## 1 - plan

#### Plan: The appropriation of outer space through asteroid 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.

## 2 – advantages

#### Countries and their companies are making their own rules through patchwork which creates conflict—an international body is key

Foster 16 – Craig, J.D., University of Illinois College of Law, “EXCUSE ME, YOU’RE MINING MY ASTEROID: SPACE PROPERTY RIGHTS AND THE U.S. SPACE RESOURCE EXPLORATION AND UTILIZATION ACT OF 2015”, *JOURNAL OF LAW, TECHNOLOGY & POLICY*, No. 2, page 428-430, http://illinoisjltp.com/journal/wp-content/uploads/2016/11/Foster.pdf

There are many reasons to be excited about the prospect of mining resources from space. Hopes are high that these mining efforts will provide an economic boon by producing jobs and injecting more money into the economy. 214 Additionally, the negative impact of mining natural resources on Earth is widely reported215 and might be mitigated by space mining. If mining precious resources from space can minimize the burden on Earth, then this would lend even greater support for asteroid mining. Finally, little enchants the human mind and propels innovation more than sending people and manmade objects into space. For good reason, there is much enthusiasm about the prospect of space mining. On the other hand, it is troublesome to some that private, commercial entities will be paving the way and making up many of the rules as they go. Might this lead to repeating many of the mistakes humans have made on Earth? Might there be unforeseen problems that could spell trouble if mining efforts are not properly regulated? The answer to these questions is likely “yes” as well. It will be important in the coming years to balance the former excitement against the latter caution. Space might seem limitless and impossible to affect in any significant fashion; but, history must be a major voice for the spacemining industry.216 It must be remembered that humans can make an impact that will be felt for generations to come. Thus, it will be important that lawmakers and the international community be as proactive as possible—both in outlining property rights and protecting the final frontier from being harmed by an industry that might become overzealous if left unchecked. Specifically, it will be vital for countries to enter into some sort of international agreement. One option is to create an agreement similar to UNCLOS, which would regulate how individual states and their citizens interact with resources mined from space.217 Such an agreement should recognize not only the property rights of the extracting commercial entities but also the rights of non-spacefaring countries to benefit from the minerals as well. This might include the creation of an international body, much like the ISA, that will ensure that the interests of all nations are maintained by distributing funds and technology to less wealthy or non-spacefaring nations. The U.S. would do well to help create and ratify such an agreement— something they have failed to do with UNCLOS. If the U.S. and other countries are uneasy about entering into such a restrictive agreement, they might also consider an international regulatory body and scheme much like the one used for satellites. The International Telecommunications Union (ITU) is a United Nations agency that, among other services, provides the international community with uniform satellite orbit oversight and regulatory guidance.218 Currently, 193 countries follow the ITU regulations and utilize their services, which have been likened to domain name registration.219 In the same way, spacefaring countries could form an international body that helps create and maintain a uniform space-mining legal framework.220 Without some sort of international framework as described above, the U.S. and other space-mining countries leave themselves open to great conflict and will be required to patch together a multitude of treaties between themselves as problems inevitably arise.221 V. CONCLUSION The idea of mining resources from celestial bodies is something that has always been relegated to video games and sci-fi movies. But as technology continues to progress at an exponential rate, such mining is starting to come within the realm of possibility. A number of companies are currently creating prospecting technologies that will allow them to determine exactly what an individual asteroid holds. They hope to eventually harvest these resources and sell them for lucrative profits. Fortunately for these companies, the current legal regime governing property rights to space resources is undergoing rapid change at the national level. The U.S. recently passed the Space Resource Exploration and Utilization Act of 2015, which explicitly entitles U.S. citizens to property rights over any space resources they obtain. This is certain to induce confidence in U.S. investors. The situation at the international level is different. Current international space agreements are vague, lacking in consensus, and provide little precedent for ownership of space resources. This has led the international community to move in the direction of creating a better regulatory framework, but this movement is still in discussion stages and is likely to take a while to come to fruition.

#### Disputes and misperceptions create cascading effects towards space weaponization and an arms race—an international framework solves BUT unilateral action causes escalating space wars

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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 ensuring safe and secure operations in outer space. It would be wrong, however, to say that the international community has not debated over this. In fact, one of the main agenda points of the fifty-seventh session of UNCOPUS Legal Committee held in April 2018, was especially devoted to “general exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources.”[lxvi] Upon evaluation, it is clear that countries are not against space mining as such; rather the contentious points are vis-à-vis authorisation, regulation, and where to place responsibility. There also appears to be concurrence regarding the need for international coordination efforts of some sort. Over the last two years, The Hague Space Resources Governance Working Group,[lxvii] established with the purpose of “assess[ing] the need for a regulatory framework for space resource activities, has identified 19 “building blocks”,[lxviii] encompassing subject matters that could be included in such a regulatory framework. Although this leaves a lot of hope for the legitimate mining of space resources, its status is still pending. Also, several questions need to be agreed upon by the global space policy community before the establishment of a framework. First, there must be an agreement among all the space powers on the need for a global governance framework for the use of space resources. This must be followed by detailed deliberations on the scope, mandate and objectives of such a framework. Can and should there be safety zones and exclusive rights be recognised under such a framework and how one can ensure equitable sharing of the resources, and lastly, the role of industries and how the interests of the industry as pioneers in this area can be secured. These are all pertinent questions that need to be considered and debated before an international regime for extraction and use of space resources can be established.[lxix] Even legal space mining activity could have serious impacts in two ways. For instance, any technological spinoffs that a country might have could add to the space weaponisation debate. Two, the erosion of norms with regard to space mining could have a cascading effect on other norms in the same issue area such as weaponisation of space. It is imperative for nations to actively combine their efforts to ensure that this activity transpires in the most globally acceptable manner and not one which stirs anarchism. The ancient Roman maxim, ‘Quod omnes tangit ab omnibus approbatur’ (What touches all must be approved by all) gains due traction in this kind of a scenario. Therefore, a universal activity like space exploration mandates an international guideline; or else, the first haul from mining, instead of earning admiration and exultation, will only be enmeshed in litigation.

### Advantage – Space War

#### Inevitable 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

#### 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.

#### 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.

#### Nuclear war causes extinction.

Starr ’17 (Steven; director of the University of Missouri’s Clinical Laboratory Science Program, senior scientist at the Physicians for Social Responsibility, Associate member of the Nuclear Age Peace Foundation, expert in the environmental consequences of nuclear war; 1/9/17; “Turning a Blind Eye Towards Armageddon — U.S. Leaders Reject Nuclear Winter Studies”; <https://fas.org/2017/01/turning-a-blind-eye-towards-armageddon-u-s-leaders-reject-nuclear-winter-studies/>; Federation of American Scientists; accessed 11/24/18; TV) [AV]

The detonation of an atomic bomb with this explosive power will **instantly ignite fires** over a surface area of three to five square miles. In the recent studies, the scientists calculated that the **blast**, **fire**, and **radiation** from a war fought with 100 atomic bombs could produce **direct fatalities** comparable to all of those worldwide in World War II, or to those once estimated for a “**counterforce**” **nuclear war** between the superpowers. However, the **long-term environmental effects** of the war **could** significantly disrupt the global weather for at least a decade, which would likely **result in** a vast **global famine**. The scientists predicted that **nuclear firestorms** in the burning cities would cause at least five million tons of **black carbon smoke** to quickly rise above cloud level into the stratosphere, where it could not be rained out. The smoke would circle the Earth in **less than two weeks** and would form **a** global **stratospheric smoke layer** that **would remain for** more than **a decade**. The smoke would absorb warming sunlight, which would **heat the smoke** to temperatures near the boiling point of water, producing **ozone losses of** 20 to **50 percent** over populated areas. This would almost double the amount of UV-B reaching the most populated regions of the mid-latitudes, and it would create UV-B indices unprecedented in human history. In North America and Central Europe, the time required to get a painful sunburn at mid-day in June could decrease to as little as six minutes for fair-skinned individuals. As the smoke layer blocked warming sunlight from reaching the Earth’s surface, it would produce the **coldest** average **surface temperatures** in the last 1,000 years. The scientists calculated that global **food production would decrease** by 20 to **40 percent** during a five-year period following such a war. Medical experts have predicted that the shortening of growing seasons and corresponding decreases in agricultural production could cause up to **two billion** people to perish from **famine**. The climatologists also investigated the effects of a nuclear war fought with the vastly more powerful modern **thermonuclear** weapons possessed by the United States, Russia, China, France, and England. Some of the thermonuclear weapons constructed during the 1950s and 1960s were 1,000 times more powerful than an atomic bomb. During the last 30 years, the average size of thermonuclear or “strategic” nuclear weapons has decreased. Yet today, each of the approximately 3,540 strategic weapons deployed by the United States and Russia is seven to **80 times** more powerful than the atomic bombs modeled in the India-Pakistan study. The smallest strategic nuclear weapon has an explosive power of **100,000 tons of TNT**, compared to an atomic bomb with an average explosive power of 15,000 tons of TNT. Strategic nuclear weapons produce much larger nuclear firestorms than do atomic bombs. For example, a standard Russian 800-kiloton warhead, on an average day, will ignite fires covering a surface area of 90 to 152 square miles. A **war** fought with hundreds or thousands of U.S. and Russian strategic nuclear weapons would **ignite immense** **nuclear firestorms** covering land surface areas of many thousands or **tens of thousands** of square miles. The scientists calculated that these fires would produce up to **180 million tons** of black carbon soot and **smoke**, which would form a dense, **global stratospheric smoke layer**. The smoke would remain in the stratosphere for 10 to **20 years**, and it **would block** as much as **70 percent of sunlight** from reaching the surface of the Northern Hemisphere and 35 percent from the Southern Hemisphere. So much sunlight would be blocked by the smoke that the noonday sun would resemble a full moon at midnight. Under such conditions, it would only require a matter of days or weeks for daily minimum **temperatures** to **fall below freezing** in the largest agricultural areas of the Northern Hemisphere, where freezing temperatures would occur every day for a period of between one to more than two years. Average surface temperatures would become colder than those experienced 18,000 years ago at the height of the last Ice Age, and the prolonged cold would cause average rainfall to decrease by up to 90%. Growing seasons would be completely eliminated for more than a decade; it would be **too cold and dark** to grow food crops, **which would doom the** majority of the **human population.** NUCLEAR WINTER IN BRIEF The profound cold and darkness following nuclear war became known as nuclear winter and was first predicted in 1983 by a group of NASA scientists led by Carl Sagan. During the mid-1980s, a large body of research was done by such groups as the Scientific Committee on Problems of the Environment (SCOPE), the World Meteorological Organization, and the U.S. National Research Council of the U.S. National Academy of Sciences; their work essentially supported the initial findings of the 1983 studies. The idea of nuclear winter, published and supported by prominent scientists, generated extensive public alarm and put political pressure on the United States and Soviet Union to reverse a runaway nuclear arms race, which, by 1986, had created a global nuclear arsenal of more than 65,000 nuclear weapons. Unfortunately, this created a backlash among many powerful military and industrial interests, who undertook an extensive media campaign to brand nuclear winter as “bad science” and the scientists who discovered it as “irresponsible.” Critics used various uncertainties in the studies and the first climate models (which are primitive by today’s standards) as a basis to criticize and reject the concept of nuclear winter. In 1986, the Council on Foreign Relations published an article by scientists from the National Center for Atmospheric Research, who predicted drops in global cooling about half as large as those first predicted by the 1983 studies and described this as a “nuclear autumn.”

#### Resource extraction in space is not a sustainable market – profitability metrics ensure total collapse into monopolization

Gardenyes 2017 (Distri Josep Gardenyes, Marxist and anarchist writer, "New Technologies, Extraterrestrial Exploitation, And The Future Of Capitalism", It's Going Down, January 28 2017, <https://itsgoingdown.org/new-technologies-extraterrestrial-exploitation-future-capitalism/>, mmv)

2017 is the year of Google’s Lunar X Prize, through which the North American corporation (as important to 21st century capitalism as Ford was to 20th century capitalism) is offering $20 million to the first company that manages to send a landing craft to the moon, drive 500 meters, and transmit high-resolution images back to Earth. But they have to do it this year. And there are already various teams that are getting ready to meet the challenge. One of which is Moon Express, which has already become the first company in history to receive legal permission, from the US government in this case, to carry out commercial exploitations on the moon’s surface. If this team makes it to the moon—and they already have the necessary financing and a schedule of test launches—they won’t only win the Prize, they will also drop off a commercial payload that represents the first step in setting up an equipment delivery service to the moon, which will make the lunar mining of Helium-3 (a valuable fuel for nuclear reactors) feasible. Another company, Planetary Resources, claims that the mining of metals and water on asteroids could be a trillion dollar business. For them, water (and the hydrogen it contains, which could be used as spaceship fuel) is “the oil of space.” These are not empty words. Planetary Resources is another company that has a business plan and the technology needed to begin carrying out the mining it envisions. On the 14th of January, Space X returned to space. It’s one of the companies of Elon Musk (who is also preparing self-driving cars for commercial sale; the technology already works and the only obstacle are the legal regulations), the billionaire whose personal crusade is the colonization of Mars in the next two decades. Space X fixed a design flaw in its rockets and on the 14th made an effective launch, deploying 10 commercial satellites from the same rocket, which, subsequently, returned automatically to Earth, landing on a Space X drone ship waiting—with its entirely robotic crew—in the Pacific Ocean. The autonomous and reusable rockets (one could say, environmentally friendly) are one of the foundations of Musk’s plan for reaching Mars in a commercially feasible way. He has already developed a business plan for developing the technology and acquiring the resources needed to complete the mission. These are not isolated or insignificant companies. And the State is also paying attention to extraterrestrial colonization. The UN Treaty on Outer Space, from 1966, holds that space and space objects cannot be armed or claimed as territory, and that any economic activity had to be peaceful and for the good of all humanity. In 2015, in the Commercial Space Launch Competitiveness Act, the US government clarified the legal question, establishing the legal right of private companies to exploit the moon, asteroids, and other space objects. It gives private entities the right to own and sell resources extracted from space objects, but not to possess the object outright. In effect, they can mine the moon until it’s empty, but the private companies working there with their robotic factories couldn’t be considered the owners. The dotcom boom, which burst in 2000, shows that immense amounts of capital can be invested in companies that do not generate any profits for quite a few years before provoking a crash (in this case, it was six years). In fact, the crash didn’t come until the moment when a few new corporations showed the capacity to become profitable and productive, corporations that today are among the most powerful in the world, like Google, Amazon, and Facebook. We are at the beginning of a phase of massive investment and growth in the new sector of extraterrestrial transport and mining. The venture capitalists of this sector enjoy the advantage that the logistical foundation of their dream (everything connected with the launching of satellites, with their crucial military and commercial uses) is already in place and profitable. Similarly, Columbus didn’t have to invent the long-distance ships or the navigation equipment (which had already been developed by the Portuguese in the luxurious commercial circuits of the Indian Ocean), he just had to take them further. They still have a few years to yield profits with extraterrestrial extraction before the bubble bursts. If they achieve it, capitalism will once again undergo an intense growth and the moment of maximum vulnerability and maximum popular rage that the institutions now face will have passed. Extraterrestrial colonization is no longer a trope of science fiction. But speaking of science fiction, we must also point out the great imaginary production carried out by Hollywood and other centers of cultural work, which have redirected our gaze to the colonization of space. Since the 19th century, there have been occasional works that posed journeys beyond Planet Earth, but the current frenetic production is qualitatively and quantitatively incomparable. Its effect is not only the normalization of extraterrestrial activity, it also accustoms us to imagine the first steps of taking our civilization and the capitalist economy beyond the Earth’s gravity well.

#### Asteroid mining is all hype – benefits are exaggerated

Riederer 14 - editor-in-chief of Guernica magazine and writer at The New Yorker

Rachel Riederer, “Silicon Valley Says Space Mining Is Awesome and Will Change Life on Earth. That’s Only Half Right”, New Republic, 4/19/14 , <https://newrepublic.com/article/117815/space-mining-will-not-solve-earths-conflict-over-natural-resources>

It's become clear that there’s just not enough stuff on Earth to go around. We’re constantly fighting over land and water, jockeying for access to our home planet’s diamonds or oil or sugarcane or schools of fish. In the last few years a chorus of voices has arisen to suggest that we could solve these petty human squabbles by looking to space. “Everything we hold of value on this planet, metals, minerals, real estate, energy sources, fuel—the things we fight wars over—are literally in near infinite quantities in the solar system,” says Peter Diamandis, one of the founders of the asteroid-mining company Planetary Resources. He claims we have a “moral obligation to become an interplanetary species,” and that if we harness the resources in space, "the entire human race will be the beneficiary." Naveen Jain, founder of Moon Express, wants to do on the moon what Diamandis wants to do with asteroids. A recent CNBC profile quotes him as saying, “Once you take a mind-set of scarcity and replace it with a mind-set of abundance, amazing things can happen here on Earth.” MOST POPULAR Police Killed Her Boyfriend, Then Charged Her With His Murder Texas Is Bracing for a Blue Wave in 2020. Yes, Texas. America’s Most Powerful Gun Supporter What Indigenous Rights Have to Do With Fighting Climate Change Open Borders Made America Great This kind of exultant talk is perhaps to be expected from entrepreneurs describing their companies’ dreams, but Diamandis and Jain are not alone. In a radio interview this April, Neil deGrasse Tyson, the public face of American astrophysics, also voiced his excitement about the potential of space mining. “If you haul an asteroid the size of a house to Earth, it could have more platinum on it than has ever been mined in the history of the world. More gold than has ever been mined in the history of the world. When that happens”—and here his voice takes on the dreamy tone familiar to fans of "COSMOS: A Spacetime Odyssey," the Fox series he hosts—“the scarcity that has led to human-to-human violence, there’s a chance it could all go away.” Tyson admitted that he was being “a little hopeful”—he has also noted that it is far more likely that any resources found in space will be put to use in space first, not hauled back to Earth (more on that later)—but his comment captures the aura of starry-eyed excitement that surrounds space mining ventures. At Slate, Will Oremus wrote about the terrestrial tech world’s blasé response to the founding of Planetary Resources, and commanded, “Wake up! This is outer space we’re talking about! This is awesome!” It is awesome. To read about these ambitious plans, and to contemplate the scale of human brainpower and industriousness required to pull them off, fills one with awe. These new companies talk about space in a way that sounds unfamiliar to the civilian ear accustomed to the reverent tone of planetarium field trips; rather than the vastness of space, the companies emphasize its accessibility. Moon Express calls the moon “the eighth continent.” Planetary Resources wants to “bring the solar system into humanity’s sphere of influence.” Experiencing awe is fun. It's even more fun to imagine a world of outer-space abundance in which we don’t have to worry about fossil fuels and everyone can afford a platinum case for their iPhone. And there is great potential for resource extraction in space, though these ventures will carry great upfront costs and plenty of uncertainty about whether they will actually come to fruition. Many deadlines and timeline estimates are fast approaching or have passed already. What’s misleading about these projects isn’t that they’re subject to budget problems and delays, but that they come couched in overblown rhetoric about their potential to radically alter human life, to do away with the notion of scarcity and deliver us to a future of plenty and peace. It’s a pattern that has become familiar in Silicon Valley: develop a plan for a business that will do something cool and make a lot of money, but describe it instead as something that will change the world. Return to that platinum asteroid for a moment. There’s one that Planetary Resources has been tracking: It passes near the Earth’s orbit every 23 months and is a half-kilometer by one kilometer in size. A spacecraft could travel to it in around eight months. Diamandis estimates its total worth at between $300 billion and $5 trillion. If it were to be mined at some point in the future, it would drive down the global price of platinum, which might make some items more affordable—luxury jewelry, of course, but also catalytic converters for cars and hard disks for laptops and DVRs—but it would primarily make the investors of Planetary Resources extremely rich. Allusions to the Wild West abound in the literature of space-mining companies. The Moon Express website talks about “brave pioneers” who explored new territories "with the backing of a monarch or a state.” For these entrepreneurs, space is not a distant emptiness; beyond the frontier, they envision a business-place. And with the exception of a Cold War–era treaty prohibiting national appropriation of the moon, there aren’t laws about ownership in space; its riches are there for the taking, like gold nuggets in a California stream. In a March debate on "Selling Space," at the American Museum of Natural History, Space Foundation CEO Elliot Pulham said that asteroids are clearly up for grabs: “There’s no law that says you can’t snag an asteroid. Knock yourself out.” It’s certainly true that space is full of valuables. Billions of years ago, during the formation of the solar system, gravity pulled the heavy materials on would-be planets toward their cores, forcing the comparatively lighter rocky material out to the surface. When those planets broke apart, they became asteroids. Some are made of rocky surface fragments, but some are made of the core materials—platinum, gold, silver, palladium—that are rare and precious on Earth. At a press roundtable after the "Selling Space" debate, Tyson explained why this process matters so much to those who would mine the sky: “Nature has pre-sifted the ingredients for you. You go grab yourself an asteroid made from the core of a planet that never survived, and you’ve got this stuff concentrated in the palm of your hand.” This is what Manifest Destiny must have felt and sounded like. Wealth beyond your wildest dreams, and it’s there for the taking. You just have to get there first. Must-reads. 5 days a week. Sign Up The “getting there first” will not be simple, or cheap. Most of the asteroids in the solar system are in the asteroid belt between Mars and Jupiter. But the orbit paths of some near-Earth asteroids, or NEAs, bring them relatively close to our planet—that is, within around 30 million miles. Planetary Resources has developed what is essentially an outer-space drone: a small telescope-equipped spacecraft, around the size of a desktop computer, that will survey near-Earth asteroids. Once an asteroid is identified and determined to be valuable, the extraction could begin, though that introduces a new set of technical obstacles. Because of the difficulty and expense of getting heavy machinery from Earth into space, some have suggested using 3D printing technology to use materials found in space to create the necessary equipment. Then, some modified version of a terrestrial mining method, like drilling or magnetic separation, could be used for the mining itself. But these extraction processes have been developed for the pressure and gravity of Earth, and they would need to be overhauled to function in the low-gravity, vacuum environment of space. If this part of the process sounds unclear, it’s because it is. To give an idea of the scale—in time and difficulty—of these kinds of operations, consider the government’s version of asteroid prospecting. In April, NASA greenlighted a mission in which a spacecraft called OSIRIS-REx will rendezvous with an asteroid called Bennu. OSIRIS-Rex is scheduled to launch in 2016, reach the asteroid in 2018, reconnoiter it for over a year, and then bring back samples for scientific study. The amount of asteroid that NASA plans to collect after all this time and trouble? Two ounces. A major premise of private space mining companies is that they will be able to work far faster and more economically than NASA, and will be willing to take on levels of risk beyond that of a government operation, but the scale and timeline of OSIRIS-REx shows how complex these operations will be, even for the swiftest companies. Rick Sternbach / KISS BAG IT, TAG IT, SELL IT An illustration, from the Cal Tech study, of an asteroid retrieval spacecraft capturing a 500-ton asteroid. The most far-out proposal in space mining is to "redirect" an NEA toward Earth and into lunar orbit. There, the asteroid could spin safely around the moon, accessible to our planet. A 2012 Cal Tech study determined that this method would be not only feasible, but “essential” for long-term human space exploration. According to the study, it will soon be possible for an unmanned spacecraft to identify a target asteroid—one around seven meters in diameter and 500,000 kilograms in mass—approach it, “loiter” nearby to determine its spin, and ultimately enclose the asteroid in what is described as a “draw-string bag.” (Take a moment to imagine a man-made drawstring bag capturing a giant mass of precious metal hurtling through space. “This is awesome!” does feel like the only reasonable response.) Once the asteroid and spacecraft are connected, a solar-powered propulsion system could fly the asteroid back to our moon and deposit it in lunar orbit. Depending on the mass of the asteroid, this retrieval flight would last between six and ten years. This idea, like the other space-mining projects, will require tremendous patience, money, vision, and bluster. So it's no surprise that the futurists of Silicon Valley are behind them: The group of companies founded with the intention of mining space are backed largely by investors who made their names and fortunes in tech. Peter Diamandis is the founder of the X Prize Foundation and of Silicon Valley’s Singularity University, which he co-founded with futurist Ray Kurzweil; Eric Schmidt is one of Planetary Resources’ major investors; before starting Moon Express, Naveen Jain was a senior executive at Microsoft and then CEO of his own startup, InfoSpace; Elon Musk founded PayPal and now has a private space company, SpaceX, currently under contract with NASA to begin carrying astronauts to the International Space Station. The New Yorker's George Packer identifies the “conflicting pressures” of Silicon Valley as “work ethic, status consciousness, idealism, and greed.” All of these pressures are present in the space-mining race, too. The work required to pull it off is undeniable—as is the idealistic delusion that outer-space extraction would bring world peace. Whoever accomplishes this first will be hailed, from Mountain View to Capitol Hill, as a genius. They will also become unfathomably wealthy, and rightly so: Entering a new, high-risk, high-tech field of business should come with the possibility for enormous reward. These entrepreneurs have evinced as much in less-utopian, off-the-cuff remarks. Diamandis has joked that his company’s financing plan is to buy puts in the platinum market and then announce their plan to bring a platinum asteroid home. Jain imagines coming back from trips to the moon with payloads worth billions of dollars: “I don’t care what people say," he said in an interview with Wired's editor last year. "That’s a shit load of money.” It’s telling that the foundational text of the space mining industry—1997's Mining the Sky, by John Lewis, a professor of planetary science at the University of Arizona and the chief scientist of Deep Space Industries—begins not with a catalog of the wealth of space, but with a brief history of exploration and military domination on Earth. Here, there isn’t enough, but in space, rather than nothingness, we find “a lively, rich understanding of the unity and lawfulness of Creation, within which the diversity and complexity of local materials and events falls into place.” Thanks to the saving power of technology, the very ideas of “limited resources and finite living space” are “tired old myths,” he writes. It’s exhilarating, this notion that tech advances could end scarcity as we know it, relegating wars over mineral wealth and energy sources to the list of woes defeated by science, alongside plague and polio. But it’s a dangerous exhilaration. It seems far more likely that new sources of wealth will, in their abundance, be one more thing for us to scrabble over. The space-mining notion is immensely appealing: the sky is full of infinite riches and abundance leads to peace. But why wouldn’t riches from the heavens cause conflicts and problems? Their vulgar terrestrial cousins always have. The problem with comparing space-mining to the Wild West isn’t just that it won’t revolutionize our economy like Manifest Destiny did. It isn’t even that there’s something suspect in taking the sky—something that feels so shared, so very deeply part of the commons—and turning it into a set of privately held commodities. It’s that this rhetoric gives the industry a kind of up-by-the-bootstraps patina, calling to mind a situation in which anyone with a gold-pan could go and seek their fortune, if one were plucky and lucky enough to set out for virgin territory. This simply does not apply to space mining, an industry where—to an even greater degree than modern-day resource extraction businesses on Earth—the barriers to entry in terms of both technology and capital are so immense that it is only open to entrepreneurs who are already billionaires. Would-be space mining companies are often called “crazy,” their plans described as wild schemes. In fact, these companies are not crazy at all. As Jain, of Moon Express, says in a promotional video, "It is not just a fun project. It is also a great business." Space-mining investors may be thinking extremely far outside the box, and willing to take on levels of risk that governments—the only entities with dealings in space until just recently—would never take on. But these are savvy investors, not a bunch of kids with a kooky dream, and they expect an eventual return on that investment. That might explain why, as the Wall Street Journal reported recently, Planetary Adventures has shifted its focus from precious metals "to a more mundane space resource: water," which "could be processed into fuel to extend the useful lives of aging commercial satellites." Granted, water has been a part of Planetary Resources’s business plan for years: When the company announced two years ago its intentions to mine asteroids, it said in a press release that “accessing water resources in space will revolutionize exploration.” But it never got headlines, for obvious reasons. As John Logsdon of the GWU Institute of Space Policy said after the "Selling Space" debate in March, “It’s not as sexy as platinum but I think the most valuable resource in space is water.” Harvesting asteroid ice could be very profitable in its own right, but it doesn’t conjure the same Panglossian platitudes as giant chunks of space gold do. That's just as well. It's a more practical approach for the near future. Because of the tremendous cost—both in terms of energy and money—of launching something out of Earth’s atmosphere or back into it, the most efficient use of resources extracted in space will be right there: in space. And that, in turn, should help bring the peace-and-abundance rhetoric back down to Earth. It's like much of what Silicon Valley invents: Not as awesome as the elevator pitch makes it sound, but useful in its own little way.

## 3 - util

#### The standard is maximizing expected wellbeing.

#### Prefer it:

#### 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] Extinction comes first!

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

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

#### 3] Use epistemic modesty for evaluating the framework debate:

#### A] Substantively true since it maximizes the probability of achieving net most moral value—beating a framework acts as mitigation to their impacts but the strength of that mitigation is contingent.

#### B] Clash—disincentives debaters from going all in for framework which means we get the ideal balance between topic ed and phil ed—it’s important to talk about contention-level offense

#### 4] Reject calc indicts and util triggers permissibility arguments:

#### A] Empirically denied—both individuals and policymakers carry out effective cost-benefit analysis which means even if decisions aren’t always perfect it’s still better than not acting at all

#### B] Theory—they’re functionally NIBs that everyone knows are silly but skew the aff and move the debate away from the topic and actual philosophical debate, killing valuable education

## 4 - underview

#### 1] 1AR theory – a) AFF gets it because otherwise the neg can engage in infinite abuse, making debate impossible, b) reject the debater – the 1AR is too short for theory and substance so ballot implications are key to check abuse,

#### 2] Aff RVIs—A] Topic ed – it deters friv violations and forces negs to think twice before skewing the 1AR since they know each shell is another split in the 2N – o/w on reversibility since every shell crowds out substance that we can’t get back, B] Reciprocity – T is a unique avenue to the ballot that the aff can’t access – makes T structurally unfair without the RVI

#### 3] Affirming is harder, a) time skew – neg has a 13-7 advantage on all NC offs plus 2NR collapse means 6 min to recontextualize in the 2NR where the 2AR is too short to recover, b) negatives enjoy an 11% win advantage controlling for other factors. Henson & Dorasil. (Dorasil, Paul and Clifford Henson. “Judging bias in competitive academic debate: the effects of region, side, and sex.” Con-temporary Economic Policy, July 4 2013.) Two implications: 1) neg must quantify abuse against the advantage to demonstrate a sufficient violation. Absent quantification I meet on theory since I meet if there’s no violation, 2) presume aff because in the absence of offense I’ve performed better by 11%.

#### 4] Truth testing makes up rules to constrain discussion of race and cement the status-quo and is just plain wrong

**Overing and Scoggin 15** “In Defense of Inclusion”; September 10, 2015; John Scoggin (coach for Loyola in Los Angeles and former debater for the Blake School in Minneapolis. His students have earned 77 bids to the Tournament of Champions in the last 7 years. He’s coached 2 TOC finalists, a TOC quarterfinalist, and champions of many major national tournaments across the country) and Bob Overing (former debater for the USC Trojan Debate Squad, and current student at Yale Law School. As a senior in high school, he was ranked #1, earned 11 bids and took 2nd at TOC. In college, he cleared at CEDA and qualified to the NDT. His students have earned 98 career bids, reached TOC finals, and won many championships.); <http://premierdebatetoday.com/2015/09/10/in-defense-of-inclusion-by-john-scoggin-and-bob-overing/> //BWSWJ

**In establishing affirmative and negative truth burdens, truth-testing forecloses important discussions even of the resolution itself**. Consider the fact that in 1925-1926, there were two college policy topics, one for men and one for women. Men got to debate child labor laws, and women had to debate divorce law. **On the truth-testing view, the women debating the women’s topic would be barred from discussing the inherent sexism of the topic choice and the division of topics to begin with**. Or consider the retracted 2010 November Public Forum topic, “Resolved: An Islamic cultural center should be built near Ground Zero.” Many debaters would feel uncomfortable arguing that resolution, just like they did on the 2012 January/February LD topic about domestic violence. We both know individuals who felt the domestic violence topic was so triggering that they did not want to compete at all. We can draw two conclusions from examples like these. **First, there are good reasons to not debate a particular topic**. These reasons have been **spelled out over decades of debate scholarship** ranging from Broda-Bahm and Murphy (1994) to Varda and Cook (2007) to Vincent (2013). **Second, truth-testing prevents either team from making the argument that the topic is offensive or harmful**. **A hypothetical case, such as a resolution including an offensive racial epithet, makes the problem more obvious**. Maybe the idea behind the resolution is good, but there’s something left out by analysis that stops there and ignores the use of a derogatory slur. **Truth-testing makes irrelevant the words in the topic and the words used by the debaters**. Thus, it fails to capture the reasons that any good person would “negate” or even refuse to debate an offensive topic. Clearly, there are elements of a topical advocacy beyond its truth that are worthy of questioning. Nebel (2015) acknowledges that some past resolutions were potentially harmful to debate (1.2, para. 5). Rather than exclude affected students as ‘not following the rules’ of semantics or truth-testing, we conclude that they should not be required to debate the topic. Nebel grapples with harmful topics in the following passage: I don’t think there is a magic-bullet response to critiques of the topic…I think they must be answered on a case-by-case basis, in their own terms…The question boils down to whether or not the topic is harmful for students to debate, and whether those harms justify breaking, or making an exception to, the topicality rule (1.2, para. 5) **This statement is hard to square with Nebel’s thesis that semantic interpretations of the resolution come “lexically prior**” (in other words, they always come first). **He wants to allow exceptions, but doing so proves that harmfulness concerns can and do trump the topicality rule.** As Nebel’s struggle with the critique of topicality illustrates, every article that claims to espouse a comprehensive view of debate must allow some exceptions to comply with our intuitions. The exceptions do not prove the rule. They prove there is a high level of concern in debate for affording dignity and respect to different kinds of arguments and modes of argumentation. **There is no one principle of proper debate. Once the door is open for external factors like harmfulness, the inference to the priority of pragmatics is an easy one to make**. If we care about the effects of debating the resolution on the students debating it, then other values like exclusion, education, and fairness start to creep in. **If we can justify avoiding discussion of a bad topic on pragmatic grounds, we can also justify promoting discussion of a good topic**. **Any advantage to allowing discursive kritiks, performances, and roles of the ballot further justifies this pragmatic view against truth-testing**. NDT champion Elijah Smith (2013) warns that **without these** argument forms, **we “distance the conversation from the material reality that black debaters are forced to deal with every day**”. Christopher Vincent (2013) built on that idea, arguing that universal moral theory “drowns out the perspectives of students of color that are historically excluded from the conversation” (para. 3). While we don’t agree wholesale with these authors, their work unequivocally demonstrates the value of departures from pure truth-testing. While we may not convince our opposition that they should presume value in kritik-based strategies, they should remain open to them. In a recent article for the Rostrum, Pittsburgh debate coach Paul Johnson (2015) extolled the ‘hands-off’ approach. Let the debaters test whether the arguments have merit, rather than deciding beforehand: **In a debate round, one may argue the impertinence of theses about structural racism with regards to a particular case…But when we explicitly or implicitly suggest such theses have little to no value by deciding in advance that they are inaccurate, we are forswearing the hard, argumentative work of subjecting our own beliefs to rigorous testing and interrogation (p. 90)** Suggesting that non-topical, race-based approaches are “vigilantist” and “self-serving” “adventure[s]” is to demean the worth of these arguments before the debate round even starts (Nebel 2015, 1.1, para. 2). **The claim that they ‘break the rules’ or exist ‘outside the law’ otherizes the debaters, coaches, and squads that pursue non-traditional styles**. Especially given that many of these students are students of color, we should reject the image of them as lawless, self-interested vigilantes. **Students work hard on their positions, often incorporating personal elements such as narrative or performance. To defend a view of debate that excludes their arguments from consideration devalues their scholarship and the way they make debate “home**.” **That’s unacceptable**. Branse notes “the motivation for joining the activity substantially varies from person to person” yet excludes some debaters’ motivations while promoting others (5, para. 4). We agree with Smith on the very tangible effects of such exclusion: “**If black students do not feel comfortable participating in LD they will lose out on the ability to judge, coach, or to force debate to deal with the truth of their perspectives**” (para. 5). Of course, we do not believe that Nebel or Branse intend their views to have these effects, but they are a concern we need to take seriously. III. Changing the Rules In Round One thought is that rejecting truth-testing is the wrong solution. Instead, we should create a better topic-selection process or an NSDA-approved topic change when the resolution is particularly bad. These solutions, however, are not exclusive of a rejection of truth-testing. An offensive topic might be reason to reform the selection process and to stop debating it immediately. Good role of the ballot arguments are the best solution because they pinpoint exactly why a debater finds the resolution inadequate. They highlight the problems of the proposed topic of discussion, and outline reasons why a different approach is preferable. While Branse believes these examples of in-round rule-making are problematic, **we think debate rounds are an excellent location for discussing what debate should be**. The first reason is the failure of consensus. **Because there are a wide variety of supported methods to go about debating, we should be cautious about paradigmatic exclusion**. While we don’t defend the relativist conclusion that all styles of debate are equally valuable, there is significant disagreement that our theories must account for. **Truth-testing denies a number of ways to debate that many find valuable. The second reason is the internalization of valuable principles. Even people who do not think kritiks are the right way to debate have taken important steps like removing gendered language from their positions**. NDT champion Elijah Smith (2013) identified hateful arguments and comments “you expect to hear at a Klan rally” as commonplace in LD rounds and the community (para. 2). We’d like to think those instances are at least reduced by the argumentation he’s encouraged. For instance, the much-maligned “you must prove why oppression is bad” argument now sees little play in high-level circuit rounds. **Truth-testing forecloses this kind of learning from the opposition.** Roles of the ballot and theory interpretations are examples of how **in-round argumentation creates new rules of engagement**. We welcome these strategies, and **debaters should be prepared to justify their proposed rules against procedural challenges**. The arguments we have made thus far are objections to truth-testing as a top-down worldview used to exclude from the get-go, not in-round means of redress against certain practices. There is a major difference between a topicality argument in a high school debate round and a prominent debate coach and camp director’s glib dismissal of non-topical argument as follows: [Y]ou can talk about whatever you want, but if it doesn’t support or deny the resolution, then the judge shouldn’t vote on it (Nebel 2015, 1.2, para. 4) Branse is equally ideological: Within the debate, the judge is bound by the established rules. If the rules are failing their function, that can be a reason to change the rules outside of the round. However, in round acts are out of the judge’s jurisdiction (2, para. 12) We take issue with debate theorists’ **attempts to define away arguments that they don’t like**. At one point, Jason Baldwin (2009) actually defended truth-testing for its openness, praising the values of the free market of ideas: That’s how the marketplace of ideas is supposed to work. But it is supposed to be a free marketplace where buyers (judges) examine whatever sellers (debaters) offer them with an open mind, **not an exclusive marketplace where only the sellers of some officially approved theories are welcome** (p. 26) Unfortunately for the truth-tester, **debate has changed, and it will change again**. What was once a model that allowed all the arguments debaters wanted to make – a prioris, frameworks, and meta-ethics – is now outdated in the context of discursive kritiks, performance, and alternative roles of the ballot. IV. Constitutivism, Authority, and the Nature of Debate **Branse’s goal is to derive substantive rules for debate from the ‘constitutive features’ of debate itself and the roles of competitors and judges.** We’ll quote him at length here to get a full view of the argument: [P]ragmatic benefits are constrained by the rules of the activity….education should not be promoted at the expense of the rules since the rules are what define the activity. **LD is only LD because of the rules governing it** – if we changed the activity to promoting practical values, then it would cease to be what it is (2, para. 7) Internal rules of an activity are absolute. From the perspective of the players, the authority of the rules are non-optional. (2, para. 12) The resolution, in fact, offers one of the only constitutive guidelines for debate. Most tournament invitations put a sentence in the rules along the lines of, “we will be using [X Resolution].” Thus, discussion confined to the resolution is non-optional (3, para. 5) [T]he delineation of an “affirmative” and a “negative” establishes a compelling case for a truth testing model…two debaters constrained by the rules of their assignment – to uphold or deny the truth of the resolution…[J]udging the quality of the debaters requires a reference to their roles. The better aff is the debater who is better at proving the resolution true. The better neg is the debater who is better at denying the truth of the resolution. The ballot requests an answer to “who did a comparatively better job fulfilling their role”, and since debaters’ roles dictate a truth-testing model, the judge ought to adjudicate the round under a truth testing model of debate. The judge does not have the jurisdiction to vote on education rather than truth testing (3, para. 7-8) Once a judge commits to a round in accordance with a set of rules…the rules are absolute and non-optional (4, para. 4) Similarly, Nebel uses contractual logic – appealing to the tournament invitation as binding agreement – to justify truth-testing: “The “social contract” argument holds that accepting a tournament invitation constitutes implicit consent to debate the specified topic….given that some proposition must be debated in each round and that the tournament has specified a resolution, no one can reasonably reject a principle that requires everyone to debate the announced resolution as worded. This appeals to Scanlon’s contractualism (1.1, para. 2) This approach is attractive because it seeks to start from principles we all seem to agree on and some very simple definitions. The primary problem is that **the starting point is very thin, but the end point includes very robust conclusions**. **The terms “affirmative” and “negative” are insufficient to produce universal rules for debate, and certainly do not imply truth-testing** (Section I, paragraph 3.) Branse does some legwork in footnoting several definitions of “affirm” and “negate,” but does little in the way of linguistic analysis. **We won’t defend a particular definition but point out that there are many definitions that vary and do not all lend themselves to truth-testing**. On a ballot the words “speaker points” are as prominently displayed as the words “affirmative” or “negative,” but neither Branse nor Nebel attempt to make any constitutive inference from their existence. Further, **to find the constitutive role of a thing, one needs to look at what the thing actually is, rather than a few specific words on a ballot.** Looking at debates now, we see that they rarely conform to the truth-testing model. **It is simply absurd to observe an activity full of plans, counterplans, kritiks, non-topical performances, theory arguments, etc. and claim that its ‘constitutive nature’ is to exclude these arguments**. Not only that, but the truth-testing family has been heavily criticized in both the policy and LD communities (Hynes Jr., 1979; Lichtman & Rohrer, 1982; Mangus, 2008; Nelson, 2008; O’Donnell, 2003; O’Krent, 2014; Palmer, 2008; Rowland, 1981; Simon, 1984; Snider, 1994; Ulrich, 1983). The empirical evidence also points toward argumentative inclusion in three important ways. **The first is argument trends. The popularity of kritiks, a prioris, meta-ethics, etc. confirm that at different times the community at large has very different views of what constitutes not only a good argument but also a good mode of affirming or negating**. The second is argument cycles. An alternate view would suggest that debate evolves and leaves bad arguments by the wayside. Nevertheless, we see lots of arguments pop in and out of the meta-game, suggesting that we have not made a definitive verdict on the best way to debate. The third is judge deference. While people’s views on proper modes of debate shift, we retain a strong deference to a judge’s decision. Judges have different views of debate; if there were some overarching principle that all judges should follow, we would expect tournament directors to enforce such a rule. In sum, there is no way to view debate as a whole and see truth-testing as the general principle underlying our practices. **The existence of a judge and a ballot are also insufficient to produce universal rules for debate**. Branse thinks “[t]he ballot requests an answer to ‘who did a comparatively better job fulfilling their role.’” While that may be a valid concern, it is dependent on what the judge views the roles of debaters to be. The absence of any sort of instruction other than determining the ‘better debating’ or the ‘winner’ most naturally lends itself to a presumption of openness. In fact, many practices very explicitly deviate from the constitutive roles Branse lays out. Some counterplans (PICs, PCCs, topical CPs and the like) may do more to prove the resolution than disprove it, yet are generally accepted negative arguments. Another type of objection to Branse’s view is an application of David Enoch’s “agency shmagency” argument. Enoch (2011) summarizes in his paper “**Shmagency** revisited”: [E]ven if you find yourself engaging in a kind of an activity…inescapably…and even if that activity is constitutively governed by some norm or…aim, this does not suffice for you to have a reason to obey that norm or aim at that aim. Rather, what is also needed is that you have a reason to engage in that activity…Even if you somehow find yourself playing chess, and even if checkmating your opponent is a constitutive aim of playing chess, still you may not have a reason to (try to) checkmate your opponent. You may lack such a reason if you lack a reason to play chess. The analogy is clear enough: Even if you find yourself playing the agency game, and even if agency has a constitutive aim, still you may not have a reason to be an agent (for instance, rather than a shmagent) (p. 5-6) The application to chess helps us see the application to debate. **Truth-testing may be the constitutive aim of doing debate, but it does not follow that our best reasons tell us to test the truth of the resolution**. In fact, you may have no reasons to be a truth-testing debater in the first place. **If “affirmative” means “the one who proves the resolution true,” we’ve demonstrated times when it’s better to be “shmaffirmative” than “affirmative**.” Finally, we think **one of the most important (perhaps constitutive) features of debate is its unique capacity to change the rules while playing within the rules**. **Education-based arguments and non-topical arguments are just arguments – they’re pieces on the chess board to be manipulated by the players**. Branse concedes that in APDA debate, the resolution is “contestable through a formal, in-round mechanism (3, para. 9). LD and policy debate also have this mechanism through theory arguments, kritiks, and alternative roles of the ballot. Branse is right that in soccer and chess, there is no way to kick a ball or move a chess piece that would legitimately change the rules of the game. Debate is different. **While soccer and chess have incontrovertible empirical conditions for victory (checkmates, more goals at fulltime), debate does not**. In fact, **discussing the win conditions is debating**! Whenever a debater reads a case, they assume or justify certain win conditions and not others. This deals with Branse’s “self-defeatingness” objection because debate about the rules does not create a “free-for-all” — it creates a debate (6, para. 1). The truth-testing judge does not get to pick and choose what makes a good debate; to do so is necessarily interventionist. **This demonstrates truth-testing is more arbitrary and subjective** [2] than the education position Branse criticizes (4, para. 4; 5, para. 2, 5). To be truly non-interventionist, we should accept them as permissible arguments until proven otherwise in round. **Of course, not all rules are up for debate**. There is a distinction between rules like speech times (call these procedural rules) and rules like truth-testing (call these substantive rules). **The former are not up for the debate in the sense that the tournament director could intervene if a debater refused to stop talking**. The latter are debate-able and have been for some time. **No tournament director enforces their pet paradigm. Because the tournament director, not the judge, has ultimate authority, we liken her to the referee in soccer**. On this view, the judge is not the referee tasked with enforcing “the rules”; she should decide only on the basis of arguments presented in the debate. Tournaments are not subject to any form of higher authority and are not obligated to follow NSDA rules, TOC guidelines, or anything else to determine a winner. **Something is only a procedural rule if it is enforced by the tournament, and truth-testing has not and shouldn’t be enforced in this manner**. To our knowledge, no bid tournament director has ever imposed a truth-testing burden on all competitors. If anything is a binding contract, it is the judge paradigm. Judge philosophies or paradigms are explicitly agreed to in writing because each judge establishes their own, and there is no coercion at play. Most tournaments mandate or strongly encourage written paradigms, have time to review them, and accept judge services instead of payment for hiring a judge. These norms establish a clearer contractual agreement in favor of judge deferral than universal truth-testing. We have tested the constitutive and contractual arguments by considering how truth-testing is not a procedural rule like speech times. As such, it cannot accrue the benefits of bindingness, authority, and non-arbitrariness. We can also test the argument in the opposite direction. There are some rules that seem even more “constitutive” of debate than the resolution but are not examples of procedural rules. For instance, every judge and debate theorist would likely reject completely new arguments in the 2AR, but there is nothing within Branse’s constitutive rules (speech times, the resolution, the aff and neg) to justify the norm. The no-new-arguments rule does not need to be written in a rulebook to have a lot of force. V. Pragmatic Justifications for Truth-testing With the priority of pragmatics established and constitutive arguments well addressed, we turn to some hybrid arguments that attempt to justify truth-testing by appealing to pragmatics. Nebel argues that the advantages stemming from truth-testing must be weighed against all exceptions to it and that the advantages of debating the ‘true meaning’ of the topic nearly always outweigh: It would be better if everyone debated the resolution as worded, whatever it is, than if everyone debated whatever subtle variation on the resolution they favored. Affirmatives would unfairly abuse (and have already abused) the entitlement to choose their own unpredictable adventure, and negatives would respond (and have already responded) with strategies that are designed to avoid clash…people are more likely to act on mistaken utility calculations and engage in self-serving violations of useful rules (1.1, para. 2) However, the advantages of topicality for the semantic/truth-testing view hold on the pragmatic view as well. We agree that the reasons to debate the meaning of the topic are strong. The only difference is that the pragmatic theory can explain the possibility of exceptions to the rule without interpretive contortion. It makes much more sense to understand that strict topicality is just a very good practice than to tout it as an absolute, lexically prior, constitutively- and contractually-binding rule. Ultimately, all benefits to topicality and debating something other than the resolution are weighed on the same scale, so we should adopt the theory that explicitly allows that scale. We are unconvinced that direct appeals to pragmatic considerations would be worse on pragmatic grounds than an external and absolute rule like ‘always be topical.’ If topicality is as important and beneficial as Nebel says it is, then it should be easy to defend within a particular debate, avoiding the worst slippery slope scenarios. Nebel also argues that the pragmatic view “justifies debating propositions that are completely irrelevant to the resolution but are much better to debate” (1.1, para. 5). Branse makes the same claim about education: “Education as a voting issue legitimizes reading positions and debating topics that have no association with the resolution” (5, para. 3). This alarmism we’ve answered with our discussion of harmful resolutions. There is no empirical indication of a slippery slope to a world where no one discusses the topic. The disadvantages to one debate round departing from topical debate are quite small, and we have no problem biting the bullet here. Sometimes (and it may be very rare), it’s better not to debate the resolution. There may also be reasons to debate something else even when the resolution is very good. **Black students should not have to wait for a reparations topic to talk about race in America**. **As conversations about racial oppression and police brutality grow louder and louder, it becomes increasingly unreasonable to defend a view of debate that ignores their relevance to the everyday lives of our students**. It should be clear that the pragmatic view takes no absolute stance on topicality or burdens. A debate practice may be pragmatic in one context but not another. For that reason, we reject the narrowness of truth-testing.

#### 5] Extinction isn’t white paranoia and apocalyptic reps are good

**Thompson 18** [Nicole Akoukou. 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 on**to 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.