#### Consensus of the best theoretical and empirical research concludes US deep engagement deters conventional conflict and nuclear proliferation cascades that cause extinction – nuclear optimism is phony baloney and proves retrenchment fails

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Stephen Brooks, William C. Wohlforth is Daniel Webster Professor of Government in the Dartmouth College Department of Government, America Abroad: Why the Sole Superpower Should Not Pull Back from the World (Oxford, New York: Oxford University Press, 2016): 103-110.

Consistency with influential relevant theories lends credence to the expectation that US security commitments actually can shape the strategic environment as deep engagement presupposes. But it is far from conclusive. Not all analysts endorse the theories we discussed in chapter 5. These theories make strong assumptions that states generally act rationally and focus primarily on security. Allowing misperceptions, emotions, domestic politics, desire for status, or concern for honor into the picture might alter the verdict on the strategy’s net expected effects. And to model the strategy’s expected effects we had to simplify things by selecting two mechanisms— assurance and deterrence—and examining their effects independently, thus missing potentially powerful positive interactions between them.

This chapter moves beyond theory to examine patterns of evidence. If the theoretical arguments about the security effects of deep engagement are right, what sort of evidence should we see? Two major bodies of evidence are most important: general empirical findings concerning the strategy’s key mechanisms and regionally focused research.

General Patterns of Evidence

Three key questions about US security provision have received the most extensive analysis. First, do alliances such as those sustained by the United States actually deter war and increase security? Second, does such security provision actually hinder nuclear proliferation? And third, does limiting proliferation actually increase security?

Deterrence Effectiveness

The determinants of deterrence success and failure have attracted scores of quantitative and case study tests. Much of the case study work yields a cautionary finding: that deterrence is much harder in practice than in theory, because standard models assume away the complexities of human psychology and domestic politics that tend to make some states hard to deter and might cause deterrence policies to backfire.1 Many quantitative findings, meanwhile, are mutually contradictory or are clearly not relevant to extended deterrence. But some relevant results receive broad support:

• Alliances generally do have a deterrent effect. In a study spanning nearly two centuries, Johnson and Leeds found “support for the hypothesis that defensive alliances deter the initiation of disputes.” They conclude that “defensive alliances lower the probability of international conflict and are thus a good policy option for states seeking to maintain peace in the world.”2 Sechser and Fuhrmann similarly find that formal defense pacts with nuclear states have significant deterrence benefits.3

• The overall balance of military forces (including nuclear) between states does not appear to influence deterrence; the local balance of military forces in the specific theater in which deterrence is actually practiced, however, is key.4

• Forward-deployed troops enhance the deterrent effect of alliances with overseas allies.5

• Strong mutual interests and ties enhance deterrence.6

• Case studies strongly ratify the theoretical expectation that it is easier to defend a given status quo than to challenge it forcefully: compellence (sometimes termed “coercion” or “coercive diplomacy”) is extremely hard.7

The most important finding to emerge from this voluminous research is that alliances—especially with nuclear-armed allies like the United States— actually work in deterring conflict. This is all the more striking in view of the fact that what scholars call “selection bias” probably works against it. The United States is more inclined to offer—and protégés to seek—alliance relationships in settings where the probability of military conflicts is higher than average. The fact that alliances work to deter conflict in precisely the situations where deterrence is likely to be especially hard is noteworthy.

More specifically, these findings buttress the key theoretical implication that if the United States is interested in deterring military challenges to the status quo in key regions, relying only on latent military capabilities in the US homeland is likely to be far less effective than having an overseas military posture. Similarly, they lend support to the general proposition that a forward deterrence posture is strongly appealing to a status quo power, because defending a given status quo is far cheaper than overturning it, and, once a favorable status quo is successfully overturned, restoring the status quo ante can be expected to be fearsomely costly. Recognizing the significance of these findings clearly casts doubt on the “wait on the sidelines and decide whether to intervene later” approach that is so strongly favored by retrenchment proponents.

The Causes of Nuclear Proliferation

Matthew Kroenig highlights a number of reasons why US policymakers seek to limit the spread of nuclear weapons: “Fear that nuclear proliferation might deter [US leaders] from using military intervention to pursue their interests, reduce the effectiveness of their coercive diplomacy, trigger regional instability, undermine their alliance structures, dissipate their strategic attention, and set off further nuclear proliferation within their sphere of influence.”8 These are not the only reasons for concern about nuclear proliferation; also notable are the enhanced prospects of nuclear accidents and the greater risk of leakage of nuclear material to terrorists.9

Do deep engagement’s security ties serve to contain the spread of nuclear weapons? The literature on the causes of proliferation is massive and faces challenges as great as any in international relations. With few cases to study, severe challenges in gathering evidence about inevitably secretive nuclear programs, and a large number of factors in play on both the demand and the supply sides, findings are decidedly mixed.10 Alliance relationships are just one piece of this complex puzzle, one that is hard to isolate from all the other factors in play. And empirical studies face the same selection bias problem just discussed: Nuclear powers are more likely to offer security guarantees to states confronting a serious threat and thus facing above-average incentives to acquire nuclear weapons. Indeed, alliance guarantees might be offered to states actively considering the nuclear option precisely in order to try to forestall that decision. Like a strong drug given only to very sick patients, alliances thus may have a powerful effect even if they sometimes fail to work as hoped.

Bearing these challenges in mind, the most relevant findings that emerge from this literature are:

• The most recent statistical analysis of the precise question at issue concludes that “security guarantees significantly reduce proliferation proclivity among their recipients.”11 In addition, states with such guarantees are less likely to export sensitive nuclear material and technology to other nonnuclear states.12

• Case study research underscores that the complexity of motivations for acquiring nuclear weapons cannot be reduced to security: domestic politics, economic interests, and prestige all matter.13

• Multiple independently conceived and executed recent case studies nonetheless reveal that security alliances help explain numerous allied decisions not to proliferate even when security is not always the main driver of leaders’ interest in a nuclear program.14 As Nuno Monteiro and Alexandre Debs stress, “States whose security goals are subsumed by their sponsors’ own aims have never acquired the bomb. … This finding highlights the role of U.S.  security commitments in stymieing nuclear proliferation: U.S. protégés will only seek the bomb if they doubt U.S. protection of their core security goals.”15

• Multiple independently conceived and executed recent case research projects further unpack the conditions that decrease the likelihood of allied proliferation, centering on the credibility of the alliance commitment.16 In addition, in some cases of prevention failure, the alliances allow the patron to influence the ally’s nuclear program subsequently, decreasing further proliferation risks.17

• Security alliances lower the likelihood of proliferation cascades. To be sure, many predicted cascades did not occur.18 But security provision, mainly by the United States, is a key reason why. The most comprehensive statistical analysis finds that states are more likely to proliferate in response to neighbors when three conditions are met: (1) there is an intense security rivalry between the two countries; (2) the prospective proliferating state does not have a security guarantee from a nuclear-armed patron; and (3) the potential proliferator has the industrial and technical capacity to launch an indigenous nuclear program.19

In sum, as Monteiro and Debs note, “Despite grave concerns that more states would seek a nuclear deterrent to counter U.S. power preponderance,” in fact “the spread of nuclear weapons decelerated with the end of the Cold War in 1989.”20 Their research, as well as that of scores of scholars using multiple methods and representing many contrasting theoretical perspectives, shows that US security guarantees and the counter-proliferation policy deep engagement allows are a big part of the reason why.

The Costs of Nuclear Proliferation

General empirical findings thus lend support to the proposition that security alliances impede nuclear proliferation. But is this a net contributor to global security? Most practitioners and policy analysts would probably not even bring this up as a question and would automatically answer yes if it were raised. Yet a small but very prominent group of theorists within the academy reach a different answer: some of the same realist precepts that generate the theoretical prediction that retrenchment would increase demand for nuclear weapons also suggest that proliferation might increase security such that the net effect of retrenchment could be neutral. Most notably, “nuclear optimists” like Kenneth Waltz contend that deterrence essentially solves the security problem for all nuclear-armed states, largely eliminating the direct use of force among them.21 It follows that US retrenchment might generate an initial decrease in security followed by an increase as insecure states acquire nuclear capabilities, ultimately leaving no net effect on international security.

This perspective is countered by “nuclear pessimists” such as Scott Sagan. Reaching outside realism to organization theory and other bodies of social science research, they see major security downsides from new nuclear states. Copious research produced by Sagan and others casts doubt on the expectation that governments can be relied upon to create secure and controlled nuclear forces.22 The more nuclear states there are, the higher the probability that the organizational, psychological, and civil-military pathologies Sagan identifies will turn an episode like one of the numerous “near misses” he uncovers into actual nuclear use. As Campbell Craig warns, “One day a warning system will fail, or an official will panic, or a terrorist attack will be misconstrued, and the missiles will fly.”23

Looking beyond these kinds of factors, it is notable that powerful reasons to question the assessment of proliferation optimists also emerge even if one assumes, as they do, that states are rational and seek only to maximize their security. First, nuclear deterrence can only work by raising the risk of nuclear war. For deterrence to be credible, there has to be a nonzero chance of nuclear use.24 If nuclear use is impossible, deterrence cannot be credible. It follows that every nuclear deterrence relationship depends on some probability of nuclear use. The more such relationships there are, the greater the risk of nuclear war.i Proliferation therefore increases the chances of nuclear war even in a perfectly rationalist world. Proliferation optimists cannot logically deny that nuclear spread increases the risk of nuclear war. Their argument must be that the security gains of nuclear spread outweigh this enhanced risk.

Estimating that risk is not simply a matter of pondering the conditions under which leaders will choose to unleash nuclear war. Rather, as Schelling established, the question is whether states will run the risk of using nuclear weapons. Nuclear crisis bargaining is about a “competition in risk taking.”25 Kroenig counts some twenty cases in which states—including prominently the United States—ran real risks of nuclear war in order to prevail in crises.26 As Kroenig notes, “By asking whether states can be deterred or not … proliferation optimists are asking the wrong question. The right question to ask is: what risk of nuclear war is a specific state willing to run against a particular opponent in a given crisis?”27 The more nuclear-armed states there are, the more the opportunities for such risk-taking and the greater the probability of nuclear use.

It is also the case that for nuclear weapons to deter a given level of conflict, there must be a real probability of their use at that level of conflict. For nuclear weapons to deter conventional attack, they must be configured in such a way as to make their use credible in response to a conventional attack. Highly controlled and reliable assured-retaliation postures might well be credible in response to a conventional attack that threatens a state’s existence. But as newer research shows, the farther the issue in question is from a state’s existential security, the harder it is to make nuclear threats credible with the type of ideally stable nuclear posture whose existence proliferation optimism presupposes.28 If a state wishes, for example, to deter a conventionally stronger neighbor from seizing a disputed piece of territory, it may face great challenges fashioning a nuclear force that is credible. Following Schelling’s logic about the “threat that leaves something to chance,” it may face incentives to create a quasi-doomsday nuclear posture that virtually locks in escalation in response to its rival’s attempt to seize the territory conventionally.

Key here is that nuclear spread cannot be treated as binary:  “You have ‘em or you don’t.” States can choose the kind of nuclear postures they build. Some states may choose to build dangerous and vulnerable nuclear postures. And because they lack the money or the technological capacity or both, many states may not be able to create truly survivable forces (that is, forces that can survive a nuclear first strike by a rival power) even if they wanted to.

The links between nuclear possession and conflict are hard to assess empirically. Still, there are relevant findings that are probative for this debate:

• Nuclear weapons are most credible at deterring the kind of conflict— threats to a state’s core territorial security—that is least relevant to the actual security concerns of most states most of the time. Both quantitative and case study research validates the claim that territorial conquest is rarely an issue in armed conflicts in the present era. Yet states that are bullish on their prospects for territorial survival as sovereign units still have plenty of security concerns and also often find plenty of reasons to use force and plenty of ways to use force other than by conquering other states.29

• Robust, secure nuclear postures do not stop states from engaging in intense security competition. Though the United States and Soviet Union did not fight each other during the Cold War, their nuclear arsenals did not prevent them from engaging in one of history’s most costly rivalries, complete with intense arms racing and dangerous crises that raised the specter of nuclear war.

• Though they built massive arsenals, at various junctures the two superpowers adopted dangerously escalatory postures to attempt to deter various levels of conflict.30

• The mere possession of nuclear weapons does not deter conventional attack, as both India and Israel discovered.

• In both statistical and case study tests, Vipin Narang finds that the only nuclear posture that has any effect on conventional conflict initiation and escalation is a destabilizing “asymmetrical escalatory” force, a doomsday posture designed to create intense incentives for early use, such as that constructed by Pakistan in the 1990s.31

In short, nuclear spread is a Hobson’s choice: it will inevitably increase the chances of nuclear use, and it will either not deter conventional war or will do so only by raising the risks of nuclear war even more. Add to this the risk that states in the real world may not behave in ways consistent with the assumptions underlying proliferation optimism. That is, some subset of new nuclear-armed states may not be led by rational leaders, may not prove able to overcome organizational problems and resist the temptation to preempt before feared neighbors nuclearize, may not pursue security as the only major state preference, and may not be risk-averse. The scale of these risks rises as the world moves from nine to twenty, thirty, or forty nuclear states. In addition, many of the other dangers noted by analysts who are concerned about the destabilizing effects of nuclear proliferation—including the risk of accidents and the prospects that some new nuclear powers will not have truly survivable forces (making them susceptible to a first-strike attack and thus creating incentives for early first use)—are prone to go up as the number of nuclear powers grows. Moreover, the risk of unforeseen crisis dynamics that could spin out of control is also higher as the number of nuclear powers increases. Finally, add to these concerns the enhanced danger of nuclear leakage to dangerous, undeterrable nonstate actors, and a world with overall higher levels of security competition becomes yet more worrisome. And all of these concerns emerge independently of other reasons the United States is generally better off in a world with fewer nuclear states, notably increased US freedom of action.

#### Plan: The appropriation of outer space through celestial body mining by private entities should be banned.

#### We’ll defend normal means as the signatories of the OST adding an optional protocol under Article II.

Tronchetti 7[Fabio Tronchetti is a professor at the International Institute of Air and Space Law, Leiden University, The Netherlands, 2007, <https://iislweb.org/docs/Diederiks2007.pdf>, 12-15-2021 amrita]

ARTICLE II OF THE OUTER SPACE TREATY: A MATTER OF DEBATE The legal content of Article II of the Outer Space Treaty is one of the most debated and analysed topic in the field of space law. Indeed, several interpretations have been put forward to explain the meaning of its provisions. Article II states that: “Outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means”. **The text of Article II represents** the final point of a process, formally initiated with Resolution 1721, aimed at conferring to outer space the status of res communis omnium, namely a thing open for the **free exploration** and use by all States **without the possibility of being appropriated**. By prohibiting the possibility of making territorial claims over outer space or any part thereof based on use or occupation, Article II **makes clear that** the customary procedures of **i**nternational **law allowing** subjects to obtain **sovereignty rights over un-owed lands**, namely discovery, occupatio and effective possession, **do not apply to** outer **space.** This prohibition was considered by the drafters of the Outer Space Treaty the best guarantee for preserving outer space for peaceful activities only and for stimulating the exploration and use of the space environment in the name of all mankind. What has been the object of controversy among legal scholars is the question of whether both States and private individuals are subjected to the provisions of Article II. Indeed, **while Article II forbids** expressis verbis the national **appropriation by** claims of **sovereignty**, by means of use and occupation or other means of outer space, **it does not** make **a**ny explicit **mention** **to** its **private** appropriation. Relying on this consideration, some authors have argued that the private appropriation of outer space and celestial bodies is allowed. For instance, in 1968 Gorove wrote: “Thus, at present an individual acting on his own behalf or on behalf of another individual or private association or an international organisation could lawfully appropriate any parts of outer space…”6 . The same argument is used today by the enterprises selling extraterrestrial acres. They base their claim to the Moon and other celestial bodies on the consideration that Article II does not explicitly forbid private individuals and enterprises to claim, exploit or appropriate the celestial bodies for profit7 . However, it must be said, that nowadays there is a general consensus on the fact that **both national appropriation and private** property rights **are denied** under the Outer Space Treaty. Several way of reasoning have been advanced to support this view. Sters and Tennen affirm that the argument that Article II does not apply to private entities since they are not expressly mentioned fails for the reason that they do not need to be explicitly listed in Article II to be fully subject to the non-appropriation principle8 . **Private entities are allowed to carry out** space **activities but**, according to Article VI of the Outer Space Treaty, they **must be authorized** to conduct such activities **by the** appropriate **State** of nationality. But if the State is prohibited from engaging in certain conduct, then it lacks the authority to license its nationals or other entities subject to its jurisdiction to engage in that prohibited activity. Jenks argues that “States bear international responsibility for national activities in space; it follows that what is forbidden to a State is not permitted to a chartered company created by a State or to one of its nationals acting as a private adventurer”9 . It has been also suggested that **the prohibition of national** appropriation **implies prohibition of private** appropriation because the latter cannot exist independently from the former10. In order to exist, indeed, private property requires a superior authority to enforce it, be in the form of a State or some other recognised entity. In outer space, however, this practice of State endorsement is forbidden. Should a State recognise or protect the territorial acquisitions of any of its subjects, this would constitute a form of national appropriation in violation of Article II. Moreover, it is possible to use some historical elements to support the argument that both the acquisition of State sovereignty and the creation of private property rights are forbidden by the words of Article II. During the negotiations of the Outer Space Treaty, the Delegate of Belgium affirmed that his delegation “had taken note of the interpretation of the non-appropriation advanced by several delegations-apparently without contradiction-as covering both the establishment of sovereignty and the creation of titles to property in private law”11. The French Delegate stated that: “…there was reason to be satisfied that three basic principles were affirmed, namely: the prohibition of any claim of sovereignty or property rights in space…”12. The fact that the accessions to the Outer Space Treaty were not accompanied by reservations or interpretations of the meaning of Article II, it is an evidence of the fact that this issue was considered to be settled during the negotiation phase. Thus, summing up, we may say that **prohibition of appropriation of outer space** and its parts is a rule which **is valid for both private and public entity**. The theory that private operators are not subject to this rule represents a myth that is not supported by any valid legal argument. Moreover, it can be also added that if any subject was allowed to appropriate parts of outer space, the basic aim of the drafters of the Treaty, namely to prevent a colonial competition in outer space and to create the conditions and premises for an exploration and use of outer space carried out for the benefit of all States, would be betrayed. Therefore, **the need to protect the non-appropriative nature o**f outer **space emerges** in all its relevance.

#### Multiple ambiguities mean that current interpretation of the OST doesn’t restrict private entities AND that other countries are just redefining it

Anderson et. al, 18, “The development of natural resources in outer space”, Jounal of Energy and Nature Resources Law, Scot W Anderson, is a partner in the Denver office of Hogan Lovells US LLP. Korey Christensen, is a senior associate in the Denver office of Hogan Lovells US LLP. Julia LaManna, is an associate in the Denver office of Hogan Lovells US LLP. DOI: 10.1080/02646811.2018.1507343, KR

While the Treaty makes it clear that there is a right of free access to celestial bodies for all nations, it prohibits ownership of the bodies themselves. It also qualifies that space activities by private entities must be authorised and supervised by the appropriate nation. However, the Treaty does not deal clearly with whether space resource extrac- tion is a lawful enterprise under its terms. Discussed below are several ambiguities of import in assessing the legality of space mining.

First, what is meant by ‘celestial bodies’? Because there is no single governing defi- nition of celestial bodies, it is unclear whether the category includes asteroids.92 If aster- oids are not celestial bodies, then the Outer Space Treaty’s prohibition on national appropriation of the moon and other celestial bodies would not apply to them. However, most legal scholars agree that asteroids should be encompassed within the treaty terms.93 The International Astronomical Union likewise includes asteroids in its definition of celestial bodies.94 Thus, it is safe to assume that the Treaty applies to asteroids and the remaining discussion in this overview proceeds accordingly.

Second, what is the effect of the Treaty’s statement that the exploration and use of space ‘shall be carried out for the benefit and in the interests of all countries’? While some have argued that this clause mandates an international profit-sharing mechanism, the US and others have taken the position that it merely reiterates the right of free access articulated in Article I.95

Third, does the prohibition on national appropriation extend to a grant of private rights over extracted resources? Meaning, can private entities own resources extracted from the celestial body without any nation owning the body itself? The Treaty includes the phrase ‘exploration and use’ twice in its terms. The word ‘use’ seems to indicate that leveraging space resources was within the contemplation of the drafters, and thus, not prohibited.96 Still, it is unclear how rights would be distributed where national appro- priation is prohibited. The diplomatic history of the Treaty indicates that perhaps this point was left ambiguous deliberately in order to gain support across nations.97

The closest analogue to a legal framework of this type is the extraction and utilisation of resources, such as fish, from the high seas. While the high seas are outside the jurisdic- tion of any single nation, domestic laws protect property rights over resources extracted from them.98 As discussed in greater depth below, US domestic law asserts that the same framework applies to the moon and asteroids. Proponents of this line of thinking argue that granting private property rights to asteroid resources does not conflict with the inter- national prohibition on national appropriation of asteroid bodies.99

#### Disputes and misperceptions create cascading effects towards space weaponization and an arms race – other international frameworks can’t solve because thoose who got the power make the calls

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The first concern is establishing clear regulations regarding asteroid mining. With an intent to establish clear regulations with respect to asteroid mining and to legalise material extraction from the moon and other celestial bodies by private companies in the US, the US government legalised space mining in 2015 by introducing the US Commercial Space Launch Competitiveness Act, 2015.[xxvii] This move was heartily welcomed by the private companies as it provided legitimacy to their planned activities. Subsequently in 2017, Luxembourg followed suit.[xxviii] While the US has been a spacefaring nation for many decades now, Luxembourg aspires to become a global leader in the nascent race to mine resources in outer space. In the 1980s the tiny European nation arose out of almost nowhere to become a leader in the satellite communications industry; today it is looking to the skies again, hoping to be the Silicon Valley of asteroid mining.[xxix] In the backdrop of a thriving steel industry that faced trade recession during the oil crisis of 1973, Luxembourg is trying to capitalise on the potential of space mining. As Prime Minister Xavier Bettel put it, “We realized it wouldn't be forever, the steel, so we decided to do other things.”[xxx] Similarly, looking beyond oil, the UAE is framing its policy approaches to make advances in two key areas: human space exploration, and commercial activities of resource extraction through mining.[xxxi] The two formal pieces of legislation (passed by the US and Luxembourg) provide an answer to the complex question of ownership in outer space; the two-word answer appears to be, “finders, keepers”. The US Commercial Space Launch Competitiveness Act, 2015 states: “A US citizen engaged in commercial recovery of an asteroid resource or a space resource shall be entitled to any asteroid resource or space resource obtained.”[xxxii] This legislation gives US space firms the right to own, keep, use, and sell the spoils of the cosmos as they deem fit. Luxembourg’s legislation is fairly analogous to the US Act, giving mining companies the right to keep their plunder. However, unlike the US law, Luxembourg’s does not require a company’s major stakeholders to be based in the country to enjoy its safeguards; the only requirement is for that company to have an office in the country.[xxxiii] In 2017, Japan entered into a five-year agreement with Luxembourg for mining operations in celestial bodies. Japan today appears a step closer to realising its objective of asteroid mining with two Japanese rovers, Minerva II-1, of JAXA landing on the surface of the asteroid named Ryugu in September 2018.[xxxiv] Earlier, Portugal and the UAE signed similar cooperation agreements with Luxembourg.[xxxv] Meanwhile, a few other countries—which have been critical of the US and Luxembourg, at the forefront of the space mining efforts**—**have also decided to join the field. The increasingly competitive and contested nature of outer space activities is spurring major spacefaring nations to push the boundaries in their space exploration. Asteroid mining could possibly become the next big thing and is already seeing a race among the space powers. The US and Luxembourg are at the forefront in space resource extraction in terms of the policy frameworks and funding.[xxxvi] Even as the US has clarified that the US Space Act 2015 is being misunderstood and that there is no change in the US policy towards national appropriation of space, the reality is that it has already spurred a major debate**.[xxxvii]** China and Russia are among those countries that are following on the path of the US and Luxembourg in undertaking mining missions in space. According to media reports, Ye Peijian, chief commander and designer of China’s lunar exploration programme has stated that China would send the first batch of asteroid exploration spacecraft around 2020.[xxxviii] Speaking to China’s Ministry of Science and Technology-run newspaper, Science and Technology Daily, Ye said that these asteroids have a high concentration of precious metals, which could rationalise the huge cost and risks involved in these activities as their economic value could run into the trillions of US dollars. Therefore, extraction, mining and transporting them back to Earth through robotic equipment will be a significant activity. Chinese scientists are working on missions to “bring back a whole asteroid weighing several hundred tonnes, which could turn asteroids with a potential threat to Earth into usable resources**.**”[xxxix] Ye was also quoted as saying that China has plans of “using an asteroid as the base for a permanent space station.”**[xl]** Helium mining on the moon is also part of China’s goals.[xli] Russia, for its part, is also responding to the space-mining developments of the last decade. For one, it plans to have a permanent lunar base somewhere between 2015 and 2020 for possible extraction of Helium.[xlii] Even as Russia’s official position on asteroid mining is that it is forbidden under the 1967 OST—which states that space is the “province of mankind”—the Russian industry players are of the view that they must follow the lead taken by the US and Luxembourg.[xliii] In early 2018, the director of the Scientific-Educational Center for Innovative Mining Technologies of the Moscow-based National University of Science and Technology MISIS (NUST MISIS), Pavel Ananyev, spoke about the Russian ambitions and proposed activities including space drilling rigs, water extraction on the Moon and 3D printers at space stations.[xliv] Russia’s private space companies including Dauria Aerospace, one of the first Russian private space companies, also hold the opinion that they must go forward in the same direction and call for a larger space to private sector to engage in extracting space resources.[xlv] Moscow may not have yet actively pursued space mining and resource extraction, but it is likely to pick up pace in the coming years alongside global efforts. Moscow clearly has a capacity gap in terms of funding because its earlier plans to have a permanent base in the Moon by 2015 is yet to happen. India, too, has ambitions in extraterrestrial resource extraction. In fact, a year after the US legislation, Prabhat Ranjan, executive director of Technology Information, Forecasting and Assessment Council (TIFAC), a policy organisation within the Department of Science and Technology, made a case for India to push ahead with lunar and asteroid mining. He said, “Moon is already being seen as a mineral wealth and further one can go up to the asteroids and start exploiting this. This can be a big game changer and if India doesn’t do this, we will lag behind.”[xlvi] More recently, Dr. K Sivan, Chairman of the country’s civil space organisation, Indian Space Research Organisation (ISRO), talked about ISRO’s plans for helium-3 extraction and said, “the countries which have the capacity to bring that source from the moon to Earth will dictate the process. I don’t want to be just a part of them, I want to lead them.”[xlvii] However, gaining proficiency in such missions is not easy – the NASA and ESA (the European Space Agency) have been discussing these possibilities for a longer time, albeit quietly. The ISRO Chairman’s response was characterised by an Indian commentator as “aspirational” and “emotional”, clearly conceding that the country’s technological wherewithal is yet to be adequate.[xlviii] Importantly, it is not clear how the legal and regulatory aspects of space mining operations are being dealt with. There was one instance, though, when Luxembourg and Japan in a joint press statement said, “The exchange of information may cover all the issues of the exploration and commercial utilization of space resources, including legal, regulatory, technological, economic, and other aspects.”[xlix] Whether such legalisation is truly legal is arguable. Space Mining: Legal or Not? The Outer Space Treaty (OST) of 1967, considered the global foundation of the outer space legal regime, along with the other four associated international instruments have provided the fundamental basis for outer space activities by prohibiting certain activities and emphasising aspects such as the “common heritage of mankind”. These agreements have been useful in highlighting the global common nature of outer space. At the same time, however, they have been insufficient and ambiguous in providing clear regulations to newer space activities such as asteroid mining. Based on the premise of ‘res communis’, the magna carta of space law, the OST, illustrates outer space as “the province of all mankind”.[l] Under Article I, States are free to explore and use outer space and to access all celestial bodies “on the basis of equality and in accordance with international law.”[li] Although the OST does not explicitly mention “mining” activities, under Article II, outer space including the Moon and other celestial bodies are “not subject to national appropriation by claim of sovereignty” through use, occupation or any other means.[lii] Furthermore, the Moon Agreement, 1979, not only defines outer space as “common heritage of mankind” but also proscribes commercial exploitation of planets and asteroids by States unless an international regime is established to govern such activities for “rational management,” “equitable sharing” and “expansion of opportunities” in the use of these resources.[liii] Slipping conveniently through the loophole in the OST, both the US and Luxembourg have authorised companies to claim exclusive ownership over extracted resources (but not of the asteroid itself). Proponents argue that since no sovereign nation is actually asserting rights over an area of outer space, instead, it is only a private unit claiming rights over singular resources, the treaty norm, “national appropriation by claim of sovereignty”, is not being violated. In the words of renowned space lawyer, Frans von der Dunk, “In terms of the law, yes it’s true that no country can claim any part of outer space as national territory — but that doesn’t mean private industry can’t mine resources.”[liv] Quoting reference from maritime law, Luxembourg regards space resources as appropriable akin to fish and shellfish, but celestial bodies and asteroids are not, just like the high sea. It is noteworthy that out of the only 18 nations that have ratified the Moon Agreement,[lv] none are major spacefaring nations, thereby giving themselves a convenient leeway to not abide by the same. These unilateral initiatives have set off a critical response from the international community. Applying literal interpretation of the OST, there is certainly room to construe that space mining may be legal, compared to the Moon Agreement whose prohibition is absolute. However, taking into consideration the letter and spirit of the OST, strengthened by the Moon Agreement, the argument that “national appropriation” only extends to appropriation of territory and not appropriation of resources is a far reach. That resource extraction is contemplated, albeit implicitly, in the OST, is nothing but logical. Not only have such claims of possessory rights not been recognised in the past, there is also global consensus regarding its illegality.[lvi] It therefore forms a part of customary international law, despite the Moon Agreement not having been widely ratified. In this light, the legalisation of space mining is a sheer violation of the elemental principles of international space law. Yet, there is no clarity on what activity is allowed and what is prohibited in outer space under the existing law.[lvii] There is ambiguity around most issues—from “who would license and regulate asteroid mining operations” to the legality of these activities as per the existing international space law.[lviii] When comparing it to the law of the seas, resource appropriation in the high seas and deep seabed is governed by the United Nations Convention on the Law of the Sea (UNCLOS), 1982, and that in Antarctica, as per the Protocol on Environmental Protection to the Antarctic Treaty, 1991. While the former is strictly regulated under Part XI of UNCLOS, the latter is completely forbidden but for scientific purposes. The law of the sea argument—“owning the fish, not the sea”—cannot be applied to outer space primarily because fish are living resources that can reproduce and therefore are renewable. Outer space resources, on the other hand, are depletable: once harvested, they cannot be replenished. The analogy with fish and seas, therefore, is not a fair one and its transposition to outer space and celestial bodies would be inaccurate. Perhaps a more comparable regime is the deep seabed, which contemplates property rights over mineral extraction. The utilisation and ownership of the deep seabed’s resources are exclusively structured around the International Seabed Authority (ISA), which is responsible for organising, carrying out and controlling all activities in the seabed.[lix] Not only must State parties seek sanction from the ISA before beginning resource exploitation, but the fiscal benefits from seabed mining must also be shared among all.[lx] Evidently, even the UNCLOS upholds State ownership and fair distribution over individual ownership and self-centred gains.[lxi] By allowing private ownership, the US and Luxembourg are once again in contravention of the very same law they are relying on. The touchstone principle, “province of all mankind” is also being defeated. Therefore, to even reap the limited benefits as under UNCLOS, at least the derivation must be made alike. This argument too falls flat. The Way Ahead Undoubtedly, growing technological adeptness has made space mining inevitable and, therefore, the question is no longer “if” but “when”. Nevertheless, a scenario where companies can, solely based on domestic laws, steadily exploit mineral resources in outer space, would be universally unacceptable. Minus regulations, the realisation of space exploitation will create great disparity between nations and disrupt dynamics of the world economy. Regulations are particularly important in the context of the space debris problem. We definitely do not wish for a future, befittingly described by renowned engineer and inventor Graham Hawkes, thus: “Space exploration promised us alien life, lucrative planetary mining, and fabulous lunar colonies. News flash, ladies and gents: Space is nearly empty. It’s a sterile vacuum, filled mostly with the junk we put up there.”[lxii] Therefore, it is extremely important that resource appropriation is carried out in an ethical manner, without interrupting safe and secure access to outer space, simultaneously allowing all countries a share in the proceeds. Technological advances and financial readiness are pushing both, states and non-state players towards new ventures in outer space. Yet, the rules of engagement especially dealing with the new commercial activities are far from ideal. There is a clear and urgent need to debate and come up with either a new regulation or accommodate the space mining activities within the existing international legal measures. Experts have articulated that these could possibly be addressed under the existing property law principles or old mining law principles.[lxiii] However, given the scale of activities that states and non-state parties will engage in, the ability of the existing regime to address space mining could be highly inadequate. The second option would be to develop a new instrument including an institutional architecture that would set out the parameters for activities related to resource extraction and space mining. Since there are a good number of commercial players playing a formidable role in asteroid mining, there has to be space for commercial players in the new gig, which might be a big departure from the earlier era institutions that saw states being the sole authority in regulating activities in outer space. A clear role for commercial players has been articulated for some time but the global space community has yet to reach a consensus in how they can be incorporated into the global governance debates. The apprehension on the part of a number of states is driven by the fact that private sector participation is still largely a western phenomenon. This trend may be undergoing change in other parts of the world but until there is a sizeable private sector community in other major spacefaring powers, there is a fear that the western bloc of countries may stand to gain from the industry being represented in the global governance debates. A third possible option is to get a larger global endorsement of the Moon Treaty, which highlights the common heritage of mankind. The Moon Treaty is important as it addresses a “loophole” of the OST “by banning any ownership of any extraterrestrial property by any organization or private person, unless that organization is international and governmental.”[lxiv] But the fact that it has been endorsed only by a handful of countries makes it a “failure” from the international law perspective.[lxv] Nevertheless, efforts must be made to strengthen the support base for the Moon Agreement given the potential pitfalls of resource extraction and space mining activities in outer space. Signatories to the Moon Treaty can take the lead within multilateral platforms such as the UN to debate the usefulness of the treaty in the changed context of technological advancements and new geopolitical dynamics, and potentially find compromises where there are disagreements. Pursuing a collective approach is ideal. An example is UNCLOS, which demonstrates that the international society possesses the capability of regulating mining quarters deemed to be the “province of mankind”. However, a sui generis legal framework must be crafted because the difference between the marines and outer space and their resources is wide, and the regulations are too region-specific to permit a superimposition of the oceanic regime to outer space. A sound legal environment will protect both the company performing operations and its beneficiaries, while ensuring even-handed resource allocation. In addition, regulations spelling out safety standards and identifying safety zones around mining operations could be useful in

## 1AC—Advantages

### Advantage—Space War

#### Private space mining goes existential – 2 reasons

#### 1 Competition -- Resources in space explodes geopolitical tensions, escalates through satellite use and posturing, and detracts from public interest

Skibba, 18, Nautilus, “Mining in Space Could Lead to Conflicts on Earth”, Ramin Skibba is a science writer and astrophysicist based in Santa Cruz and San Diego. URL: <https://nautil.us/mining-in-space-could-lead-to-conflicts-on-earth-2-7300/>, KR

Major space-faring nations are not among the 16 countries party to the treaty, but they should arguably come to some equitable agreement, since international competition over natural resources in space may very well transform into conflict. Take platinum-group metals. Mining companies have found about 100,000 metric tons of the stuff in deposits worldwide, mostly in South Africa and Russia, amounting to $10 billion worth of production per year, according to the U.S. Geological Survey. These supplies should last several decades if demand for them doesn’t rise dramatically. (According to Bloomberg, supply for platinum-group metals is constrained while demand is increasing.)

Palladium, for example, valued for its conductive properties and chemical stability, is used in hundreds of millions of electronic devices sold annually for electrodes and connector platings, but it’s relatively scarce on Earth. A single giant, platinum-rich asteroid could contain as much platinum-group metals as all reserves on Earth, the Google-backed Planetary Resources claims. That’s a massive bounty. As Planetary Resources and other U.S. and foreign companies scramble for control over these valuable space minerals, competing “land grabs” by armed satellites may come next. Platinum-group metals in space may serve the same role as oil has on Earth, threatening to extend geopolitical struggles into astropolitical ones, something Trump is keen on preparing for. Yesterday he said he’s seriously weighing the idea of a “Space Force” military branch.

NASA’s increasing collaboration with space mining companies could distort and divert efforts previously focused on space exploration.

Moreover, the technology that might enable this free-for-all—versatile “nanosatellites,” no larger than a loaf of bread—is relatively inexpensive. While reporting for a story about these tiny satellites, also known as CubeSats, I came across some missions applicable to mining asteroids. In November, NASA will launch a satellite for a mission called Near-Earth Asteroid Scout, for example. It will deploy a solar sail, propel itself with sunlight, and journey to the asteroid belt, where it will scope out a particular asteroid and analyze its properties. NASA has also awarded grants to Planetary Resources to advance the designs of spectral imagers and propulsion systems for CubeSats, and other missions will develop the satellites’ abilities to communicate and network with each other. NASA also awarded Deep Space Industries contracts to assess commercial approaches for NASA’s asteroid goals, which may involve hosting DSI’s asteroid-prospecting equipment on its missions.

Like all forms of mining, it will be dangerous. If space-mining activities break up asteroids, the resulting debris could be hazardous for satellites, other spacecraft, and astronauts nearby. On the other hand, in a best-case scenario, space mining could be environmentally safe, capture only necessary minerals and water, and, in the more distant future even lead to the construction of a far-flung space station led by NASA and other space agencies, orbiting 200 million miles from Earth and serving as both a mining depot and a pit-stop for passing spacecraft.

But it’s not clear that a pact between the commercial space mining industry and NASA would align with the public’s interest. NASA’s increasing collaboration with space mining companies could distort and divert efforts previously focused on space exploration and basic research, and discourage public interest and engagement in astronomy.

For example, Seager advocated for space mining at a science writing conference I attended in 2015. She’s part of a motley group of advisors for Planetary Resources, including the movie director James Cameron, a lawyer for a prominent Washington D.C. firm, and Dante Lauretta, another astronomer whom I respect. Seager seems to believe that encouraging private space mining will lead to more investments and technological innovation that would enable more scientific research. In a 2012 interview with The Atlantic, for instance, she said, “The bottom line is that NASA is not working the best that it could for space science right now, and so in order for people like me to succeed with my own research goals, the commercial space industry needs to be able to succeed independently of government contracts.”

But if the U.S. and U.S.-based companies lay claim to the richest and most easily accessible prospecting sites, not allowing other companies and nations to share in the wealth, economic and political relations could be damaged. That’s why this seems to be a dangerous path for space explorers. Once you’re on board with the commercial space industry, then you as a researcher must accept, if not support, everything that comes with it. Seager and a few other researchers may be willing to take this risk, but what about the rest of the space science community? Moreover, to succeed, these businesses will seek profitable missions, while science, exploration, and discovery—goals that stimulate public interest—will inevitably have lower priority. (Other commercial spaceflight companies, like Elon Musk’s SpaceX, do generate public interest, but they’re not directly involved in mining asteroids.) NASA may have its shortcomings, but at least its missions and research goals answer to the public. It’s not exactly a welcome thought to imagine more and more of our presence and activity in space being ceded, with NASA’s help, to private industry.

#### Independently, that checks any of their mining good offense

Yan 18 [Laura Yan is a writer in Brooklyn. Her writing has appeared in Wired, GQ, The Cut, Pacific Standard, Longreads, The Outline, and elsewhere. Should We Really Be Mining in Space? May 5, 2018. https://www.popularmechanics.com/space/a20195040/should-we-be-really-be-mining-in-space/]

Imagine, for instance, an asteroid that contains as many platinum-group metals as all reserves on Earth. Businesses will compete for the precious resource, and the competing may soon turn into battle by armed satellites, which can lead back to conflicts on Earth. The act of mining itself could also be dangerous: if space-mining break up asteroids, it could harm other satellites, spacecrafts and astronauts.

Commerical space mining could lead to conflicts between profitability and public interest. "Once you’re on board with the commercial space industry, then you as a researcher must accept, if not support, everything that comes with it," Skibba writes. "To succeed, these businesses will seek profitable missions, while science, exploration, and discovery—goals that stimulate public interest—will inevitably have lower priority,"

#### Market expansion guarantees wars over property rights—governments get quickly involved

Funnell 18 – Anthony, Writer for Future Tense News Citing Dean of Law at University of Adelaide, “War in space 'inevitable' because there's so much money to be made, expert warns”, ABC News, 8/23/2018, https://www.abc.net.au/news/2018-08-24/conflict-in-space-is-inevitable-expert-warns/10146314

A leading Australian space law expert has warned conflict over space assets is "inevitable", and more needs to be done now to avert the potential for hostility. Professor Melissa de Zwart, the Dean of Law at the University of Adelaide, says growing commercial interest in the mining of precious minerals on asteroids and planets has heightened the danger. "I think you have to be a realist about that," she said. "Where you have resources, where you have competition for those resources, where you have investment of money in the extraction of those resources ... there will be an expectation of security around that investment." While full-scale mining is yet to be tried, there is significant international interest. Japanese aerospace agency Jaxa has already successfully landed a robotic craft on an asteroid and taken samples. It currently has another probe hovering over an asteroid named Ryugu. Artist's impression of Hayabusa 2 PHOTO: Artist's impression of Jaxa's robotic craft flying above Ryugu. (Source: JAXA) Two American companies — Deep Space Industries and Planetary Resources — are thought to be the leaders in the field, but in May this year a UK firm called Asteroid Mining Corporation also entered the race. "Those corporations will be looking to the nation-state to say, well, are you going to protect our investment in this business?" Professor de Zwart said. A very crowded space The US Government and American firms continue to play a dominant role in more traditional space technology development and deployment. SpaceX, for example, is a major private supplier of rockets, while the US Air Force currently coordinates international satellite traffic, providing advanced warnings about potentially dangerous space debris. Listen to the episode Are we moving away from the notion that space is for all humankind? And is conflict in space inevitable? But the number of players is rapidly increasing. The OECD's Space Forum says more than 80 countries now have some form of space program, mostly concentrated on rockets, satellites and satellite-related services and technology. They estimate the global industry is worth somewhere around $US400 billion and growing quickly. And that figure could skyrocket if, and when, asteroid mining kicks off. Eric Stallmer, the president of the US-based Commercial Spaceflight Federation, a consortium of 85 space-related organisations and businesses, believes that moment is fast approaching. "I think we are looking at a five to 10-year timetable for developing that technology. It makes for an exciting time," he said

#### Space wars go nuclear

Grego 18 – Laura, Senior Scientist in the Global Security Program at the Union of Concerned Scientists, Postdoctoral Researcher at the Harvard-Smithsonian Center for Astrophysics, PhD in Experimental Physics at the California Institute of Technology, Space and Crisis Stability, Union of Concerned Scientists, 3-19-18, <https://www.law.upenn.edu/live/files/7804-grego-space-and-crisis-stabilitypdf>

Why space is a particular problem for crisis stability For a number of reasons, space poses particular challenges in preventing a crisis from starting or from being managed well. Some of these are to do with the physical nature of space, such as the short timelines and difficulty of attribution inherent in space operations. Some are due to the way space is used, such as the entanglement of strategic and tactical missions and the prevalence of dual-use technologies. Some are due to the history of space, such the absence of a shared understanding of appropriate behaviors and consequences, and a dearth of stabilizing personal and institutional relationships. While some of these have terrestrial equivalents, taken together, they present a special challenge. The vulnerability of satellites and first strike incentives Satellites are inherently fragile and difficult to protect; in the language of strategic planners, space is an “offense-dominant” regime. This can lead to a number of pressures to strike first that don‘t exist for other, better-protected domains. Satellites travel on predictable orbits, and many pass repeatedly over all of the earth‘s nations. Low-earth orbiting satellites are reachable by missiles much less capable than those needed to launch satellites into orbit, as well as by directed energy which can interfere with sensors or with communications channels. Because launch mass is at a premium, satellite armor is impractical. Maneuvers on orbit need costly amounts of fuel, which has to be brought along on launch, limiting satellites‘ ability to move away from threats. And so, these very valuable satellites are also inherently vulnerable and may present as attractive targets. Thus, an actor with substantial dependence on space has an incentive to strike first if hostilities look probable, to ensure these valuable assets are not lost. Even if both (or all) sides in a conflict prefer not to engage in war, this weakness may provide an incentive to approach it closely anyway. A RAND Corporation monograph commissioned by the Air Force15 described the issue this way: First-strike stability is a concept that Glenn Kent and David Thaler developed in 1989 to examine the structural dynamics of mutual deterrence between two or more nuclear states.16 It is similar to crisis stability, which Charles Glaser described as ―a measure of the countries‘ incentives not to preempt in a crisis, that is, not to attack first in order to beat the attack of the enemy,‖17 except that it does not delve into the psychological factors present in specific crises. Rather, first strike stability focuses on each side‘s force posture and the balance of capabilities and vulnerabilities that could make a crisis unstable should a confrontation occur. For example, in the case of the United States, the fact that conventional weapons are so heavily dependent on vulnerable satellites may create incentives for the US to strike first terrestrially in the lead up to a confrontation, before its space-derived advantages are eroded by anti-satellite attacks.18 Indeed, any actor for which satellites or space-based weapons are an important part of its military posture, whether for support missions or on-orbit weapons, will feel “use it or lose it” pressure because of the inherent vulnerability of satellites. Short timelines and difficulty of attribution The compressed timelines characteristic of crises combine with these “use it or lose it” pressures to shrink timelines. This dynamic couples dangerously with the inherent difficulty of determining the causes of satellite degradation, whether malicious or from natural causes, in a timely way. Space is a difficult environment in which to operate. Satellites orbit amidst increasing amounts of debris. A collision with a debris object the size of a marble could be catastrophic for a satellite, but objects of that size cannot be reliably tracked. So a failure due to a collision with a small piece of untracked debris may be left open to other interpretations. Satellite electronics are also subject to high levels of damaging radiation. Because of their remoteness, satellites as a rule cannot be repaired or maintained. While on-board diagnostics and space surveillance can help the user understand what went wrong, it is difficult to have a complete picture on short timescales. Satellite failure on-orbit is a regular occurrence19 (indeed, many satellites are kept in service long past their intended lifetimes). In the past, when fewer actors had access to satellite-disrupting technologies, satellite failures were usually ascribed to “natural” causes. But increasingly, even during times of peace operators may assume malicious intent. More to the point, in a crisis when the costs of inaction may be perceived to be costly, there is an incentive to choose the worst-case interpretation of events even if the information is incomplete or inconclusive. Entanglement of strategic and tactical missions During the Cold War, nuclear and conventional arms were well separated, and escalation pathways were relatively clear. While space-based assets performed critical strategic missions, including early warning of ballistic missile launch and secure communications in a crisis, there was a relatively clear sense that these targets were off limits, as attacks could undermine nuclear deterrence. In the Strategic Arms Limitation Treaty, the US and Soviet Union pledged not to interfere with each other‘s ―national technical means‖ of verifying compliance with the agreement, yet another recognition that attacking strategically important satellites could be destabilizing.20 There was also restraint in building the hardware that could hold these assets at risk. However, where the lines between strategic satellite missions and other missions are blurred, these norms can be weakened. For example, the satellites that provide early warning of ballistic missile launch are associated with nuclear deterrent posture, but also are critical sensors for missile defenses. Strategic surveillance and missile warning satellites also support efforts to locate and destroy mobile conventional missile launchers. Interfering with an early warning sensor satellite might be intended to dissuade an adversary from using nuclear weapons first by degrading their missile defenses and thus hindering their first-strike posture. However, for a state that uses early warning satellites to enable a “hair trigger” or launch-on-attack posture, the interference with such a satellite might instead be interpreted as a precursor to a nuclear attack. It may accelerate the use of nuclear weapons rather than inhibit it. Misperception and dual-use technologies Some space technologies and activities can be used both for relatively benign purposes but also for hostile ones. It may be difficult for an actor to understand the intent behind the development, testing, use, and stockpiling of these technologies, and see threats where there are none. (Or miss a threat until it is too late.) This may start a cycle of action and reaction based on misperception. For example, relatively low-mass satellites can now maneuver autonomously and closely approach other satellites without their cooperation; this may be for peaceful purposes such as satellite maintenance or the building of complex space structures, or for more controversial reasons such as intelligence-gathering or anti-satellite attacks. Ground-based lasers can be used to dazzle the sensors of an adversary‘s remote sensing satellites, and with sufficient power, they may damage those sensors. The power needed to dazzle a satellite is low, achievable with commercially available lasers coupled to a mirror which can track the satellite. Laser ranging networks use low-powered lasers to track satellites and to monitor precisely the Earth‘s shape and gravitational field, and use similar technologies. 21 Higher-powered lasers coupled with satellite-tracking optics have fewer legitimate uses. Because midcourse missile defense systems are intended to destroy long-range ballistic missile warheads, which travel at speeds and altitudes comparable to those of satellites, such defense systems also have inherent ASAT capabilities. In fact, while the technologies being developed for long-range missile defenses might not prove very effective against ballistic missiles—for example, because of the countermeasure problems associated with midcourse missile defense— they could be far more effective against satellites. This capacity is not just theoretical. In 2007, China demonstrated a direct-ascent anti-satellite capability which could be used both in an ASAT and missile defense role, and in 2009, the United States used a ship-based missile defense interceptor to destroy a satellite, as well. US plans indicated a projected inventory of missile defense interceptors with capability to reach all low earth orbiting satellites in the dozens in the 2020s, and in the hundreds by 2030.22 Discrimination The consequences of interfering with a satellite may be vastly different depending on who is affected and how, and whether the satellite represents a legitimate military objective. However, it will not always be clear who the owners and operators of a satellite are, and users of a satellite‘s services may be numerous and not public. Registration of satellites is incomplete23 and current ownership is not necessarily updated in a readily available repository. The identification of a satellite as military or civilian may be deliberately obscured. Or its value as a military asset may change over time; for example, the share of capacity of a commercial satellite used by military customers may wax and wane. A potential adversary‘s satellite may have different or additional missions that are more vital to that adversary than an outsider may perceive. An ASAT attack that creates persistent debris could result in significant collateral damage to a wide range of other actors; unlike terrestrial attacks, these consequences are not limited geographically, and could harm other users unpredictably. In 2015, the Pentagon‘s annual wargame**,** or simulated conflict, involving space assets focused on a future regional conflict. The official report out24warnedthatit was hard to keep the conflict contained geographically when using anti-satellite weapons: As the wargame unfolded, a regional crisis quickly escalated, partly because of the interconnectedness of a multi-domain fight involving a capable adversary. The wargame participants emphasized the challenges in containing horizontal escalation once space control capabilities are employedto achieve limited national objectives. Lack of shared understanding of consequences/proportionalityStates havefairly similar understandings of the implications of military actions on the ground, in the air, and at sea,built over decades of experience. The United States and the Soviet Union/Russia have built some shared understanding of each other‘s strategic thinking on nuclear weapons, though this is less true for other states with nuclear weapons. But in the context of nuclear weapons, there is an arguable understanding about the crisis escalation based on the type of weapon (strategic or tactical) and the target (counterforce—against other nuclear targets, or countervalue—against civilian targets). Because of a lack of experience in hostilities that target space-based capabilities, it is not entirely clear what the proper response to a space activity is and where the escalation thresholds or “red lines” lie. Exacerbating this is the asymmetry in space investments; not all actors will assign the same value to a given target or same escalatory nature to different weapons.

#### Dual-use capabilities force China and Russia to intervene – 1NC ev doesn’t assume that china is scared of re-purposed appropriation

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The Artemis **Accords are a culmination of American space policy to enable commercialization** of outer space. However, they pose a variety of problems. To start, any future agreements under the accords **may violate** international law – both **the OST** and the VCLT. While the Trump Administration appears willing to ignore this issue, violating international law **is a dangerous precedent and should be avoided**.118 Further, the dual nature of all space technology means that **any commercial activity in space** that the Artemis Accords enable **could** readily **be converted for belligerent purposes**.119 This would both violate international law and threaten national security. Despite these inherent dangers, the **Trump** Administration has **maintained a bellicose rhetoric** on its space policy.120 Although American technology and investments surpass those of Russia and China, such rhetoric serves **to inflame** already **tense relations.** **Russia and China are** each **pursuing** their own space **programs which threaten national security** interests, but the United States has engaged neither in Artemis Accords diplomacy.121 A. Violations of International Law? **At best**, future Artemis Accords agreements **exist in a gray area** of international law. After all, the Moon Treaty failed to update and clarify the gaps in the OST on space exploration and resource exploitation by non-state actors. The Space Act and the Artemis Accords together represent American state practice and opinio juris as to the meaning of the OST. At worst, the Trump Administration would be blatantly and knowingly violating international law, in particular the ban on national appropriation. Certainly, the Artemis Accords **signal a willingness to push i**nternational **law to the limit**, if not to step over the line. In addition to potentially violating the OST, the Artemis Accords may also violate the VCLT. Though the United States has not ratified the VCLT, the “treaty on treaties” is customary international law and thus binding on all states. Article 41 of the VCLT permits two or more parties to a treaty to make bilateral, inter-se agreements or to modify a treaty among themselves.122 Yet, if these side deals are “incompatible with the effective execution of the object and purpose of the treaty as a whole” then the VCLT forbids them.123 NASA made clear that bilateral Artemis Accords agreements with other nations will be “grounded in the Outer Space Treaty” and that resource utilization will be conducted under the “auspices of the Outer Space Treaty.”124 Therefore, the United States appears ready to create bilateral, inter-se agreements every time it signs an Artemis Accords agreement. **Because Article II** of the OST clearly **bans national appropriation, licensing non-state actors** to create mining colonies on the Moon in safety zones **verges on appropriation**, especially when coupled with Article VI’s responsibility clause based on national activity.125 Overall, the Administration advances on very uneven legal footing, which is further **compounded by** the fact that **space tech**nologies **are** inherently **dual purpose**. B. Dual Purpose Any technology – from rocketry, to satellites, to mining equipment – introduced into space is inherently dual purpose. That is, it may readily be converted to military uses. The OST makes clear that nuclear weapons are prohibited in space. It also completely demilitarizes the Moon, under Article IV.126 However, military **personal may** **participate in** scientific research or other peaceful purposes – i.e., **commercial ones**.127 Hence, from a national security standpoint it would be legal for other rival nations, namely Russia and China, to create lunar bases or asteroid mines. But **should conflict arise, such tech**nology and infrastructure could readily **be turned hostile** and harnessed against American infrastructure in space. **This is troubling because for** a country like **China there is no** obvious **distinction between public and private** industry.128 And from China’s perspective, NASA is still teaming up with SpaceX in public-private partnerships and the DoD has many of similar agreements as well. In fact, in its 2020 Defense Space Strategy, the DoD proclaimed its eagerness to “[l]everage commercial technological advancements and acquisition processes

#### The standard is maximizing expected wellbeing.

#### 1] Lexical pre-requisite: threats to bodily security preclude the ability for moral actors to effectively act upon other moral theories since they are in a constant state of crisis that inhibits the ideal moral conditions which other theories presuppose

#### 2] Only consequentialism explains degrees of wrongness—if I break a promise to meet up for lunch, that is not as bad as breaking a promise to take a dying person to the hospital. Only the consequences of breaking the promise explain why the second one is much worse than the first. Intuitions outweigh—they’re the foundational basis for any argument and theories that contradict our intuitions are most likely false even if we can’t deductively determine why.

extinction first ---

#### Existential risks are categorically different---even if they win that the vast majority of people would die, total collapse is an entirely different ethical category---the infinite range of scenarios for total extinction mean try or die is decisively neg

Baum 15

Seth D. Baum, PhD in geography from Pennsylvania State University, is Executive Director of the Global Catastrophic Risk Institute, “Winter-Safe Deterrence: The Risk of Nuclear Winter and Its Challenge to Deterrence, Contemporary Security Policy, 36(1): 123-14, http://www.tandfonline.com/10.1080/13523260.2015.1012346

Here it is important to bring in the ethics of global catastrophic risk. A global catastrophe is an event that causes great harm to the entirety of global human civilization. Catastrophes of this magnitude take on a special ethical significance. Carl Sagan was perhaps the first to recognize this in his own discussion of nuclear winter. The astronomer saw the big picture: Human extinction means the loss of all people who could ever exist into the distant future. Contemporary scholars further understand that even without total human extinction, a permanent collapse of human civilization is of comparable significance. Ultimately what is at stake is the long-term trajectory of human civilization, its success or its failure. Ethical obligations to future generations are fundamentally different from those to people alive today, for two reasons. First, future generations vastly outnumber the current population. Barring catastrophe, humanity could survive for millions or even billions of years into the future. Thus anything that affects the long-term trajectory of human civilization is of much greater consequence than things that only affect people today. Second, despite their great number, future generations are utterly helpless. They cannot vote in today’s elections or trade in today’s markets, and they certainly cannot deter today’s countries with any weapons. This is absolutely unfair, but that is just how it is. The only reason people must help future generations is because it is the right thing to do. For nuclear winter policy, the basic point is that when a permanent global catastrophe could occur, a cautious approach is generally warranted. This means erring on the side of smaller nuclear arsenals. Any given nuclear weapons exchange has a range of possible outcomes of varying severities and probabilities. A permanent global catastrophe is so severe of an outcome that even a small probability of it happening is a large risk and thus worth avoiding.

**That threatens the ontological conditions of life itself**

**Burke et al.**, Associate Professor of International and Political Studies @ UNSW, Australia, **‘16**

(Anthony, Stefanie Fishel is Assistant Professor, Department of Gender and Race Studies at the University of Alabama, Audra Mitchell is CIGI Chair in Global Governance and Ethics at the Balsillie School of International Affairs, Simon Dalby is CIGI Chair in the Political Economy of Climate Change at the Balsillie School of International Affairs, and, Daniel J. Levine is Assistant Professor of Political Science at the University of Alabama, “Planet Politics: Manifesto from the End of IR,” Millennium: Journal of International Studies 1–25)

8. Global ethics must respond to mass extinction. In late 2014, the Worldwide Fund for Nature reported a startling statistic: according to their global study, 52% of species had gone extinct between 1970 and 2010.60 This is not news: for three decades, conservation biologists have been warning of a ‘sixth mass extinction’, which, by definition, could eliminate more than three quarters of currently existing life forms in just a few centuries.61 In other words, it could threaten the practical possibility of the survival of earthly life. Mass extinction is not simply extinction (or death) writ large: **it is a qualitatively different phenomena that demands its own ethical categories.** It cannot be grasped by aggregating species extinctions, let alone the deaths of individual organisms. Not only does it erase diverse, irreplaceable life forms, their **unique histories** and **open-ended possibilities**, but it **threatens the ontological conditions of Earthly life**.

IR is one of few disciplines that is explicitly devoted to the pursuit of survival, yet it has almost nothing to say in the face of a possible mass extinction event.62 It utterly lacks the conceptual and ethical frameworks necessary to foster diverse, meaningful responses to this phenomenon. As mentioned above, Cold-War era concepts such as ‘nuclear winter’ and ‘omnicide’ gesture towards harms massive in their scale and moral horror. However, they are asymptotic: they imagine nightmares of a severely denuded planet, yet they do not contemplate the **comprehensive negation** that a mass extinction event entails. In contemporary IR discourses, where it appears at all, extinction is treated as a problem of scientific management and biopolitical control aimed at securing existing human lifestyles.63 Once again, this approach fails to recognise the reality of extinction, which is a **matter of being and nonbeing**, not one of life and death processes.

Confronting the enormity of a possible mass extinction event requires a total overhaul of human perceptions of what is at stake in the disruption of the conditions of Earthly life. The question of what is ‘lost’ in extinction has, since the inception of the concept of ‘conservation’, been addressed in terms of financial cost and economic liabilities.64 Beyond reducing life to forms to capital, currencies and financial instruments, the dominant neoliberal political economy of conservation imposes a homogenising, Western secular worldview on a planetary phenomenon. Yet the **enormity, complexity, and scale** of mass extinction is so huge that humans need to **draw on every possible resource in order to find ways of responding**. This means that they need to mobilise multiple worldviews and lifeways – including those emerging from indigenous and marginalised cosmologies. Above all, it is crucial and urgent to realise that extinction is a **matter of global ethics**. It is not simply an issue of management or security, or even of particular visions of the good life. Instead, it is about staking a claim as to the goodness of life itself. If it does not fit within the existing parameters of global ethics, then it is these boundaries that need to change.

9. An Earth-worldly politics. Humans are worldly – that is, we are fundamentally worldforming and embedded in multiple worlds that traverse the Earth. However, the Earth is not ‘our’ world, as the grand theories of IR, and some accounts of the Anthropocene have it – an object and possession to be appropriated, circumnavigated, instrumentalised and englobed.65 Rather, it is a complex of worlds that we share, co-constitute, create, destroy and inhabit with countless other life forms and beings.

The formation of the Anthropocene reflects a particular type of worlding, one in which the Earth is treated as raw material for the creation of a world tailored to human needs. Heidegger famously framed ‘earth’ and ‘world’ as two countervailing, conflicting forces that constrain and shape one another. We contend that existing political, economic and social conditions have pushed human worlding so far to one extreme that it has become almost entirely detached from the conditions of the Earth. Planet Politics calls, instead, for a mode of worlding that is responsive to, and grounded in, the Earth. One of these ways of being Earth-worldly is to embrace the condition of being entangled. We can interpret this term in the way that Heidegger66 did, as the condition of being mired in everyday human concerns, worries, and anxiety, to prolong existence. But, in contrast, we can and should reframe it as authors like Karen Barad67 and Donna Haraway68 have done. To them and many others, ‘entanglement’ is a radical, indeed fundamental condition of being-with, or, as Jean-Luc Nancy puts it, ‘being singular plural’.69 This means that no being is truly autonomous or separate, whether at the scale of international politics or of quantum physics. World itself is singular plural: what humans tend to refer to as ‘the’ world is actually a multiplicity of worlds at various scales that intersect, overlap, conflict, emerge as they surge across the Earth. World emerges from the poetics of existence, the collision of energy and matter, the tumult of agencies, the fusion and diffusion of bonds.

Worlds erupt from, and consist in, the intersection of **diverse forms of being** – material and intangible, organic and inorganic, ‘living’ and ‘nonliving’. Because of the tumultuousness of the Earth with which they are entangled, ‘**worlds’ are not static, rigid or permanent. They are permeable and fluid**. They can be **created**, **modified** – and, of course, destroyed. Concepts of violence, harm and (in)security that focus only on humans ignore at their peril the destruction and severance of worlds,70 **which undermines the conditions of plurality that enables life on Earth to thrive.**

#### High risk of extinction from a multitude of sources --- policy solutions are key to mitigate the risk, and educational spaces must raise awareness and understanding --- that’s offense because their framing prevents discussion of high magnitude impacts.

Javorsky, 18

Emily Javorsky, Emilia Javorsky is a Boston-based physician-scientist focused on the invention, development and commercialization of new medical therapies. She also leads an Artificial Intelligence in Medicine initiative with The Future Society (TFS) at the Harvard Kennedy School of Government. “Why Human Extinction Needs a Marketing Department.” Xconomy. January 15, 2018. <https://www.xconomy.com/boston/2018/01/15/why-human-extinction-needs-a-marketing-department/>, RJP

Experts at Oxford University and elsewhere have estimated that the risk of a global human extinction event this century—[or at least of an event that wipes out 10 percent or more of the world’s population](http://globalprioritiesproject.org/wp-content/uploads/2016/04/Global-Catastrophic-Risk-Annual-Report-2016-FINAL.pdf)— is [around 1 in 10](http://www.existential-risk.org/concept.pdf). The most probable culprits sending us the way of the dinosaur are mostly anthropogenic risks, meaning those created by humans. [These include](http://globalprioritiesproject.org/wp-content/uploads/2016/04/Global-Catastrophic-Risk-Annual-Report-2016-FINAL.pdf) climate change, nuclear disaster, and more emerging risks such as artificial intelligence gone wrong (by accident or nefarious intent) and bioterrorism. A recent search of the scientific literature through [ScienceDirect](http://www.sciencedirect.com/) for “human extinction” returned a demoralizing 157 results, [compared](http://www.existential-risk.org/concept.pdf) to the 1,627 for “dung beetle.” I don’t know about you, but this concerns me. Why is there so little research and action on [existential risks](https://nickbostrom.com/existential/risks.html)(risks capable of rendering humanity extinct)?

A big part of the problem is a lack of awareness about the real threats we face and what can be done about them. When asked to estimate the chance of an extinction event in the next 50 years, [U.S. adults in surveys reported chances ranging from 1 in 10 million to 1 in 100](https://80000hours.org/articles/extinction-risk/#fn-2), certainly not 10 percent. The awareness and engagement issues extend to the academic community as well, where a key bottleneck is a lack of talented people studying existential risks. Developing viable risk mitigation strategies will require widespread civic engagement and concerted research efforts. Consequently, there is an urgent need to improve the communication of the magnitude and importance of existential risks. The first step is getting an audience to pay attention to this issue.

That won’t be easy. Our social media-driven digital echo chambers present us with topics we already care about, so if you don’t already think about existential risk, it is unlikely you’ll come across it. Furthermore, in today’s media environment, research data must compete with a sea of misinformation, spin, and a daily deluge of “breaking” headlines. We have understandably become desensitized to alarms, especially on topics that have been sensationalized like “extinction.” We can only hear “the sky is falling” so much before we stop listening.

To succeed at getting the message across about existential risks, we need to get creative in figuring out how to capture public attention. Just presenting data will likely not be sufficient. Nor do I think the answer is to hyperbolize the evidence, as that dilutes the credibility of the conversation. We need alternative strategies.

One solution is for creative people such as designers, artists, and marketing experts to get involved, as their toolkit extends beyond analyzing data. These people are uniquely equipped to translate information about risks into human wants, needs, values, and aesthetics.

Creative depictions of existential risks are common in science fiction and film but fictional doom-and-gloom isn’t usually designed to build public outcry for change or to spur policy debate. However, translating existential risks into something that people can experience first-hand can effectively engage an audience and entice them to learn more about a topic and, hopefully, into action.

The power of such a personal, creative experience hit home with me at a dinner I attended late last year at the [World Frontiers Forum](https://www.worldfrontiersforum.org/). The dinner, called The Last Supper, was hosted by Sam Kass, a former White House chef, with a menu created by Carolina Curtin of Café ArtScience, a restaurant in Cambridge, MA. The meal featured ingredients that will likely not be available to future generations due to climate change. I was shocked to see coffee and chocolate included in this lineup of endangered ingredients. For me, these aren’t even ingredients, they’re vital food groups. The abstract concept of “climate change” was converted into a direct impact on my basic needs and desires. Imagine if every Chipotle had menu items marked that would not be available in 2075? X’s on a world map showing the areas that will no longer be able to produce your favorite Starbucks single origin brew? The message gets you thinking, and wanting to learn more.

The risk of “AI gone wrong” was similarly translated into a fun, interactive activity thanks to the creativity of game designer Frank Lantz, director of the NYU Game Center. Last year, he released an addictive video game he designed called “[Universal Paperclips](http://www.decisionproblem.com/paperclips/),” which was inspired by an AI thought experiment from Oxford philosopher Nick Bostrom. The game explores in a frightening and engaging way how programming a super-intelligent AI to do a seemingly benign task, making as many paperclips as possible, could lead to the destruction of the universe.

Another striking example is the work of Dan Borelli of Harvard’s Graduate School of Design. He led an art-based project at the U.S. Environmental Protection Agency’s Nyanza Superfund site in his hometown of Ashland, MA, where a chemical dye manufacturing plant contaminated the groundwater and soil for years up until the 1970s. [Borelli placed colored filters on streetlights](http://www.ashlandnyanzaproject.com/thestreetlights/) that corresponded to the contamination levels in that area. Imagine driving through a town where streetlamps eerily change color, from red and orange to blue and purple. You’re likely curious and concerned once you realize the meaning.

Likely the strongest case for creativity as a tool to spur meaningful change is the effort of Tesla. The company’s creative expression comes in the form of beautiful and desirable products that also mitigate climate change risk. Tesla has shaped the future of sustainable transportation by introducing electric cars that are aesthetically and functionally superior to most fossil fuel-based models. Yes, consumers who already care about climate change will want to purchase the product, but others will want cool, sexy cars regardless of the benefits to humanity. By repositioning electric vehicles as high-end products, Tesla managed to increase awareness and put sustainable transportation on the map as a societal value.

While creativity may be able to open the door to curiosity, it must be connected to accurate information and opportunities for actionable change. Although it’s not looking good for our species, there are many ways to intervene and help prevent threats from becoming reality. We can pressure governments to enact policy changes (nuclear disarmament treaties), support triple-bottom line companies (which value environmental and social impact, not just the financial bottom line), invest in technical solutions (novel antibiotics and green energy), divest from companies contributing to risks (fossil fuels), and donate to organizations that are mitigating specific risks ([Machine Intelligence Research Institute](https://intelligence.org/)) and existential risks ([Future of Life Institute](https://futureoflife.org/) and [Future of Humanity Institute](https://www.fhi.ox.ac.uk/)). Employing creativity to raise awareness of existential risks is a vital strategy for engaging new audiences and shifting the tides towards learning and action. The future of our species depends on it.

#### Nuclear war is not whitewashing---results in targeting urban centers which necessitates acknowledging their risks.

Nicole A. **Thompson 18**. Chicago-based creative writer. 4-6-2018. "Why I will not allow the fear of a nuclear attack to be white-washed." RaceBaitR. http://racebaitr.com/2018/04/06/2087/#

I couldn’t spare empathy for a white woman whose biggest fear was something that hadn’t happened yet and might not. Meanwhile, my most significant fears were in motion: women and men dying in cells after being wrongly imprisoned, choked out for peddling cigarettes, or shot to death during ‘routine’ traffic stops. I twitch when my partner is late, worried that a cantankerous cop has brutalized or shot him because he wouldn’t prostrate himself. As a woman of color, I am aware of the multiple types of violence that threaten me currently—not theoretically. Street harassment, excessively affecting me as a Black woman, has blindsided me since I was eleven. A premature body meant being catcalled before I’d discussed the birds and the bees. It meant being followed, whistled at, or groped. As an adult, while navigating through neighborhoods with extinguished street lights, I noticed the correlation between women’s safety and street lighting—as well as the fact that Black and brown neighborhoods were never as brightly lit as those with a more significant white population. I move quickly through those unlit spaces, never comforted by the inevitable whirl of red and blue sirens. In fact, it’s always been the contrary. Ever so often, cops approach me in their vehicle’s encouraging me to “Hurry along,” “Stay on the sidewalk,” or “Have a good night.” My spine stiffening, I never believed they endorsed my safety. Instead, I worried that I’d be accused of an unnamed accusation, corned by a cop who preys on Black women, or worse. A majority of my 50-minute bus ride from the southside of Chicago to the north to join these women for the birthday celebration was spent reading articles about citywide shootings. I began with a Chicago Tribute piece titled “33 people shot, seven fatally, in 13 hours,” then toppled into a barrage of RIP posts on Facebook and ended with angry posts about police brutality on Tumblr. You might guess, by the time I arrived to dinner I wasn’t in the mood for the “I can’t believe we’re all going to die because Trump is an idiot” shit. I shook my head, willing the meal to be over, and was grateful when the check arrived just as someone was asking me about my hair. My thinking wasn’t all too different from Michael Harriot’s ‘Why Black America Isn’t Worried About the Upcoming Nuclear Holocaust.” While the meal was partly pleasant, I departed thinking, “fear of nuclear demolition is just some white shit.” Sadly, that thought would not last long. I still vibe with Harriot’s statement, “Black people have lived under the specter of having our existence erased on a white man’s whim since we stepped onto the shore at Jamestown Landing.” However, a friend—a Black friend—ignited my nuclear paranoia by sharing theories about when it might happen and who faced the greatest threat. In an attempt to ease my friend’s fear, I leaned in to listen but accidentally toppled down the rabbit hole too. I forked through curated news feeds. I sifted through “fake news,” “actual news,” and foreign news sources. Suddenly, an idea took root: nuclear strike would disproportionately impact Black people, brown people, and low-income individuals. North Korea won’t target the plain sight racists of Portland, Oregon, the violently microaggressive liberals of the rural Northwest, or the white-hooded klansmen of Diamondhead, Mississippi. No, under the instruction of the supreme leader Kim Jong-un, North Korea will likely strike densely populated urban areas, such as Los Angeles, Chicago, Washington D.C., and New York City. These locations stand-out as targets for a nuclear strike because they are densely populated U.S. population centers. Attacking the heart of the nation or populous cities would translate to more casualties. With that in mind, it’s not lost on me that the most populous cities in the United States boast sizeable diverse populations, or more plainly put: Black populations. This shit stresses me out! There’s a creeping chill that follows me, a silent alarm that rings each time my Google alert chimes letting me know that Donald Trump has yet again provoked Kim Jong-Un, a man who allegedly killed his very own uncle. I’ve grown so pressed by the idea of nuclear holocaust that my partner and I started gathering non-perishables, candlesticks, a hand-crank radio, and other must-buy items that can be banked in a shopping cart. The practice of preparing for a nuclear holocaust sometimes feels comical, particularly when acknowledging that there has long been a war on Black people in this country. Blackness is bittersweet in flavor. We are blessed with the melanized skin, the MacGyver-like inventiveness of our foremothers, and our blinding brightness—but the anti-blackness that we experience is also blinding as well as stifling. We are stuck by rigged systems, punished with the prison industrial complex, housing discrimination, pay discrimination, and worse. We get side-eyes from strangers when we’re “loitering,” and the police will pull us over for driving “too fast” in a residential neighborhood. We get murdered for holding cell phones while standing in our grandmother’s backyard. The racism that strung up our ancestors, kept them sequestered to the back of the bus and kept them in separate and unequal schools still lives. It lives, and it’s more palpable than dormant. To me, this means one thing: Trump’s America isn’t an unfortunate circumstance, it’s a homecoming event that’s hundreds of years in the making, no matter how many times my white friends’ say, “He’s not my president.” In light of this homecoming, we now flirt with a new, larger fear of a Black genocide. America has always worked towards Black eradication through a steady stream of life-threatening inequality, but nuclear war on American soil would be swift. And for this reason I’ve grown tired of whiteness being at the center of the nuclear conversation. The race-neutral approach to the dialogue, and a tendency to continue to promote the idea that missiles will land in suburban and rural backyards, instead of inner-city playgrounds, is false. “The Day After,” the iconic, highest-rated television film in history, aired November 20, 1983. More than 100 million people tuned in to watch a film postulating a war between the Soviet Union and the United States. The film, which would go on to affect President Ronald Reagan and policymakers’ nuclear intentions, shows the “true effects of nuclear war on average American citizens.” The Soviet-targeted areas featured in the film include Higginsville, Kansas City, Sedalia, Missouri, as well as El Dorado Springs, Missouri. They depict the destruction of the central United States, and viewers watch as full-scale nuclear war transforms middle America into a burned wasteland. Yet unsurprisingly, the devastation from the attack is completely white-washed, leaving out the more likely victims which are the more densely populated (Black) areas. Death tolls would be high for white populations, yes, but large-scale losses of Black and brown folks would outpace that number, due to placement and poverty. That number would be pushed higher by limited access to premium health care, wealth, and resources. The effects of radiation sickness, burns, compounded injuries, and malnutrition would throttle Black and brown communities and would mark us for generations. It’s for that reason that we have to do more to foster disaster preparedness among Black people where we can. Black people deserve the space to explore nuclear unease, even if we have competing threats, anxieties, and worries. Jacqui Patterson, Director of the Environmental and Climate Justice Initiative, once stated: African American communities are disproportionately vulnerable to and impacted by natural (and unnatural) catastrophes. Our socio-economic vulnerability is based on multiple factors including our lack of wealth to cushion us, our disproportionate representation in lower quality housing stock, and our relative lack of mobility, etc.

#### ROTB: Plan focus – that means that they get to use links of the plan nothing else

#### Arbitrariness: Allowing them to get offense of anything Moot 6 min of aff offense making being aff strategically unviable since we’d have to restart the debate at the 1ar – creating a 13-7 time skew. Fairness comes first – unfair debate practices create uneducational debates because debaters read less substantitavely true arguemtns. Also scope of solvency -

#### Clash. One debate doesn’t change our subjectivity but iterative contestation around a stasis point like the resolution does. Preserving clash good –

#### Add-on

#### Asteroid mining furthers tensions between the US, China and Russia and escalates

Jamasmie 21 Cecilia Jamasmie [Cecilia has covered mining for more than a decade. She is particularly interested in Corporate Social Responsibility (CSR), Diamonds and Latin America. Cecilia has been interviewed by BBC News and CBC among others and has been a guest speaker at mining conventions, including MINExpo 2016 and the World’s Copper Conference 2018. She is also member of the expert panel on Social License to Operate (SLO) at the European project MIREU (Mining and Metallurgic Regions EU). She holds a Master of Journalism from the University of British Columbia, and is based in Nova Scotia.], 2-2-2021, "Experts warn of brewing space mining war among US, China and Russia," MINING, <https://www.mining.com/experts-warn-of-brewing-space-mining-war-among-us-china-and-russia/> DD AG

A brewing war to set a mining base in space is likely to see China and Russia joining forces to keep the US increasing attempts to dominate extra-terrestrial commerce at bay, experts warn. The Trump Administration took an active interest in space, announcing that America would return astronauts to the moon by 2024 and creating the Space Force as the newest branch of the US military.It also proposed global legal framework for mining on the moon, called the Artemis Accords, encouraging citizens to mine the Earth’s natural satellite and other celestial bodies with commercial purposes. The directive classified outer space as a “legally and physically unique domain of human activity” instead of a “global commons,” paving the way for mining the moon without any sort of international treaty. Spearheaded by the US National Aeronautics and Space Administration (NASA), the Artemis Accords were signed in October by Australia, Canada, England, Japan, Luxembourg, Italy and the United Emirates “Unfortunately, the Trump Administration exacerbated a national security threat and risked the economic opportunity it hoped to secure in outer space by failing to engage Russia or China as potential partners,” says Elya Taichman, former legislative director for then-Republican Michelle Lujan Grisham. “Instead, the Artemis Accords have driven China and Russia toward increased cooperation in space out of fear and necessity,” he writes.Russia’s space agency Roscosmos was the first to speak up, likening the policy to colonialism. “There have already been examples in history when one country decided to start seizing territories in its interest — everyone remembers what came of it,” Roscosmos’ deputy general director for international cooperation, Sergey Saveliev, said at the time.China, which made history in 2019 by becoming the first country to land a probe on the far side of the Moon, chose a different approach. Since the Artemis Accords were first announced, Beijing has approached Russia to jointly build a lunar research base. President Xi Jinping has also he made sure China planted its flag on the Moon, which happened in December 2020, more than 50 years after the US reached the lunar surface.

#### Debris cascading prevents future mining – there’s only a risk of our offense

Salter 16 [Alexander William Salter, Assistant Professor of Economics, Rawls College of Business, Texas Tech University. SPACE DEBRIS: A LAW AND ECONOMICS ANALYSIS OF THE ORBITAL COMMONS. 2016. https://law.stanford.edu/wp-content/uploads/2017/11/19-2-2-salter-final\_0.pdf]

The probability of a collision is currently low. Bradley and Wein estimate that the maximum probability in LEO of a collision over the lifetime of a spacecraft remains below one in one thousand, conditional on continued compliance with NASA’s deorbiting guidelines.3 However, the possibility of a future “snowballing” effect, whereby debris collides with other objects, further congesting orbit space, remains a significant concern.4 Levin and Carroll estimate the average immediate destruction of wealth created by a collision to be approximately S30 million, with an additional S200 million in damages to all currently existing space assets from the debris created by the initial collision.3 The expected value of destroyed wealth because of collisions, currently small because of the low probability of a collision, can quickly become significant if future collisions result in runaway debris growth.

Given the possibility of high future costs, private and public actors should, for their own benefit, direct attention to the space debris problem now. Global satellite revenue in 2014 totaled S195.2 billion.6 That stream of economic activity is most threatened by significantly increased concentrations of space debris in orbit. Other activities within the “space economy” ($320 billion in revenue in 2013) that are potentially threatened include human spaceflight and nonorbital spacecraft.7 Private-sector space activities planned for the more distant future, including space tourism and asteroid mining, will also be affected if access to orbit is complicated by space debris.