISS National Lab has developed a successful Sponsored Program model that attracts third-party funding from private industry and other government agencies to solve big problems or address target challenges. These programs translate into projects on the ISS National Lab. The Sponsored Program model enables an organization to ask new questions and explore key variables, using the ISS National Lab environment as a tool in their innovation portfolio. In return, the organization creates opportunities for targeted research and development projects and STEM education projects or fosters novel ideas of startup companies. Fortune 500 companies, government agencies, and regional incubators have successfully used the ISS National Lab Sponsored Program model. This unique research and development model is flexible to meet the needs and budget of a partnering organization. Successful Sponsored Programs include Boeing Mass Challenge, Massachusetts Life Sciences Center, National Science Foundation (NSF) fluid dynamics and combustion Sponsored Program, and the National Institutes of Health (NIH) National Center for Advancing Translational Sciences (NCATS) organ-on-chip technologies Sponsored Program, totaling more than $20 million in third-party funding over the last two years. Additional Sponsored Programs totaling close to $5 million in 2017 with Fortune 500 organizations are imminent and will target major challenges to humankind as well as STEM education initiatives.

#### **Creates competitive markets and has the net benefit of increasing the amount of research we can do**

**ISS National Lab** [International Space Station National Laboratory – Center for the Advancement of Science in Space, “Research on the ISS, No Date, <https://www.issnationallab.org/research-on-the-iss/public-private-partnerships-in-space/>] /Triumph Debate

Commercial Services Providers – A Competitive Marketplace for Space Services As the demand for space research and development projects increases, the supply of access to space and research and development facilities will need to be augmented. In space, private-sector commercial research and development facility operators are on the forefront of a new era of space research on the ISS and future space platforms. These organizations operate their facilities internally and externally on the ISS. They provide users with more choices to address unique research needs and are the pathfinders for a marketplace in low Earth orbit. Many of these companies have used their own resources to invest in in-orbit research and development facilities, reducing the risk for the federal sector to develop these facilities and services. In its first five years, the ISS National Lab has supported growth in the number of these research and development facility operators from one in FY12 to five in FY16—with four additional facilities expected to begin in-orbit operations by FY18. The ISS National Lab fosters healthy competition between these supply partners by allowing them to bid on each commercial customer project, seeking the best solution for the customer. The current commercial facility operators are: NanoRacks – Since 2009, NanoRacks has provided hardware and services for the International Space Station National Laboratory. Three internal research platforms can house plug-and-play NanoLabs and provide critical capabilities such as centrifugation and microscopy. Additionally, the NanoRacks External Platform was launched in FY15 and provides capabilities for Earth and deep space observation, sensor development, and testing for advanced electronics and materials. BioServe – In-orbit offerings from BioServe include multiple life sciences facilities and kits, including the multi-purpose Space Automated Bioproduct Laboratory (SABL), launched in FY15. SABL supports myriad initiatives for commercial life sciences research as well as physical and material science experiments. TechShot – Launched in FY15, the TechShot Bone Densitometer is a commercial bone-density scanner for use in spaceflight rodent research. In just one year, the successful operation of this facility has already demonstrated its utility as a catalyst for disease modeling research and commercial biomedical initiatives in space. Made In Space – In FY16, the Additive Manufacturing Facility developed by Made In Space launched to the International Space Station, enabling 3D printing projects from commercial, educational, and government entities interested in the development of objects for experiments and technology demonstrations. These objects will be produced onboard the International Space Station in a fraction of the time currently required to have such objects manifested and delivered to the station using traditional ground preparation and launch. Space Tango – TangoLab-1 is a general research platform launched in FY16. This facility from Space Tango allows multiple automated experiments in the life and physical sciences to run simultaneously. This architecture minimizes crew member interaction and reduces complexity while increasing scalability, enabling improved throughput for users. In addition to currently available capabilities, a growing pipeline of commercial ISS National Lab facilities in preparation (from Teledyne Brown, AlphaSpace, STaArS, and HNu Photonics) will advance research in remote sensing, materials testing, molecular biology, and tissue culture. Companies are exploring how these capabilities might transition onto future low Earth orbit platforms, from free-flying spacecraft to expandable modules. Through support of such companies, the ISS National Lab and NASA are enabling the International Space Station National Laboratory to serve as an incubator for the low Earth orbit market and U.S. private sector spaceflight interests, and are using public-private partnership funding models to share the risk and benefits of these emerging human space flight activities.

## **1nc – Africa DA – war impacts**

#### **Russia is challenging US dominance in Africa**

**Smith 9-13**-2021 [Elliot Smith, September 13, 2021, CNBC, “Russia is building its military influence in Africa, challenging U.S. and French dominance” <https://www.cnbc.com/2021/09/13/russia-is-building-military-influence-in-africa-challenging-us-france.html>] /Triumph Debate

In the past two months alone, Russia has signed military cooperation agreements with Nigeria and Ethiopia, Africa’s two most populous nations. The Stockholm International Peace Research Institute estimates that Africa accounted for 18% of Russian arms exports between 2016 and 2020. Russian mercenaries have also provided direct assistance to governments in Libya and the Central African Republic, according to the U.N. However, the Kremlin has denied links to the Wagner Group, a paramilitary organization alleged by the U.N. to be aiding human rights abuses in the region. “A group of Russian instructors was sent to the CAR at the request of its leaders and with the knowledge of the UN Security Council Sanctions Committee on the CAR established by Resolution 2127,” a Russian foreign ministry statement said in July. “Indicatively, none of them has taken part in combat operations.” Reuters reported in July that U.S. lawmakers had stalled a planned $1 billion weapons sale to Nigeria over allegations of human rights abuses by the government. Less than a month later, Russia signed a deal with President Muhammadu Buhari’s administration to supply military equipment, training and technology to Nigerian forces. Although historically a key diplomatic and trade partner of the U.S., Buhari’s government found itself at odds with Washington amid the #EndSARS protests in 2020, and again after a recent fallout with Twitter. Meanwhile, Islamist militant groups such as Boko Haram and the Islamic State’s West Africa Province have cotinued to wreak havoc in the northeast of the country. This confluence of factors paving the way for Russian influence-building was also at play in Ethiopia. Russia has provided support for Prime Minister Abiy Ahmed’s government after Western governments balked at his forces’ military response to an insurgency in northern Tigray. Ethiopia felt the U.S. in particular was aligning with Egypt in the ongoing dispute over the Grand Ethiopian Renaissance Dam. U.S. Secretary of State Antony Blinken further evoked the ire of Addis Ababa in March by accusing forces in Tigray of “ethnic cleansing.” Russian Foreign Minister Sergey Lavrov then met with Ethiopian counterpart Demeke Mekonnen in June. Moscow proceeded with the deployment of election observers to Ethiopia, whereas the EU withdrew its observers, citing “ongoing violence across the country, human rights violations and political tensions, harassment of media workers and detained opposition members.” Russia has supplied strategic weapons both as a potential defense against any Egyptian strike on the GERD and to aid government forces in Tigray. “Gains by the Tigray Defence Force (TDF), which has captured parts of the Afar and Amhara regions in recent weeks, make the provision of desperately needed weapons all the more important for Addis Ababa, and Moscow is likely to oblige to such a request, possibly on a buy-now-pay-later basis,” said Louw Nel, senior political analyst at NKC African Economics. In what Nel flagged as a “sign of things to come,” Ethiopia and Russia signed a military cooperation agreement in July, focused specifically on knowledge and technology transfers. However, Nel noted that Ethiopia will be “wary of allowing Russian personnel to be deployed there in anything other than a training capacity.” Russia’s foreign ministry was not immediately available for comment when contacted by CNBC.

#### **US private economic involvement in the African space race results in hard power advantages against Russia – the aff gets rid of this possibility**

**Devermont & Oniosun 2020** [Judd Devermont and Temidayo Oniosun, June 23, 2020, War On The Rocks, “IS THE UNITED STATES LOSING THE AFRICAN SPACE RACE?,” <https://warontherocks.com/2020/06/is-the-united-states-losing-the-african-space-race/>] /Triumph Debate

Advancing American economic and development goals in Africa will translate into influence in harder national security spheres. Africa’s space industry is projected to grow to over $10 billion in the next five years, according to Space in Africa’s African Space Industry Annual Report. This is a significant opportunity for the United States to expand bilateral trade with African countries, which rested at a mere $40 billion in 2018. U.S. companies are well-positioned to sell space equipment and services to African governments. Specifically, the U.S. private sector could build new satellites, sell ground station equipment, provide capacity training, and offer launch services. These investments in the region’s space sector could support America’s goal of substantially increasing two-way trade. The nascent space industry in several African countries also furthers USAID’s efforts to foster self-reliance, boosting growth and employment in sectors such as telecommunications, navigation, and Earth observation. These systems and services help to address major societal challenges including imperfect markets, climate change, scarce resources, health systems, and an aging population. For example, about 61 percent of Africans do not have access to the internet, a problem communications satellites could address. The entire satellite value chain has important implications for U.S. political influence in Africa. The technology transfer process, access to technologies and data, and support for development have the potential to increase U.S. political influence and to deepen national security ties between the United States and African partners. The United States has historically used space diplomacy in Africa to display U.S. commitment. These ties have the potential to translate into African support for U.S. positions on data-sharing, safety coordination, and other international space norms. Currently, Burkina Faso is a vice-chair of the U.N. General Assembly’s First Committee, which oversees disarmament issues in space; Cameroon is vice-chair on the Fourth Committee, which moderates international cooperation in space; and South Africa is chair of the Scientific and Technical Subcommittee of the ad hoc U.N. Committee on the Peaceful Uses of Outer Space. African support, for example, could add momentum to the U.S. government’s new legal framework, known as the Artemis Accords, to govern the behavior of countries and companies in space and on the moon. NASA administrator Jim Bridenstine recently underscored the importance of these norms, pointing out that debris from a spent Chinese rocket stage landed in Cote d’Ivoire. It also may blunt Chinese and Russian efforts, via state-owned companies, to strengthen their geopolitical influence and surveillance capacity in the region. According to the Defense Intelligence Agency, China uses its commercial sales “to bolster relationships with countries around the world” and “lead the space community.” China established an 18-meter diameter dish in Swakopmund, Namibia in 2001, which some analysts worry could be used to advance the People Liberation Army’s (PLA) cyber, space, and networking objectives. China’s Great Wall Industry Corporation notched its first foreign sale to Nigeria in 2007, delivering the total package: satellite manufacture, launch service, ground station construction, project implementation, financing, insurance, and training. The Russians launched Angola’s first satellite and will do the same for its replacement later this year. Russia claims it is currently negotiating with unnamed African countries to deploy Global Navigation Satellite System (GLONASS) ground stations across the region. China funded Ethiopia’s first satellite and trained its engineers. It also launched Sudan’s first-ever satellite, which will conduct Earth observation research for military and civilian purposes. If the United States is not engaged, it has a limited ability to counter and mitigate the risks posed by adversaries in this sector. The Big Picture The United States has an opportunity to join the African space race, establishing itself as a major partner in the region’s rapidly expanding space programs. Doing so would advance American economic, diplomatic, and national security interests by increasing U.S. trade and investment, deepening ties with influential African governments, and staking a U.S. claim in a sector where China and Russia are increasingly dominant. Washington should build on some of NASA’s recent engagements, including an agreement last year with South African National Space Agency (SANSA) to conduct technical and environmental research on the potential to establish a ground station in South Africa. The U.S. government ought to promote the space sector as a key focus area for the Trump Administration’s Prosper Africa initiative, showcasing SpaceX’s role in launching satellites in Ghana, Kenya, Nigeria, and South Africa. Specifically, Washington should consider providing financial incentives and credits to enable its private sector to compete with state-backed Chinese and Russian firms. Finally, the United States should work with African officials to develop common understandings and positions in international forums to develop norms for outer space, ensuring an even playing field for foreign companies and addressing potential threats to sovereignty. It is in the U.S. interest to be part of this success story — it just has to make the leap.

#### **Russia & China will use weaknesses in US hard power as opportunities to strike**

**Michta 12-14**-2021 [Andrew A. Michta, December 14 2021, “Russia and China’s Dangerous Decline,” Wall Street Journal, <https://www.wsj.com/articles/russia-and-china-dangerous-population-decline-indo-pacific-pivot-research-development-taiwan-ukraine-11639497466>] /Triumph Debate

The risk of confrontation between the U.S. and China is greater than it has been in decades, and a broader war, triggered by a Chinese action against Taiwan, is a possibility. In “Destined for War: Can America and China Escape Thucydides’s Trap?” (2017), Graham Allison likened the situation to the Peloponnesian War, which the Athenian historian thought inevitable because Sparta feared the rising power of Athens. Yet the real reason for the current tensions has less to do with the decline and rise of great powers than with threat perceptions, balance-of-power estimates, autonomous assessments and internal decisions that have been driving China—and Russia—for several years now. (They have increasingly aligned in their opposition to the U.S. and the post-Cold War international order.) The rising threat of high-intensity state-on-state war is driven by the growing elite conviction in Beijing and Moscow that their power disadvantage relative to the U.S. and its allies will worsen unless they move soon, making victory increasingly unattainable. There are three principal reasons why China and Russia may want to confront the U.S. and its allies sooner rather than later, possibly within five years. First, the U.S. military will require time to restructure and refit away from counterterrorism and toward high-intensity state-on-state great-power conflict. The Army Modernization Strategy published in 2019 sets 2035 as the deadline for transforming the Army into a multidomain-capable force. From a Russian or Chinese perspective, that means each additional year will shift imbalances, which currently favor them in some areas, in America’s favor. The second factor is domestic conditions in the U.S. and Europe. Western democracies are buffeted by the trifecta of Covid-19; increasingly brazen mass in-migration, to which their governments seem unable to respond effectively; and the cresting cultural revolution, especially in the U.S., which is likely to peak within the next two years. All have strained national cohesion across the West, fed distrust in government, and sowed seeds of doubt that legacy democratic institutions and processes are able to meet the basic requirements of governance and satisfy the citizenry. Once America has moved beyond its current internal 1970s-style turbulence, a reconsolidated U.S., with its key manufacturing supply chains re-shored back from China, will present Beijing and Moscow with a far more formidable foe than today. A good indicator is the recent reports that the U.S. has made a qualitative leap in hypersonic missile technology, likely to nullify the edge Russia and China had hoped to maintain through the investment in their own programs. Notwithstanding their blustery propaganda, Beijing and Moscow are keenly aware that America’s research-and-development base can be mobilized to improve U.S. capabilities. Time is on America’s side when it comes to the quality and sophistication of its weapon systems. The third factor: internal pressures building within Chinese and Russian societies. For both countries, population trends and current projections paint a devastating picture. In 2021 China reported its first projected population decline since the famine that accompanied Mao Zedong’s “Great Leap Forward” in the late 1950s. With the official birthrate of 1.3 children per woman—far below the replacement rate of 2.1, and in part a result of the now-relaxed one-child policy—there are credible projections that China’s population will peak in 2022, and that births will continue to decline and deaths will surpass births by six million in 2025. Russia’s population is projected to decline from 146 million today to 121 million in 2050. Historically, wars have often started because of miscalculations based on unsound intelligence estimates and underestimating the enemy. In the case of U.S. strategic competition with China and Russia, the risk of war has grown not because of their rise but because of how China and Russia assess the real near-term implications of Washington’s decision to refocus its defense strategy on the fundamentals of great-power competition and conflict instead of counterterrorism and nation building. Whether war breaks out will depend on how badly Beijing and Moscow fear the global power shift in the next decade and how eager they will be to exploit their perceived current relative advantages to remake the world.

#### **US-Russia nuclear war causes nuclear winter, blocks out sunlight, kills life on earth**

**Monzon 2019** [Inigo Monzon, August 20, 2019, “US, Russia Nuclear War Would Cause 'Nuclear Winter' And 'Human Extinction,' Study Reveals,” International Business Times, <https://www.ibtimes.com/us-russia-nuclear-war-would-cause-nuclear-winter-human-extinction-study-reveals-2815921>] /Triumph Debate

A new study has confirmed that the world will be plunged into a nuclear winter following a nuclear war between the U.S. and Russia. According to the study, the war between these two superpowers would trigger a global environmental event that can last for several years. The new study was conducted by a team of researchers from the University of Colorado, Rutgers University and the National Center for Atmospheric Research. It was published in the Journal of Geophysical Research: Atmospheres. For the study, the researchers created a model depicting what would happen to Earth if the U.S. and Russia engaged in an all-out nuclear war. As part of the simulation, the researchers observed what would happen if a large number of nuclear bombs were detonated in urban areas near the U.S. and Russia. In the simulation, the two countries used all of their nuclear weapons. According to the findings of their model, dubbed as the Community Earth System Model – Whole Atmosphere Community Climate Model version 4, the explosions from the nuclear bomb detonations would create a massive amount of smoke that would cover up the Earth’s atmosphere. The smoke, which scientists predict would linger for years, will block out sunlight, leading to a significant drop in Earth’s temperature. According to the scientists, the winter-like season that will be caused by the nuclear war will last for a long time. It will also trigger other environmental events such as changes to the monsoon and El Niño seasons. The scientists noted that the results of their study agree with the findings of a previous research published in 2007. The similarity between these two studies clearly indicates the inevitability of a nuclear winter following a massive nuclear war. “Despite having different features and capabilities, both models produce similar results,” the scientists stated in the study’s abstract. “Nuclear winter, with below-freezing temperatures over much of the Northern Hemisphere during summer, occurs because of a reduction of surface solar radiation due to smoke lofted into the stratosphere.