# 1NC

## T Unjust

**Interp – Unjust refers to a negative action – it means contrary.**

**Black Laws No Date** "What is Unjust?" https://thelawdictionary.org/unjust/ //Elmer

Contrary to right and justice, or to the enjoyment of his rights by another, or to the standards of conduct furnished by the laws.

**Violation – The Aff is a positive action – it creates a new concept for Space i.e. the treating of Space as a “Global Commons”**

**Standards –**

**1] Limits – making the topic bi-directional explodes predictability – it means that Aff’s can both increase non-exist property regimes in space AND decrease appropriation by private actors – makes the topic untenable.**

**2] Ground – wrecks Neg Generics – we can’t say appropriation good since the 1AC can create new views on Outer Space Property Rights that circumvent our Links since they can say “Global Commons” approach solves.**

**Independently - the Plan is both Extra-T - since it establishes a new property rights regime AND Effects-T - since the Global Commons ISN'T INTRINSICALLY a reduction on Private Property in Space, it involves actions like creating a governance system AND redistribution/cooperation which is the I/L to their Colonialism Advantage - both of which are voters for Limits and Predictability**

**DTD–T indicts the whole aff**

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

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

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

## Russia DA

**Reforms spurred by popular backlash are critical to Russian growth and coming now, but the plan stops them by giving Putin a foreign policy win that secures legitimacy**

Andrew **Wood 19**, Associate Fellow in the Russia and Eurasia Program of Chatham House, Former British Ambassador to Belgrade and Moscow, “Putinist Rule Minus Putin?”, The American Interest, 7/29/2019, https://www.the-american-interest.com/2019/07/29/putinist-rule-minus-putin/

The Russian tradition of top-down rule has a long history, but Vladimir Vladimirovich Putin was not condemned to follow it over the past couple of decades. It was Putin who made the crucial decision to reinforce it further on his return to the Kremlin in 2012 by choosing repression over the cautious economic reforms that had been mooted in the Medvedev presidential interlude. He it was who seized Crimea in 2014 and invaded eastern Ukraine. He has overseen the decline in the Russian economy since 2008 and the continuing rise in corruption that has gone along with it. He is responsible for the servility of the Duma and the courts to the diktat of the executive branch, and for the predatory conduct of Russia’s various enforcement agencies. The questions for Russia now are how, and whether, present political structures can in due course cope without Putin. “Putinism” is a convenient shorthand for describing the way Russia is ruled, but that is the result of a personalized process intended to enforce the unity of the Russian state and the obligation of its citizens to obey its requirements, not a construct defined in detail from the start. Its principal achievement has been that it has both protected and enhanced the role of the center. Putin’s re-election as President in 2018 confirmed authoritarianism as a process in continuing advance, its overriding purpose being to retain power in the interests of those already wielding it, and bound by loyalty to its central figure, at present Putin. Putin does not of course literally rule alone. He cannot in the nature of things decide everything in Russia by himself. He could not, even if he wished it, prevent those holding some degree of power at any level from using it to their cumulative advantage without regard to the law, or to what most outsiders would see as common decency, for that matter. He is most immediately dependent on the support of a narrowing set of long-term collaborators, whether political-, security-, or business-related, whose interests are also dependent on the present disorder of things, together with the mutual and complicit trust among those collaborators essential to its preservation. Putin is the linchpin that holds them together. Hang together or hang separately is the English language proverb. There is no doubt a Russian one. Stability? Putin’s present term ends in May 2024. He cannot under Russia’s Constitution stand again that year. But the personalized and repressive logic of Putinism implies that a way to allow him to remain in command must nevertheless be found. As Grigory Yavlinsky rightly put it in his updated and newly translated study of what he calls peripheral authoritarianism, in Russia and in other states similarly governed: signs have become more pronounced that Russia’s autocracy is developing along the lines of long-term usurpation of power by a very close circle of people that see politics in terms of highly personal power play rather than as a mechanism to ensure the long-term survival of Russian statehood. Yavlinsky concludes that the spectrum of remaining opportunities for change has narrowed, at least for the next decade. If that proves to be so, preserving a lasting claim to continuing legitimacy without addressing Russia’s external or internal problems would in effect, if it succeeded, be to freeze those problems in place. The shadow of unknown and so far unpredictable change in 2024 has now fed into a shift in public attitudes since Putin’s re-election in 2018. Putin himself has become somewhat tarnished, losing in the process his image of being beyond politics, and of being Russia’s necessary savior. Putin is now held personally responsible for domestic problems that he could once deflect onto his Prime Minister’s shoulders. The argument that the Kremlin is the defender of “traditional values” on behalf of the Russian people has lost some of its force. The perception that Russia’s leaders are concerned for their own interests and those of their privileged dependents, rather than those of Russia’s ordinary citizens, is becoming the norm. Polls show that about 27-30 percent of the population are now ready, or at least say they are ready, to take part in street protests. These are becoming more common, not least outside Moscow, provoked for the most part by local issues and the misdeeds of local or regional office holders. But they all nevertheless reflect to some degree or another on the standing of the Kremlin. None of this is to suggest that widespread public disturbance is imminent. What triggers that in any society is always unpredictable. There are, moreover, neither widely accepted ideas for better government nor public figures of sufficient standing to articulate them in Russia, for now at least, around whom such disturbances might crystallize on a nation-wide scale. But the existing and potentially developing shift in public attitudes does indicate that, if Putin chooses to stay in effective power after 2024, then continuity in the Kremlin will be dependent on popular resignation rather than enthusiasm. Russia’s economic prospects up to and beyond 2024 are poor, and neither Putin nor his authoritarian minded supporters have serious proposals for improving them. The “National Projects” he has put forward are similar in principle to others that have been tried in vain before. Assertions that innovative investment in the defense sector will pay off in promoting diversity across the economy as a whole have proved false. Per capita income has declined over the past five years and may not easily recover. Putin and his colleagues can no longer rely, as the Kremlin did ten or more years ago, on growing income from natural resources, however ill-managed, to bolster its popular appeal and to pay off its political allies. Around three-quarters of Russia’s GDP is by now state owned, meaning run by Putin sanctioned beneficiaries. Significant capital flight has continued and is a clear marker of distrust of the authorities. So too is the less widely noted emigration of well educated and enterprising Russians to the Western democracies since 2000, whose rate rose significantly after Putin’s return to the Kremlin in 2012. The total over the past 19 years is estimated to be 1.6–2 million. The Internal Backstop Economic difficulties, a sense that Putinism has exhausted its political capital and resentment at the enforcement of top down control may perhaps make a further Putin term after 2024 troublesome to implement without some sort of domestic or foreign event to make it seem necessary. There are however significant numbers of Russians able to benefit from the complexities of the present state of affairs, or unsettled enough at the thought of Putin going without a clear and reasonably trusted successor in prospect to make Putin’s continuance in effective control seem by 2023 both inevitable and acceptable. Continued stagnation from 2024 on and uncertain relations with the outside world would, on the other hand, seem likely to fuel more and more discontent. There is at present no sign of an aging Putin or his collaborators having anything fresh to offer on his home front, either before or after 2024. But he has a telling reserve of force at his disposal for the purpose of ensuring the survival of the regime in case of domestic violence. The National Guard is comparable in numbers to the Russian Armed Forces. Its declared purpose is to ensure public order, meaning in practice keeping Russian citizens in order by force, however violent. There are other internal agencies with similar powers. The extent of the network expresses ruthlessness but is also a mark of fear within the regime as to the committed loyalty of the Russian people in general. The same is true of the persistent effort made by Kremlin supporters to confine public discussion to their approved agenda of how Russia should develop, politically, economically or with regard to the rest of the world. The effect is that Russia at present exists in a state of limbo, with its governing authorities incapable of addressing the issues of most importance to its citizens, its domestic concerns. The large share of the Russian budget devoted to domestic and international security gets in the way, along with the interest of privileged state contractors in using every opportunity to pursue and price projects designed to fill their pockets rather than benefit the public as a whole. Great Power? Stephen Kotkin records in his magisterial history of the Stalin years that, by 1937, “Perceived security imperatives and a need for absolute unity once again turned the quest in Russia to build a strong state into personal rule.” Stalin has of course been restored to eminent repute in Russia under Putin, and Putin has been influenced by Stalin’s train of thought, as well as borrowing his language from time to time. But I do not quote Kotkin to show that Putin is a Stalin clone, merely to point to the fact that Putin’s aim from the beginning has been, like Stalin’s and others’ before him, to build a strong state in Russia by means of a “vertical of power,” and that the end result is, once again, personal rule. Security imperatives, as Putin would see them, have been a driving force, with the need for absolute unity in meeting them as the inescapable corollary. Like Stalin before him, Putin does not draw a distinction between what he sees as threatening at home or abroad. The two shade into one another. The tragedy of Beslan in September 2004, for instance, was by any normal criteria an internal affair, with the school seized by Chechen terrorists and the threat resolved with brutal slaughter by Russian forces. For Putin, it was also an attempt by unspecified foreign forces to seize a “juicy piece” of Russian territory, and a reason to abolish the autonomous standing of Russia’s Governors. He and his colleagues saw the 2004-05 Orange Revolution in Ukraine not as an internal crisis in that state, but as the result of foreign interference directed at Russia. He responded at home with increasingly stringent measures against non-governmental organizations in Russia, starting with any that had any form of external financial aid and the introduction and extension of measures directed against “extremism.” He argued that the street protests of 2011-12 were provoked and planned by Hillary Clinton. And so on, to the need to protect Fortress Russia today from internal Fifth Columnists and from hostile foreign powers determined to destroy it. There are of course complexities in this process of hardening attitudes in official Russia as to its relationship with its own people, with its ex-Soviet neighbors, with former members of the Warsaw Pact, and with the West in general over the Putin years, but one strain is constant: Nothing is ever Russia’s fault. Moscow is always sinned against. Putin’s historic mission is to restore his country’s status as a great power, with the right to establish and protect its hegemony over its neighbors. Those neighbors have no right to object, let alone to look to outside powers to support their independence. Putin and his colleagues have public support in Russia for such a stance, as did their tsarist predecessors in analogous circumstances. But the Russian public would at the same time by now prefer there to be a less fraught relationship with the rest of Europe, and the United States too. The euphoria provoked by the Kremlin’s bloodless seizure of Crimea in 2014 has faded. The idea that their country has a special mission to defend itself, and that this has to be done by cowing its neighbors into effective submission, is still there as a general assumption, but not as an immediate aspiration.

**The plan masks the need for economic modernization**

Nicole J. **Jackson 19**, Associate Professor in International Studies, Specializing in Russian and Eurasian Politics and Security Studies at the School for International Studies, Simon Fraser University, Vancouver, Canada, PhD from the London School of Economics, Outer Space in Russia’s Security Strategy, Chapter19, Routledge Handbook of Russian Security, Reviewed & Edited by Roger E. Kanet, Professor of Political Science at the University of Miami, Taylor and Francis

Today, the Russian Federation is a major actor in space and outer space governance. Its presence in space is second only to that of the US. Meanwhile, the challenges of keeping outer space ‘secure’ is growing in importance and complexity in the current context of globalisation, rapid technological change, and the increasing access to space for state and non-state actors. Russia considers outer space as a strategic region to enhance its military capabilities on earth, provide intelligence and communication functions, and achieve international status and prestige as a space power. It is sensitive to US strategy and actions and has developed counter-space technologies (e.g. electronic weapons that can jam satellites) to provide Russia with an asymmetrical edge to offset US military advantages. However, Russia’s outer space rhetoric and policy are also driven by domestic and identity issues. Outer space strategy is an instrument through which Russia pursues its goal to be a ‘great power’ and to shape the international system more closely to the new multipolar world as it sees it. It may also bring Russia economic benefits and mask internal challenges. President Vladimir Putin has taken both symmetric and asymmetric actions in outer space and increased Russia’s investment in new technologies (satellites, electronic warfare,1 strategic offensive weapon, etc.) and simultaneously pursued diplomatic initiatives to control weapons in space. During the Cold War, despite military tensions and serious concern about a possible arms race in outer space, Russia and the US negotiated internationally binding agreements related to the governance of space activities. Today, both powers are again warning of a new arms race in outer space while continuing to strengthen the roles of their militaries in the field. Since 2000, Russia has actively pursued both binding laws and non-binding norms to ban and control weapons in outer space and has advocated for non-binding, voluntary transparency and confidence-building measures (TCBMs). Sometimes it has done this in cooperation with other states, sometimes in opposition to them. This diplomatic endeavour may seem somewhat at odds with Russia’s growing militarisation; however, the dual role on outer space fits well within Russia’s overall foreign and security strategy which is both reactive to US policy and simultaneously pro the United Nations (UN) and consensus-based multilateral negotiations. Russia is strengthening its comprehensive power, including military, diplomatic and normative global influence, in order to make its voice heard on the international stage. Russia’s diplomatic activism is that of an aspirational great power, but it also reflects the limits of its current economic and military weaknesses. International negotiations enable Russia to be recognised as a key player in global affairs, while also benefiting from an opportunity to highlight the US/West’s declining influence and the rise of a multipolar world. This chapter examines why outer space is so important for Russia. Then, it shows how and why the Russian government’s outer space strategy and capabilities have evolved since the 1990s. The paper concludes with an appraisal of Russia’s recent diplomatic initiatives on outer space governance.2 No longer economically competitive in the race for control of outer space, Russia has attempted several strategies to enable it at least to keep in the running. It has placed its space strategy in the context of defence requirements and state military control. It is using diplomacy – working with international organisations affiliated with the UN – to discuss, cooperate on and influence the race for the militarisation of space. It works with disarmament organisations to influence and promote a collective approach to the problem, rather than one dominated by the richer and more powerful states. Russia’s securitisation of outer space: threats and opportunities The Russian state defines threats largely in traditional terms of territorial protection from military challenges and views space assets as vital for military communication and defence. Russia’s geography highlights the need to protect its extensive borders and military and economic assets and infrastructure scattered over its vast territory (Barvinenko, 2007). The state has traditionally assessed that it is surrounded by hostile powers and thus needs ‘buffers’ or a ‘sphere of influence’ to protect itself. Today, Russia has expanded this rhetoric of vulnerability to include attacks from outer space. Russians use the term ‘aerospace’ rather than outer space because of the interrelatedness of airspace and outer space in the context of contemporary threats and conflicts, and because there is no distinct boundary between the two concepts (Kupriyanov, 2005). Russia’s rhetoric on outer space broadly mirrors that of the US, stressing urgency to prepare for a possible future war there. In 2017, US Navy Vice Admiral Charles Richards, deputy commander of US Strategic Command, argued that ‘With rapidly growing threat of a degraded space environment, we must prepare for a conflict that extends into space’ (quoted in Daniels, 2017). Rapid technological advancements in the space industry have influenced perceptions that there are economic benefits from being a space power. At the same time, they have given rise to concerns about threats stemming from the militarisation of space. For example, the development of cheap miniature satellites promises speedy replacement of disabled satellites in the event of attack. Theoretically, this could allow the US military (or other actors) to use such space constellations to support operations during a conflict.3 Through technology outer space has become integrated with other domains – land, sea, air and cyber. Most recently, the first generation of hypersonic weapons has ‘set the conditions for the merger of air and missiles defence and the air and outer space domains’ (Charron and Fergusson, 2018). Of course, a healthy space industry also provides strategic resources for a state’s military and economy. In Russia’s case, the announcement of new technological developments also masks unaddressed structural and systemic weaknesses and confers domestic and international legitimacy on Russia’s aspiration to be a ‘great power’.

**Space cooperation massively boosts prestige for authoritarian regimes**

**Juul, 19** - Senior policy analyst at the Center for American Progress

Peter Juul, “Trump’s Space Force Gets the Final Frontier All Wrong,” Foreign Policy. March 20, 2019. https://foreignpolicy.com/2019/03/20/trumps-space-force-gets-the-final-frontier-all-wrong/

* Space is k2 national prestige – we control it now because people remember Apollo and ISS but that won’t last forever – strong NASA leadership is key
* Autocracy link – working with Russia and China gives them diplomatic leverage because it treats them as co-equal despite HR violations
* Competition is key – drives all countries to try to outperform the others

But funding isn’t everything, and in the new geopolitical context, democracy must be seen to work effectively. When it comes to space exploration, that means ratcheting back U.S. space cooperation with Russia as well as forgoing any equally intimate cooperation with China and its secretive space agency. The fact that the head of Russia’s space agency remains under U.S. sanctions for his role in Moscow’s military intervention in Ukraine illustrates the hazards involved in working with autocracies in space. Deep cooperation with autocratic powers in space gives autocracies a major point of diplomatic leverage over the United States, and more generally allows them to poach unearned international prestige by working on goals set and largely carried out by the United States. In today’s world, there’s no reason for the United States to give Russia or China this sort of standing by association. Cooperation between the United States and Russia won’t grind to an immediate halt, though. With the International Space Station in orbit until at least 2024—if not longer—it will take time to disentangle the web of functional ties that have bound NASA and its Russian counterpart over the last quarter century. Significant cooperation with China should be avoided altogether, especially given its notoriously opaque and military-run space program. The space programs and agencies of other nations—NASA, the European Space Agency and its member-nation agencies, the Japan Aerospace Exploration Agency, and even Russia’s Roscosmos—remain led and run by civilians.

**Extinction**

Bruce **Blair 19**, Co-founder of Global Zero, nuclear security expert and a research scholar at the Program on Science and Global Security at Princeton University's Woodrow Wilson School of Public and International Affairs, with; Clifford Gaddy; 2019, “Russia’s Aging War Machine,” https://www.globalzero.org/wp-content/uploads/2019/03/BB\_Russias-Aging-War-Machine\_1999.pdf

The Stakes for the United States Should Americans and their government care about Russia’s nuclear posture and its dissolution? The answer is an emphatic yes. American security is bound up in Russia’s destiny, and our immediate security depends crucially on ironclad Russian control over its nuclear arsenal. If we are very lucky, the Russian nuclear arsenal and control system will atrophy without incident, coming to a safe instead of deadly end. In such a happy scenario, this atrophy will also encourage Russia to ratify the START II arms reduction treaty and negotiate even deeper bilateral reductions, lowering the ceiling on strategic deployments from 3,500 (START II) to 2,500 (START III) or fewer.Within a decade or so Russia’s aging force could easily shrink to 500 or fewer, creating enormous latitude to negotiate vast reductions in deployments. But this scenario is wishful thinking loaded with untenable assumptions. The START process has stalled and may not be revived any time soon, leaving in place increasingly decrepit and hazardous forces that Russia might not retire after all. The decay of the Russian arsenal is certain to run growing risks of proliferation and to erode safety along with basic offensive capability. For example, a degraded early warning network is less able to detect an actual attack—but also less able to screen out false indications of attack. Similarly, failure in the nuclear command link between the General Staff in Moscow and the launch crews in the field would disrupt not only the ability of the General Staff to quickly transmit the go code, but also the feedback loop from the missiles to the General Staff that detects and prevents an unauthorized launch attempt at any subordinate level of command. Finally, the departure of security guards from their posts at weapons depots to forage for food or escape inclement weather may not only impede the authorized dispersal of those weapons during a crisis but also increase the vulnerability of the weapons to theft. And the danger is not merely theoretical. A 1996 CIA report noted that broken locking devices on some Russian nuclear weapons had not been repaired for lack of spare parts. In short, progressive nuclear deterioration in Russia increases the risks of mistaken, illicit, or accidental launch, and the loss of strict central control over Russia’s vast nuclear complex bodes ill for nonproliferation. If Russia’s nuclear designers, producers, and custodians surrender to economic pressure, they could open the floodgates to the illicit transfer of nuclear materials, weapons, and delivery technologies to America’s adversaries. A meltdown of Russian nuclear control could be catastrophic for Americans. Securing Russia’s nuclear weapons and materials and strengthening safety and control over operational deployments deserve top billing among the security priorities of the U.S. government. To alleviate the immediate danger, Russian and U.S. strategic missiles should be taken off hair-trigger alert so that none could be fired on a moment’s notice. “De-alerting” our arsenals, ideally by detaching the warheads from missiles, would reduce their susceptibility to illicit or mistaken launch.Today it takes only minutes to prepare those forces for launch. Reducing the interval to days or longer would provide a far larger margin of safety against many scenarios, ranging from the temporary loss of legitimate civilian control over Russian weapons to false warning in Russia’s early warning system—both more plausible dangers than a deliberate, cold-blooded attack by Russia or the United States against each other. The challenge of deterrence today pales beside the challenge of operational safety. But even a comprehensive nuclear stand-down falls short over the long run. As long as Russia remains mired in economic, political, and military despair, the nuclear threat will continue. Russia will not be able to reduce its reliance on nuclear weapons until it can afford an adequate conventional military force. It will not be able to ensure control over its nuclear weapons and materials until it has a strong state, one based on a healthy economy and a civil society. The West’s vital stakes in this process of nation-building have not diminished, despite all the failures and frustrations of the past decade. If anything, those stakes have grown—as have the cost and effort needed to stabilize and transform Russia.

## Space Primacy DA

**Commercial Space Race favors American Companies that cements space dominance – shift away endangers our lead – losing green-lights Chinese Dominance across the board.**

**Autry and Kwast 19** Greg Autry and Steve Kwast 8-22-2019 "America Is Losing the Second Space Race to China" (Greg Autry, a clinical professor of space leadership, policy, and business at Arizona State University’s Thunderbird School of Global Management, and Steve Kwast)//Elmer

America Is Losing the Second Space Race to China The private sector can give the United States a much-needed rocket boost. The current U.S. space defense strategy is inadequate and on a path to failure. President Donald Trump’s vision for a Space Force is big enough. As he said on June 18, “It is not enough to merely have an American presence in space. We must have American dominance in space.” But the Air Force is not matching this vision. Instead, the leadership is currently focused on incremental improvements to existing equipment and organizational structures. Dominating the vast and dynamic environment of space will require revolutionary capabilities and resources far deeper than traditional Department of Defense thinking can fund, manage, or even conceive of. Success depends on a much more active partnership with the commercial space industry— and its disruptive capabilities. U.S. military space planners are preparing to repeat a conflict they imagined back in the 1980s, which never actually occurred, against a vanished Soviet empire. Meanwhile, China is executing a winning strategy in the world of today. It is burning hard toward domination of the future space markets that will define the next century. They are planning infrastructure in space that will control 21st-century telecommunications, energy, transportation, and manufacturing. In doing so, they will acquire trillion-dollar revenues as well as the deep capabilities that come from continuous operational experience in space. This will deliver space dominance and global hegemony to China’s authoritarian rulers. Despite the fact that many in the policy and intelligence communities understand exactly what China is doing and have been trying to alert leadership, Air Force leadership has convinced the White House to fund only a slightly better satellite command with the same leadership, while sticking a new label onto their outmoded thinking. A U.S. Space Force or Corps with a satellite command will never fulfill Trump’s call to dominate space. Air Force leadership is demonstrating the same hubris that Gen. George Custer used in convincing Congress, over President Ulysses S. Grant’s better experience intuition, that he could overtake the Black Hills with repeating rifles and artillery. That strategy of technological overconfidence inflamed conflict rather than subduing it, and the 7th Cavalry were wiped out at the Battle of the Little Bighorn. The West was actually won by the settlers, ranchers, miners, and railroad barons who were able to convert the wealth of the territory itself into the means of holding it. They laid the groundwork that made the 20th century the American Century and delivered freedom to millions of people in Europe and Asia. Of course, they also trampled the indigenous people of the American West in their wake—but empty space comes with no such bloody cost. The very emptiness and wealth of this new, if not quite final, frontier, however, means that competition for resources and strategic locations in cislunar space (between the Earth and moon) will be intense over the next two decades. The outcome of this competition will determine the fate of humanity in the next century. China’s impending dominance will neutralize U.S. geopolitical power by allowing Beijing to control global information flows from the high ground of space. Imagine a school in Bolivia or a farmer in Kenya choosing between paying for a U.S. satellite internet or image provider or receiving those services for free as a “gift of the Chinese people.” It will be of little concern to global consumers that the news they receive is slanted or that searches for “free speech” link to articles about corruption in Western democracies. Nor will they care if concentration camps in Tibet and the Uighur areas of western China are obscured, or if U.S. military action is presented as tyranny and Chinese expansion is described as peacekeeping or liberation. China’s aggressive investment in space solar power will allow it to provide cheap, clean power to the world, displacing U.S. energy firms while placing a second yoke around the developing world. Significantly, such orbital power stations have dual use potential and, if properly designed, could serve as powerful offensive weapons platforms. China’s first step in this process is to conquer the growing small space launch market. Beijing is providing nominally commercial firms with government-manufactured, mobile intercontinental ballistic missiles they can use to dump launch services on the market below cost. These start-ups are already undercutting U.S. pricing by 80 percent. Based on its previous success in using dumping to take out U.S. developed industries such as solar power modules and drones, China will quickly move upstream to attack the leading U.S. launch providers and secure a global commercial monopoly. Owning the launch market will give them an unsurmountable advantage against U.S. competitors in satellite internet, imaging, and power. The United States can still build a strategy to win. At this moment, it holds the competitive advantage in every critical space technology and has the finest set of commercial space firms in the world. It has pockets of innovative military thinkers within groups like the Defense Innovation Unit, under Mike Griffin, the Pentagon’s top research and development official. If the United States simply protects the intellectual property its creative minds unleash and defend its truly free markets from strategic mercantilist attack, it will not lose this new space race. The United States has done this before. It beat Germany to the nuclear bomb, it beat the Soviet Union to the nuclear triad, and it won the first space race. None of those victories was achieved by embracing the existing bureaucracy. Each of them depended on the president of the day following the only proven path to victory in a technological domain: establish a small team with a positively disruptive mindset and empower that team to investigate a wide range of new concepts, work with emerging technologies, and test innovative strategies. Today that means giving a dedicated Space Force the freedom to easily partner with commercial firms and leverage the private capital in building sustainable infrastructure that actually reduces the likelihood of conflict while securing a better economic future for the nation and the world.

**Hegemony solves extinction from every threat–alternatives are worse**

**Ikenberry 20** John Ikenberry 6-9-2020 “The Next Liberal Order: The Age of Contagion Demands More Internationalism, Not Less”<https://www.foreignaffairs.com/articles/united-states/2020-06-09/next-liberal-order> (Albert G. Milbank Professor of Politics and International Affairs at Princeton University and Global Eminence Scholar at Kyung Hee University, in South Korea)//Elmer

The rivalry between the United States and China will preoccupy the world for decades, and the problems of anarchy cannot be wished away. But for the United States and its partners, a far greater challenge lies in what might be called “the problems of modernity”: the deep, worldwide transformations unleashed by the forces of science, technology, and industrialism, or what the sociologist Ernest Gellner once described as a “tidal wave” pushing and pulling modern societies into an increasingly complex and interconnected world system. Washington and its partners are threatened less by rival great powers than by emergent, interconnected, and cascading transnational dangers. Climate change, pandemic diseases, financial crises, failed states, nuclear proliferation—all reverberate far beyond any individual country. So do the effects of automation and global production chains on capitalist societies, the dangers of the coming revolution in artificial intelligence, and other, as-yet-unimagined upheavals. The coronavirus is the poster child of these transnational dangers: it does not respect borders, and one cannot hide from it or defeat it in war. Countries facing a global outbreak are only as safe as the least safe among them. For better or worse, the United States and the rest of the world are in it together. Past American leaders understood that the global problems of modernity called for a global solution and set about building a worldwide network of alliances and multilateral institutions. But for many observers, the result of these efforts—the liberal international order—has been a failure. For some, it is tied to the neoliberal policies that produced financial crises and rising economic inequality; for others, it evokes disastrous military interventions and endless wars. The bet that China would integrate as a “responsible stakeholder” into a U.S.-led liberal order is widely seen to have failed, too. Little wonder that the liberal vision has lost its appeal. Liberal internationalists need to acknowledge these missteps and failures. Under the auspices of the liberal international order, the United States has intervened too much, regulated too little, and delivered less than it promised. But what do its detractors have to offer? Despite its faults, no other organizing principle currently under debate comes close to liberal internationalism in making the case for a decent and cooperative world order that encourages the enlightened pursuit of national interests. Ironically, the critics’ complaints make sense only within a system that embraces self-determination, individual rights, economic security, and the rule of law—the very cornerstones of liberal internationalism. The current order may not have realized these principles across the board, but flaws and failures are inherent in all political orders. What is unique about the postwar liberal order is its capacity for self-correction. Even a deeply flawed liberal system provides the institutions through which it can be brought closer to its founding ideals. However serious the liberal order’s shortcomings may be, they pale in comparison to its achievements. Over seven decades, it has lifted more boats—manifest in economic growth and rising incomes—than any other order in world history. It provided a framework for struggling industrial societies in Europe and elsewhere to transform themselves into modern social democracies. Japan and West Germany were integrated into a common security community and went on to fashion distinctive national identities as peaceful great powers. Western Europe subdued old hatreds and launched a grand project of union. European colonial rule in Africa and Asia largely came to an end. The G-7 system of cooperation among Japan, Europe, and North America fostered growth and managed a sequence of trade and financial crises. Beginning in the 1980s, countries across East Asia, Latin America, and eastern Europe opened up their political and economic systems and joined the broader order. The United States experienced its greatest successes as a world power, culminating in the peaceful end to the Cold War, and countries around the globe wanted more, not less, U.S. leadership. This is not an order that one should eagerly escort off the stage. Any alternative is worse and causes great power war. The major alternatives to a modernized world order supported by the United States appear unlikely, unappealing, or both. A Chinese-led order, for example, would be an illiberal one, characterized by authoritarian domestic political systems and statist economies that place a premium on maintaining domestic stability. There would be a return to spheres of influence, with China attempting to domi-nate its region, likely resulting in clashes with other regional powers, such as India, Japan, and Vietnam, which would probably build up their conventional or even nuclear forces. A new democratic, rules-based order fashioned and led by medium powers in Europe and Asia, as well as Canada, however attractive a concept, would simply lack the military capacity and domestic political will to get very far. A more likely alternative is a world with little order—a world of deeper disarray. Protectionism, nationalism, and populism would gain, and democracy would lose. Conflict within and across borders would become more common, and rivalry between great powers would increase. Cooperation on global challenges would be all but precluded. If this picture sounds familiar, that is because it increasingly corresponds to the world of today. The deterioration of a world order can set in motion trends that spell catastrophe. World War I broke out some 60 years after the Concert of Europe had for all intents and purposes broken down in Crimea. What we are seeing today resembles the mid-nineteenth century in important ways: the post– World War II, post–Cold War order cannot be restored, but the world is not yet on the edge of a systemic crisis. Now is the time to make sure one never materializes, be it from a breakdown in U.S.-Chinese relations, a clash with Russia, a conflagration in the Middle East, or the cumulative effects of climate change. The good news is that it is far from inevitable that the world will eventually arrive at a catastrophe; the bad news is that it is far from certain that it will not.

## Space Elevators PIC

**CP: States ought to adopt a binding international agreement that bans the appropriation of outer space by private entities by establishing outer space as a global commons subject to regulatory delimiting and global liability except in the instance of space elevators**

**Space Elevators constitute Appropriation – they impede orbits.**

**Matignon 19** Louis de Gouyon Matignon 3-3-2019 "LEGAL ASPECTS OF THE SPACE ELEVATOR TRANSPORTATION SYSTEM"<https://www.spacelegalissues.com/space-law-legal-aspects-of-the-space-elevator-transportation-system/> [PhD in space law (co-supervised by both Philippe Delebecque, from Université Paris 1 Panthéon-Sorbonne, France, and Christopher D. Johnson, from Georgetown University || regularly write articles on the website Space Legal Issues so as to popularise space law and public international law]//Elmer

An Earth-based space elevator would consist of a cable with one end attached to the surface near the equator and the other end in space beyond geostationary orbit. An orbit is the curved path through which objects in space move around a planet or a star. The 1967 Treaty’s regime and customary law enshrine the principle of non-appropriation and freedom of access to orbital positions. Space Law and International Telecommunication Laws combined to protect this use against any interference. The majority of space-launched objects are satellites that are launched in Earth’s orbit (a very small part of space objects – scientific objects for space exploration – are launched into outer space beyond terrestrial orbits). It is important to precise that an orbit does not exist: satellites describe orbits by obeying the general laws of universal attraction. Depending on the launching techniques and parameters, the orbital trajectory of a satellite may vary. Sun-synchronous satellites fly over a given location constantly at the same time in local civil time: they are used for remote sensing, meteorology or the study of the atmosphere. Geostationary satellites are placed in a very high orbit; they give an impression of immobility because they remain permanently at the same vertical point of a terrestrial point (they are mainly used for telecommunications and television broadcasting). A geocentric orbit or Earth orbit involves any object orbiting Planet Earth, such as the Moon or artificial satellites. Geocentric (having the Earth as its centre) orbits are organised as follow: 1) Low Earth orbit (LEO): geocentric orbits with altitudes (the height of an object above the average surface of the Earth’s oceans) from 100 to 2 000 kilometres. Satellites in LEO have a small momentary field of view, only able to observe and communicate with a fraction of the Earth at a time, meaning a network or constellation of satellites is required in order to provide continuous coverage. Satellites in lower regions of LEO also suffer from fast orbital decay (in orbital mechanics, decay is a gradual decrease of the distance between two orbiting bodies at their closest approach, the periapsis, over many orbital periods), requiring either periodic reboosting to maintain a stable orbit, or launching replacement satellites when old ones re-enter. 2) Medium Earth orbit (MEO), also known as an intermediate circular orbit: geocentric orbits ranging in altitude from 2 000 kilometres to just below geosynchronous orbit at 35 786 kilometres. The most common use for satellites in this region is for navigation, communication, and geodetic/space environment science. The most common altitude is approximately 20 000 kilometres which yields an orbital period of twelve hours. 3) Geosynchronous orbit (GSO) and geostationary orbit (GEO) are orbits around Earth at an altitude of 35 786 kilometres matching Earth’s sidereal rotation period. All geosynchronous and geostationary orbits have a semi-major axis of 42 164 kilometres. A geostationary orbit stays exactly above the equator, whereas a geosynchronous orbit may swing north and south to cover more of the Earth’s surface. Communications satellites and weather satellites are often placed in geostationary orbits, so that the satellite antennae (located on Earth) that communicate with them do not have to rotate to track them, but can be pointed permanently at the position in the sky where the satellites are located. 4) High Earth orbit: geocentric orbits above the altitude of 35 786 kilometres. The competing forces of gravity, which is stronger at the lower end, and the outward/upward centrifugal force, which is stronger at the upper end, would result in the cable being held up, under tension, and stationary over a single position on Earth. With the tether deployed, climbers could repeatedly climb the tether to space by mechanical means, releasing their cargo to orbit. Climbers could also descend the tether to return cargo to the surface from orbit.

**Private Companies are pursuing Space Elevators AND property rights uniquely key**

**Alfano 15** Andrea Alfano 8-18-2015 “All Of These Companies Are Working On A Space Elevator”<https://www.techtimes.com/articles/77612/20150818/companies-working-space-elevator.htm> (Writer at the Tech Times)//Elmer

Space elevators are solid proof that any mundane object sounds way cooler if you stick the word "space" in front of it. But there's much more than coolness at stake when building a space elevator – this technology has the potential to revolutionize space transportation, and the Canadian private space company Thoth Technology that was recently awarded a patent for its space elevator design isn't the only company in the game. One of the other major players is a U.S.-based company called LiftPort Group, founded by space entrepreneur Michael Laine in 2003. Its plan for a space elevator is vastly different from the one for which Thoth received a patent, however. Whereas Thoth's plans entail tethering a 12-mile-high inflatable space elevator to the Earth, LiftPort is shooting for the moon. Originally, LiftPort had planned to build an Earth elevator, too, but it abandoned the idea in 2007 in favor of building a lunar elevator. The basic design for a lunar elevator is an anchor in the moon that is attached to a cable that extends to a space station situated at a very special point. Known as a Lagrange Point, this is the gravitational tipping point between the Earth and the moon, where their gravitational pulls essentially cancel one another out. A robot could then travel up and down the tether, ferrying cargo between the moon and the station. Out farther in space, a counterweight would balance out the system. Both types of space elevator are intended to increase space access, but in very different ways. Thoth's Earth elevator aims to make launches easier by starting off 12 miles above the Earth's surface. LiftPort's space elevator aims to increase access to the moon in particular, because it is much easier to launch a rocket to the Lagrange Point and dock it at a space station than it is to get to the moon directly. There's a third major company based in Japan called Obayashi Corp. whose plans look like a hybrid of Thoth's and LiftPort's. Obayashi is not a space company, however – it's actually a construction company. Like Thoth, Obayashi plans to build an Earth elevator. But its Earth elevator would consist of a cable tethered to the blue planet, a robotic cargo-carrier, a space station, and a counterweight. It essentially looks like LiftPort's plans, but stuck to the Earth instead of to the moon.

**Yes Space Elevators – NASA confirms.**

**Snowden 18** Scott Snowden 10-2-2018 "A colossal elevator to space could be going up sooner than you ever imagined"<https://www.nbcnews.com/mach/science/colossal-elevator-space-could-be-going-sooner-you-ever-imagined-ncna915421> (Scott has written about science and technology for 20 years for publications around the world. He covers environmental technology for Forbes.)//Elmer

For more than half a century, rockets have been the only way to go to space. But in the not-too-distant future, we may have another option for sending up people and payloads: a colossal elevator extending from Earth’s surface up to an altitude of 22,000 miles, where geosynchronous satellites orbit. NASA says the basic concept of a space elevator is sound, and researchers around the world are optimistic that one can be built. The Obayashi Corp., a global construction firm based in Tokyo, has said it will build one by 2050, and China wants to build one as soon as 2045. Now an experiment to be conducted soon aboard the International Space Station will help determine the real-world feasibility of a space elevator. “The space elevator is the Holy Grail of space exploration,” says Michio Kaku, a professor of physics at City College of New York and a noted futurist. “Imagine pushing the ‘up’ button of an elevator and taking a ride into the heavens. It could open up space to the average person.”

**Regardless of completion, Elevators spur investment in Nanotechnology**

Liam **O’Brien 16**. University of Wollongong. 07/2016. “Nanotechnology in Space.” Young Scientists Journal; Canterbury, no. 19, p. 22.

Nanotechnology is at the forefront of scientific development, continuing to astound and innovate. Likewise, the space industry is rapidly increasing in sophistication and competition, with companies such as SpaceX, Blue Origin and Virgin Galactic becoming increasingly prevalent in what could become a new commercial space race. The various space programs over the past 60 years have led to a multitude of beneficial impacts for everyday society. Nanotechnology, through research and development in space has the potential to do the same. Potential applications of nanotechnology in space are numerous, many of them have the potential to capture and inspire generations to come. One of these applications is the space elevator. By using carbon nanotubes, a super light yet strong material, this concept would be an actual physical structure from the surface of the Earth to an altitude of approximately 36 000 km. The tallest building in the world would fit into this elevator over 42 000 times. The counterweight, used to keep the elevator taught, is proposed to be an asteroid. This would need to be at a distance of 100 000 km, a quarter of the distance to the moon. The benefits of such a structure would be enormous. 95% of a space shuttle's weight at take-off is fuel, costing US$ 20 000 per kilogram to send something into space. However, with a space elevator the cost per kilogram can be reduced to as little as US$ 200. Exploration to other planets can begin at the tower, and travel to and from the moon could become as simple as a morning commute to work. Solar sails provide the means to travel large distances and incredible speeds. Much like sails on a boat use wind, the solar sail uses light as a source of propulsion. Ideally these sails would be kilometres in length and only a few micrometres in thickness. This provides us with the ability to travel at speeds previously unheard of. Using carbon nanotubes once again, a solar sail has the capability to travel at 39 756 km/s which is 13% of the speed of light! This sail could reach Pluto in an astonishing 1.7 days, and Alpha Centauri in just 32 years. Space travel to other planets, other stars, could be possible with solar sails. The Planetary Society is funding for a space sail of itself, and has successfully launched one into orbit. NASA has also sent a sail into orbit, allowing it to burn up in the atmosphere after 240 days. Investing time and resources into nanotechnology for space exploration has benefits for society today. Materials such as graphene are being used in modern manufacturing at an increasing rate as the applications become utilised. Carbon nanotubes will change the way we think about materials and their strength. These nanotubes have a tensile strength one hundred times that of steel, yet are only a sixth of the weight. Imagine light weight vehicles using less petrol and energy as well as being just as strong as regular vehicles. With potentials to revolutionize the way we think about space travel, nanotechnology has a bright future. As a new field of science, it has the capability to push the human race to the outer reaches of our galaxy and hopefully one day to other stars. It will inspire generations of explorers and dreamers to challenge themselves and advance the human race into the next era. As Richard Feynman said in his 1959 talk 'There's Plenty of Room at the Bottom' "A field in which little has been done, but in which an enormous amount can be done. There is still plenty more to achieve.

**Nano tech solves warming**

Bhavya **Khullar**. September 4, 20**17**. Nanomaterials Could Combat Climate Change and Reduce Pollution. https://www.scientificamerican.com/article/nanomaterials-could-combat-climate-change-and-reduce-pollution/

The list of environmental problems that the world faces may be huge, but some strategies for solving them are remarkably small. First explored for applications in microscopy and computing, nanomaterials—materials made up of units that are each thousands of times smaller than the thickness of a human hair—are emerging as useful for tackling threats to our planet’s well-being. Scientists across the globe are developing nanomaterials that can efficiently use carbon dioxide from the air, capture toxic pollutants from water and degrade solid waste into useful products. “Nanomaterials could help us mitigate pollution. They are efficient catalysts and mostly recyclable. Now, they have to become economical for commercialization and better to replace present-day technologies completely,” says [Arun Chattopadhyay](http://www.iitg.ac.in/arun/), a member of the chemistry faculty at the Center for Nanotechnology, Indian Institute of Technology Guwahati. To help slow the climate-changing rise in atmospheric CO2levels, researchers have developed nanoCO2 harvesters that can suck atmospheric carbon dioxide and deploy it for industrial purposes. “Nanomaterials can convert carbon dioxide into useful products like alcohol. The materials could be simple chemical catalysts or photochemical in nature that work in the presence of sunlight,” says Chattopadhyay, who has been working with nanomaterials to tackle environmental pollutants for more than a decade. Many research groups are working to address a problem that, if solved, could be a holy grail in combating climate change: how to pull CO2 out of the atmosphere and convert it into useful products. Chattopadhyay isn’t alone. Many research groups are working to address a problem that, if solved, could be a holy grail in combating climate change: how to pull CO2 out of the atmosphere and convert it into useful products. Nanoparticles offer a promising approach to this because they have a large surface-area-to-volume ratio for interacting with CO2 and properties that allow them to facilitate the conversion of CO2into other things. The challenge is to make them economically viable. Researchers have tried everything from metallic to carbon-based nanoparticles to reduce the cost, but so far they haven’t become efficient enough for industrial-scale application. One of the most recent points of progress in this area is work by scientists at the CSIR-Indian Institute of Petroleum and the Lille University of Science and Technology in France. The researchers developed a nanoCO2 harvester that uses water and sunlight to convert atmospheric CO2 into methanol, which can be employed as an engine fuel, a solvent, an antifreeze agent and a diluent of ethanol. Made by wrapping a layer of modified graphene oxide around spheres of copper zinc oxide and magnetite, the material looks like a miniature golf ball, captures CO2 more efficiently than conventional catalysts and can be readily reused, according to Suman Jain, senior scientist of the Indian Institute of Petroleum, Dehradun in India, who developed the nanoCO2harvester. Jain says that the nanoCO2 harvester has a large molecular surface area and captures more CO2 than a conventional catalyst with similar surface area would, which makes the conversion more efficient. But due to their small size, the nanoparticles have a tendency to clump up, making them inactive with prolonged use. Jain adds that synthesizing useful nanoparticle-based materials is also challenging because it’s hard to make the particles a consistent size. Chattopadhyay says the efficiency of such materials can be improved further, providing hope for useful application in the future. CLEANSING WATER Most toxic dyes used in textile and leather industries can be captured with nanoparticles. “Water pollutants such as dyes from human-created waste like those from tanneries could get to natural sources of water like deep tube wells or groundwater if wastewater from these industries is left untreated,” says Chattopadhyay. “This problem is rather difficult to solve.” An international group of researchers led by professor Elzbieta Megiel of the University of Warsaw in Poland reports that nanomaterials have been widely studied for removing heavy metals and dyes from wastewater. According to the research team, adsorption processes using materials containing magnetic nanoparticles are highly effective and can be easily performed because such nanoparticles have a large number of sites on their surface that can capture pollutants and don’t readily degrade in water. Chattopadhyay adds that appropriately designed magnetic nanomaterials can be used to separate pollutants such as arsenic, lead, chromium and mercury from water. However, the nanotech-based approach has to be more efficient than conventional water purification technology to make it worthwhile. In addition to removing dyes and metals, nanomaterials can also be used to clean up oil spills. Researchers led by Pulickel Ajayan at Rice University in Houston, Texas, have developed a reusable nanosponge that can remove oil from contaminated seawater.

**Warming causes extinction**

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

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

## Consult Natives CP

**CP: States ought to engage in a prior and binding consultation with indigenous nations over treating outer space as a global commons subject to regulatory delimiting and global liability through a binding international agreement**

**Normal means isn’t a consultation but it’s key to indigenous sovereignty**

Hilding **Neilson &** Elena **Cirkovic** Consulting Canadians on a Framework for Future Space Exploration Activities: A Response to the Canadian Space Agency (CSA) - Part I, Völkerrechtsblog, 28.07.**2021**, doi: 10.17176/20210728-135814-0. //SR

Canada’s position of support and leadership in space exploration has a positive and impressive history. From the development of the CanadaArm and the participation in work on the International Space Station (ISS) to the new scientific contributions with respect to lunar and Martian exploration, Canada has many reasons to be proud. However, it is worth noting that Canada’s role in space exploration has traditionally neglected to include Indigenous peoples, Indigenous knowledges, and Indigenous rights. In general, the history of Canadian participation in space exploration did not have a substantial and direct impact on Indigenous peoples’ rights in Canada. With accelerating technological developments in the past twenty years, space has become more accessible for humans. With these transformations, the current and proposed future of space exploration has the potential to negatively impact Indigenous peoples across Canada. One of the emerging issues for astronomers and various traditions including traditions of Indigenous peoples in Canada and elsewhere, is the launching of so-called satellite mega constellations, such as the SpaceX’s Starlink. Increasing the number of satellites in the Lower Earth’s Orbit (LEO), impacts further research. For various human cultures, Dark Skies have, among others, navigational and spiritual significance. Finally, the objective of our post is to emphasize the need for greater scientific understanding of the universe, which is achieved through research, education and outreach, and inclusion of multiple knowledges and ontologies. Without consultation with multiple knowledges of multicultural and multinational Canada, future space activities might contribute to the ongoing culture of colonization. We present arguments for the ethical and legal requirements for the CSA to consult with and to be inclusive of Indigenous rights and concerns as Canada moves to support the Artemis Accords. The Accords trigger a variety of issues in the outer space sector, which are beyond the scope of this brief post. The authors come to this work from two perspectives: the first being a Mi’kmaw astronomer who grew up in Newfoundland and is a status member of the Qalipu Nation, and co-author, a Bosnian-Canadian legal scholar. Thereby we stress that our contribution is an opinion and has no intent to speak for Indigenous peoples in general and/or any Indigenous-led organization in Canada, or any particular group or community in Canada. Please note that we will be using the terms Indigenous, and Aboriginal interchangeably as we engage with the language of domestic (Canadian) and international documents, publications, institutions, and relevant regulatory and/or administrative bodies. The terms Indigenous and Aboriginal refers to the three different categories of Indigenous peoples in Canada – First Nation, Inuit, and Métis. We reflect upon the CSA’s obligation to consult Indigenous peoples in Canada via two lenses: Firstly, where does Outer Space Law intersect with the modern and historic treaties between the First Nations and Canada (Crown)? Do these treaties include the skies and outer space? Secondly, considering its status as an international (and bilateral) agreement, where the Artemis Accords trigger the application of the United Nations Declaration on the Rights of Indigenous Peoples. Assuming that the Artemis Accords might, and in the situations where they do, trigger any responsibilities and obligations of Canada under the UNDRIP and its domestic laws to consult the First Nations, what are the CSA’s and Canada’s obligations to First Nation, Inuit, and Métis communities and Nations? We engage with these two points considering the following: That the questions of Indigenous rights and title in Canada, including the treaty rights, have significant impacts on how Canada consults with the First Nations and other communities and nations in Canada and pursues the ongoing and future space exploration accordingly; That these questions also require a revisiting of the allegedly prevailing narrative as proposed by some scholars and members of the global outer space sector, generally speaking, which treats space exploration as an analogy of the colonization of the Americas. The legal framework of our argument is that of Canadian Constitutional obligations towards indigenous peoples. The relevant cases are discussed and listed in the rest the following sections. Brief Consideration of Indigenous Rights in Canada Canada’s obligations to Indigenous peoples under the Canadian Constitution cannot be superseded or undermined by commitments under a bilateral agreement such as the Artemis Accords. These legal obligations include those recognized and affirmed by Section 35 of the Constitution Act, 1982, and those set out in self-government agreements. We recognize that, in 1985, the Supreme Court of Canada (SCC) concluded that treaties between Indigenous peoples and the Crown were not international treaties but were sui generis treaties (Simon v The Queen, [1985] 2 SCR 387 at para 33). However, it is worth considering that ‘[f]or many Indigenous peoples, treaties concluded with European powers…are, above all, treaties of peace and friendship, destined to organize coexistence in – not their exclusion from – the same territory and not to regulate restrictively their lives…under the overall jurisdiction of non-Indigenous authorities’ (para 117). While the United Nations, in documents including the UNDRIP, has recognized the potentially international character of Indigenous Crown treaties (UNDRIP Preamble, art 37(1)), we recognize that Canadian law has yet to consider this international recognition in domestic law. Nevertheless, as Henderson argues ‘any Crown authority over First Nations is limited to the actual scope of their treaty delegations. If no authority or power is delegated to the Crown, this power must be interpreted as reserved to First Nations, respectively, and is protected by prerogative rights and the common law since neither can extinguish a foreign legal system.’. There are plural and ongoing discussions on the status of Aboriginal title in Canada, as well as treaty obligations. It is beyond the scope of our comment to address the extensive international and domestic jurisprudence on the topic. However, we stress the existence of the Crown’s fiduciary duty to Aboriginal People as an aspect of various activities, including Canada’s activities in outer space (See, Annex I). Indeed, ‘The doctrine of Aboriginal rights exists… because of one simple fact: when Europeans arrived in North America, Aboriginal peoples were already here, living in communities on the land, and participating in distinctive cultures, as they had done for centuries. It is this fact, and this fact above all others, which separates Aboriginal peoples from all other minority groups in Canadian society and which mandates their special legal status.’ (Chief Justice Lamer in R. v. Van der Peet, para 30).

**Indigenous people say yes–appropriation goes against their values**

**Young**, M. J. (**1987**). “Pity the Indians of Outer Space”: Native American Views of the Space Program. Western Folklore, 46(4), 269. doi:10.2307/1499889 //SR \*brackets for problematic language]

Because Native Americans [indigenous people] have a different perspective of the world, they can offer us alternative ways of seeing ourselves in relationship to the natural world and help us answer the question of what constitutes appropriate behavior-in outer space, as well as on earth. Furthermore, some non-Native Americans realize that, as they look to the traditions of the Native Americans, they see their own heritage with increased clarity. Although this appreciation of Native Americans comes too late in America's history and could be construed as appropriating their ideas as we did their land, a significant number of Native Americans are receptive to the potential that now exists for a dialogue between traditions, both non-Native and Native American, perhaps because they are experiencing a parallel concern, a need to come to terms with their own emerging identity.2 Both groups have begun to realize that it is only through such a dialogue that the mistakes of the past can be avoided in the future. For non-Native Americans the justification for this inquiry is that through an analysis of the difference between the two understandings of space-Anglo and Native American-we can better "see" the ideological dimensions of our own, taken-for-granted mythology that legitimizes space exploration. Native American [indigenous] attitudes towards "outer space" often conflict with the attitudes of the proponents of the U.S. space program. Rather than applying the metaphor of the "new frontier" or even the term "outer" to this aspect of the cosmos, many Native Americans regard it as encompassed in "Father Sky," part of their network of symbolic associations that integrates all elements of the cosmos. A recent commercial called "Earth Pictures," produced by TRW, a firm that specializes in "aerial views" of portions of the earth's globe from outer space, aptly illustrates these differing attitudes.3 In this commercial, TRW representatives give members of the Navajo tribe a guided tour of the TRW laboratories and conclude by showing them a satellite picture (Landsat) of the Navajo reservation from outer space. With evident humor, the Navajos respond by holding up a picture of outer space from their reservation-a dry painting of Father Sky who contains within his body the sun, moon, and constellations. The commercial thus serves to illustrate Navajo beliefs about "outer space." According to Navajo worldview, which emphasizes harmonious relations with all elements of the cosmos-a sacred kinship among all aspects of experience, natural and supernatural-Father Sky is a living being, intimately related to humans who should, therefore, treat him with appreciation and respect. This example from the Navajo is representative of the cosmology of most Native American groups, a cosmology that is shaped by a belief in the unity and sacred nature of all life, the above and the below. As Joseph Epes Brown suggests, the Native American quality of seeing is based on "a polysynthetic metaphysic of nature, immediately experienced rather than dangerously abstracted."4 He describes this vision as a "message of the sacred nature of the land, of place."5 Place in this sense extends, of course, to outer space, or Father Sky, as well as to Mother Earth. This perspective contrasts sharply with that of enthusiasts of space exploration who regard space as something "out there," beyond everyday experience, through which we should travel to reach planets and other objects that we will investigate, and, if possible, use to meet our own needs.

**Solves the aff better**

**​​Barsh 93** Russel Lawrence Barsh 1993 “Native American Sovereignty” University of Michigan Journal of Law Reform, Winter, 1993, 25 U. MICH. J. L. REF. 671 (Professor of Native American Studies at the University of Lethbridge)//Elmer

There no longer seems to be much difference in the Westernization of the Third World and of the indigenous world. Indigenous societies are usually more isolated geographically, so the process of convergence is understandably slower. But they are catching up. While world leaders lament the loss of biological diversity, which holds the key to the renewal and survival of ecosystems, our planet rapidly is losing its cultural diversity, which holds the key to the renewal and survival of human societies. Scientists and scholars search for an alternative in their theories while real alternative cultures disappear. It will be a real struggle to reassert an indigenous perspective on social justice, democracy, and environmental security. The hardest part of the struggle will be converting words to action, going beyond the familiar, empty rhetoric of sovereignty and cultural superiority. The struggle will be hardest here in the United States, where the gaps between rhetoric and reality have grown greater than anywhere on earth. This is the best place to begin, however, because this is the illusory "demonstration" that is studied by the rest of the world, including the indigenous peoples of other regions. Are American Indians ready to accept this global responsibility? The current generation of tribal leadership appears unwilling to try. It is firmly committed by its actions to the materialist path, and it is neutralized by its dependence on a continuing financial relationship with the national government and developers. The next generation of American Indians may be another matter. Disillusioned and critical, they may yet find a voice of their own that is both modern and truly indigenous, and they may have the courage to practice the ideals that their parents merely sloganize. Let us hope so. There is no alternative for Indian survival or for global survival.