# 1NC

## 1

### NC

#### The right to appropriate is an extension of the right to one’s body; you have a just claim to the fruits of your own labor

Locke 1689

John Locke (Philosopher; MA, Oxford, 1658). Two Treatises of Government. Awnsham Churchill: London. 1689. JDN. <https://press-pubs.uchicago.edu/founders/documents/v1ch16s3.html>

27. Though the Earth, and all inferior Creatures be common to all Men, yet every[one] Man has a Property in his [their] own Person. This no Body has any Right to but himself. The Labour of his Body, and the Work of his Hands, we may say, are properly his. Whatsoever then he [one] removes out of the State that Nature hath provided, and left it in, he [they] hath mixed his [their] Labour with, and joyned to it something that is his own, and thereby makes it his Property. It being by him removed from the common state Nature placed it in, hath by this labour something annexed to it, that excludes the common right of other Men. For this Labour being the unquestionable Property of the Labourer, no[one] man but [they] he can have a right to what that is once joyned to, at least where there is enough, and as good left in common for others.

28. He that [Whomever] is nourished by the Acorns he pickt up under an Oak, or the Apples he gathered from the Trees in the Wood, has certainly appropriated them to himself. No Body can deny but the nourishment is [theirs] his. I ask then, When did they begin to be his? When he digested? Or when he eat? Or when he boiled? Or when he brought them home? Or when he pickt them up? And 'tis plain, if the first gathering made them not his, nothing else could. That labour put a distinction between them and common. That added something to them more than Nature, the common Mother of all, had done; and so they became his private right. And will any one say he had no right to those Acorns or Apples he thus appropriated, because he had not the consent of all Mankind to make them his? Was it a Robbery thus to assume to himself what belonged to all in Common? If such a consent as that was necessary, Man had starved, notwithstanding the Plenty God had given him. We see in Commons, which remain so by Compact, that 'tis the taking any part of what is common, and removing it out of the state Nature leaves it in, which begins the Property; without which the Common is of no use. And the taking of this or that part, does not depend on the express consent of all the Commoners. Thus the Grass my Horse has bit; the Turfs my Servant has cut; and the Ore I have digg'd in any place where I have a right to them in common with others, become my Property, without the assignation or consent of any body. The labour that was mine, removing them out of that common state they were in, hath fixed my Property in them.

#### Therefore negate—private appropriation of space is deducible from first principles. There is no morally relevant distinction from terrestrial property

Baca 93, Associate at Gallop writes in 1993 for the SMU Journal of Air Law and Science

[Kurt Anderson, (Associate at Gallop, Johnson & Neuman, St Louis, Missouri), Property Rights in Outer Space, 58 J. Air L. & Com. 1041, 1993, <https://scholar.smu.edu/jalc/vol58/iss4/4>, accessed 6-24-21]

The powers necessary to constitute an efficient system of property rights on Earth have been found, by deduction from first principles by political philosophers influential in the development of the Western institutions and from history and practice in the courts, to be the power to exclude, to use, and to dispose. 98 The resulting system is also inherently equitable as it benefits society as a whole and as it protects investments and expectations. This system would remain equitable so long as the initial allocation of any new resource was, and is, not based on mere usurpation of unclaimed property, but is based on investment in the property that adds to its value. 99

This system of property rights relies on the provision of powers to the holder of the property. The source of the power is ultimately in the state that enforces the liabilities of parties corresponding to the powers of owners: the liability to exclusion, the liability for interference with use, and the liability to respect contracts and to refrain from hindering disposition. °0 This implies that sovereign power is essential to any functioning system of property rights, and in the absence of a general sovereign body, sovereignty is to be found in the nation-state.

How does the extension of man's [humanities] activities into space and onto the celestial bodies change the basic necessities of an efficient and equitable property rights system? The movement of activities into space affects only the place of activities. The nature of those activities and of the actor remain unchanged. The nature of efficiency and equity are likewise unchanged, and the need for certain securities and guarantees to foster productive activity by man is unchanged. The same property rights system that is most beneficial on Earth will be most beneficial on the celestial bodies.

The principles of the Outer Space Treaty do not necessarily contradict these property concepts. It has already been shown that the notion of property rights, including the power to use and dispose, are not incompatible with the general principles of the Outer Space Treaty.20 ' The principle of access in space is also appropriate when properly interpreted. ° But, in regulating access, governing bodies must make proper account for the use of various portions of space and of the rights of the user to be free of harmful interference. 3 Although the provision of Article II against national appropriation contradicts these property concepts, it is inconsistent with the notions of jurisdiction and ownership found elsewhere in the treaty.2 0 4 This provision should therefore be modified and replaced with a concept of reasonable use or investment.20 5 Such a provision should provide for initial allocation of unclaimed property only upon productive use or investment. This would allow for the security of national sovereignty while preventing the non-productive reservation of vast resources by non-users.20 6

## 2

### Space Debris Clean-Up CP

#### Plan- Implement market share liability to space debris clean up.

Muñoz-Patchen 18:

Muñoz-Patchen, Chelsea (2018)[Associate in the Houston Law Office of the Latham & Watkins earned BA and BS in Geography from Arizona State University received her law degree from the University of Chicago]"Regulating the Space Commons: Treating Space Debris as Abandoned Property in Violation of the Outer Space Treaty," Chicago Journal of International Law: Vol. 19: No. 1, Article 7. <https://chicagounbound.uchicago.edu/cjil/vol19/iss1/7> AVKAW

In this Subsection, this Comment argues for extending the concept of market-share liability and establishing a U.N.-run fund to be distributed to parties for costs incurred when cleaning up space debris. This subsection will introduce market-share liability and then describe how it could be more effectively used not as compensation for loss, but as part of a regulatory device aimed at reducing the amount of existing space debris. Market-share liability has been suggested as a way to deal with the difficulty of identifying the individual ownership of objects and it could be put to use in the obligation to clean up debris.154 Market-share liability would allow for the apportionment of responsibility based on the respective contribution to the risk, and would not require the identification of individual pieces of space debris.155 Market-share liability has already been successfully applied where multiple parties contribute to a dangerous situation, but where it is virtually impossible to tie a particular party to the harm caused.156 Market-share liability was created in 1980 in the case Sindell v. Abbott Labororatories. 157 In Sindell, the Supreme Court of California devised the concept in response to a case in which pharmaceuticals that were marketed to pregnant women caused cancer in their children at least a decade later.158 Since the latent period was so long, the women naturally could not remember the specific pill manufacturer out of two hundred such manufacturers.159 The court found that each defendant’s market share could be determined fairly accurately, and therefore used market share as a basis for the apportionment of liability.160 While market-share liability has not been broadly adopted, this is likely because cases with fungible products and a serious causation problem are rare.161

#### Market share liability can solve the debris problem.

Muñoz-Patchen 18:

Muñoz-Patchen, Chelsea (2018)[Associate in the Houston Law Office of the Latham & Watkins earned BA and BS in Geography from Arizona State University received her law degree from the University of Chicago]"Regulating the Space Commons: Treating Space Debris as Abandoned Property in Violation of the Outer Space Treaty," Chicago Journal of International Law: Vol. 19: No. 1, Article 7. <https://chicagounbound.uchicago.edu/cjil/vol19/iss1/7> AVKAW

Academics have taken this idea and sought to apply it to space debris, which has similar fungibility and causation issues, but their applications have been limited to a tort-like context.162 One author suggested that whenever a collision occurs due to an unidentifiable piece of debris and a functional space object, liability and compensation should be apportioned “among spacefaring nations equal to the percentages of the total debris population for which the particular nation is responsible.” 163 This mechanism frees the victim from having to prove causation by a specific nation, when that would be virtually impossible.164 There will be difficulties calculating the percentage with precision in such a system, but there is fairly accurate information from the U.N., including registry, sampling, mathematical models, and other records of known collisions and the resultant debris.165 Without strong buy-in, it may be challenging to get this rarely used domestic tort theory to apply in international space law, especially with the potential for disputes over the proper apportionment of market share.166 The states primarily responsible for existing debris are the U.S., Russia, and China – powerful countries unlikely to be pleased with this newfound expense. That said, though these nations would be paying the highest cost, this would be proportional to their respective contributions to the problem. Indeed, these nations may welcome this remedy, because their space activity is threatened by the proliferation of space debris and they likely value continuing their extensive and advanced use of space. This solution solves the free rider problem and would compensate any nation or company that cleans up space such that any nation (like the U.S., Russia, or China) fearing the collapse of its space program and unwilling to bear all the cleanup costs itself would see this as an attractive solution. It is even possible that liable states like the U.S. and Russia will be eager to aid in debris identification, so as to add to other states’ liability.167 This regulatory remedy would resolve the current tragedy of the commons. By assigning responsibility for the cost of cleanup, nations or companies would be incentivized to begin cleanup operations, because they would know that others will not freeride on their costly efforts. Instead, they will have guaranteed compensation from those responsible. Obtaining the funds is crucial, particularly since the high cost of deploying existing technology to destroy space debris has been a hindrance thus far.168 Using market-share liability is also a useful way to compensate victims of debris collisions and to incentivize spacefaring nations to avoid creating new debris in the future.169 However, this does not do enough to remedy the persistent existence of space debris, which is threatening the very continuation of space activity. The Outer Space Treaty creates an obligation on states to carry out space activities “for the ‘benefit and interests of all countries,’ and that outer space shall never be subject to national appropriation.” 170 To uphold their obligations under this treaty, nations should not be creating debris, because it interferes with the ability of others to conduct their space activities, or perhaps keeps them from space altogether. Due to this legal violation, and the negative externality created by property abandonment, states should be required to pay for the disposal of debris in proportion to the amount they create. While the creation of debris may be unavoidable, there are existing practices that can greatly minimize the proliferation of debris, and any debris that is nonetheless created can be dealt with through market-share liability payments. This collection of market-share disposal payments would not simply be a tax on operations or tort compensation for harmful acts. Instead, once liability is apportioned, (and this could be done on an ongoing or periodic basis to reflect new developments), nations or companies undertaking actions to clean up space would be compensated for their costs by the nations responsible according to their percentage of responsibility. The U.N. Office for Outer Space Affairs (UNOOSA) could allocate the percentage of liability, drawing on its role in promoting international cooperation and the peaceful use of outer space, as well as preparing reports and studies.171 If any disputes were to arise from nonpayment, familiar procedures could be employed—perhaps by drawing from other notable space treaties that provide “established procedures for the peaceful settlement of disputes, in accordance with the Charter of the United Nations.” 172 In many of the space treaties and conventions, including the Liability Convention, disputes and claims can be brought to the Secretary General of the U.N.173 These bodies could be utilized here to assure fairness in allocating liability and handling routine compensation disputes. This new regulatory regime can thus be grounded in the existing space treaty regime and administered by existing authorities. It would resolve the incentive problems that exist in the international commons of space through regulation that allocates the cost of debris cleanup to those who have created and continue to create it. The regime can also adapt as the outer space marketplace and the actors who comprise it shift over time, and as the registry of space objects, incidents, and tracking capabilities improves. This regulatory regime also ultimately would allocate cleanup funds to parties who would like to continue to operate in space, removing the disincentive to carry the cost in the face of potential freeriding.

## 3

### DA Space Col

#### Colonization of Mars is feasible but requires private investment incentive to motivate the required tech developments – private appropriation now is key.

Martin & Saydam 21

(BA Journalism University of Central Lancashire, Media & Content Coordinator for The University of New South Wales Serkan Saydam received his BSc, MSc and PhD degrees in Mining Engineering from the Dokuz Eylul University, Izmir, Turkey and completed his Postdoctoral Fellowship at the University of Witwatersrand, Johannesburg, South Africa. He then worked at De Beers for 3 years as project manager in Johannesburg, South Africa. Serkan joined the School of Mining Engineering as a Senior Lecturer in 2006 and was promoted to Associate Professor in 2012. Serkan then was then promoted to the Professorial role in 2017 and he is currently working as a Professor and Director of Research at the School of Minerals and Energy Resources Engineering at UNSW. A key focus of his research is to address the current needs and future challenges faced by the mining industry. These are generally very complex engineering problems, as mining environments become more extreme and constraints are imposed due to increasing social, environmental, and health and safety standards. His fields of research include ground control, mine planning & design, technology integration, new mining methods and off-Earth mining. In addition, he established research collaboration with NASA's Jet Propulsion Laboratory & Kennedy Space Center, and Luxembourg Space Agency as well more than 20 research organisations and universities globally. He has more than 250 publications and graduated 18 PhD students. Serkan is currently Fellow Member of Australian Institution of Mining and Metallurgy; President of the ISRM Commission on Planetary Rock Mechanics; Deputy Director of the Australian Centre for Space Engineering Research (ACSER) at UNSW; Deputy Secretary General and Council Member of the SOMP (The Society of Mining Professors). <https://newsroom.unsw.edu.au/news/science-tech/mars-settlement-likely-2050-says-unsw-expert-%E2%80%93-not-levels-predicted-elon-musk>, USNW Sydney Newsroom, 3/10/21, NCS, <https://newsroom.unsw.edu.au/news/science-tech/mars-settlement-likely-2050-says-unsw-expert-%E2%80%93-not-levels-predicted-elon-musk> brackets for spelling mistake

Robotic mining that can provide water and fuel is the key to developing a colony on the red planet within the next 30 years. Mars will be colonised by humans by the year 2050, as long as autonomous mining processes quickly become more commercially viable. That’s the view of Professor Serkan Saydam from UNSW Sydney in the wake of the amazing landing on Mars by NASA’s Perseverance rover. Perseverance is expected to provide answers about whether forms of life ever existed on the red planet, but it is also designed to help address the challenges of future human expeditions there. Professor Saydam, from the School of Mineral Energy Resources Engineering, says the main focus in terms of creating a colony on Mars is finding water – and being able to extract it and process it using robots before humans land. “Everything is all about water,“ Prof. Saydam says. “You use water as a life support, plus also being able to separate out the hydrogen to use as an energy source. “The process for having humans on Mars will be to set up operations, go there and produce water with robots first, and then be able to extract the hydrogen to make the energy ready before people arrive. “Innovation in robotics and autonomous systems are clearly important so that we have the water ready and the hydrogen separated and ready for when human beings land. “At the moment, we don’t have ability to do it. There are significant research efforts, specifically here at UNSW under ACSER (Australian Centre for Space Engineering Research), about the best way to do it, but there is no consensus yet. It also depends on how many people we expect to be living on Mars. Is it five, or 5000, or 50,000, or even more?“ Entrepreneur Elon Musk has claimed he’s confident there will be a city of 1 million on Mars by 2050, transported there by 1000 Starships proposed by his SpaceX venture, with plans for up to three rocket launches per day. Prof. Saydam says that may be unrealistic in the specific timeframe, but admits that demand for travel and a potential colonisation of Mars is what’s needed to drive the technological developments required. “I think the technology is ready and we already have the knowledge, but the main problem is having the focus,“ says Prof. Saydam, who is organising an International Future Mining Conference in December 2021 that will feature former NASA astronaut Pamela Melroy and Honeybee Robotics vice-president Kris Zacny. “It’s a bigger question: ‘Why don’t we do that already on earth? Why are we still using human beings for physical work in mining here?’ We have huge experience in mining, but still heavily depend on humans. “One issue is that demand is not there. For companies to get involved in developing products (for Mars missions), they need to be able to produce minerals or something that can be used for manufacturing goods and then sell it. “At the moment, everything is just a cost and there is no revenue for companies.“ However, that could be starting to change. United Launch Alliance, a joint venture between Lockheed Martin and Boeing who are heavily invested in the rockets used to launch spaceships, has publicly announced they will pay $500 per kilogram for fuel – derived from water – supplied on the moon. That rises to $3000 per kilogram if the fuel is available in a low-earth orbit. “That immediately creates a market,“ Prof. Saydam says. “Plus, if Elon Musk does what he says and puts people on the surface of Mars in 20 years, then that also creates a market. “I believe a colony on Mars is going to happen, but between 2040 and 2050 is more feasible. This could be shortened depending on the technological advances that can reduce the costs or [form] from stronger motivation. “What I think will happen is that first of all we will do these activities on the moon and have a colony there. Then we can use the moon as a petrol station to get to Mars and beyond. “But before 2050, I think we will have settlements on both the moon and Mars.“

#### Life on earth is doomed – countless eventualities and unforeseen dangers.

Meyer 16

(Robinson Meyer is a staff writer at The Atlantic. He is the author of the newsletter The Weekly Planet, and a co-founder of the COVID Tracking Project at The Atlantic.), "Human Extinction Isn't That Unlikely", The Atlantic, 4/29/16, NCS, https://www.theatlantic.com/technology/archive/2016/04/a-human-extinction-isnt-that-unlikely/480444/

Nuclear war. Climate change. Pandemics that kill tens of millions. These are the most viable threats to globally organized civilization. They’re the stuff of nightmares and blockbusters—but unlike sea monsters or zombie viruses, they’re real, part of the calculus that political leaders consider everyday. A new report from the U.K.-based Global Challenges Foundation urges us to take them seriously. The nonprofit began its annual report on “global catastrophic risk” with a startling provocation: If figures often used to compute human extinction risk are correct, the average American is more than five times likelier to die during a human-extinction event than in a car crash. Partly that’s because the average person will probably not die in an automobile accident. Every year, one in 9,395 people die in a crash; that translates to about a 0.01 percent chance per year. But that chance compounds over the course of a lifetime. At life-long scales, one in 120 Americans die in an accident. Yet the risk of human extinction due to climate change—or an accidental nuclear war, or a meteor—could be much higher than that. The Stern Review, the U.K. government’s premier report on the economics of climate change, assumed a 0.1-percent risk of human extinction every year. That may sound low, but it adds up when extrapolated to century-scale. Across 100 years, that figure would entail a 9.5 percent chance of human extinction. And that number might even underestimate the risk. Another Oxford survey of experts from 2008 posited the annual extinction risk to be a higher figure, 0.2 percent. And the chance of dying from any major global calamity is also likely higher. The Stern Review, which supplies the 9.5-percent number, only assumed the danger of species-wide extinction. The Global Challenges Foundation’s report is concerned with all events that would wipe out more than 10 percent of Earth’s human population. “We don’t expect any of the events that we describe to happen in any 10-year period. They might—but, on balance, they probably won’t,” Sebastian Farquhar, the director of the Global Priorities Project, told me. “But there’s lots of events that we think are unlikely that we still prepare for.” For instance, most people demand working airbags in their cars and they strap in their seat-belts whenever they go for a drive, he said. We may know that the risk of an accident on any individual car ride is low, but we still believe that it makes sense to reduce possible harm. So what kind of human-level extinction events are these? The report holds catastrophic climate change and nuclear war far above the rest, and for good reason. On the latter front, it cites multiple occasions when the world stood on the brink of atomic annihilation. While most of these occurred during the Cold War, another took place during the 1990s, the most peaceful decade in recent memory: In 1995, Russian systems mistook a Norwegian weather rocket for a potential nuclear attack. Russian President Boris Yeltsin retrieved launch codes and had the nuclear suitcase open in front of him. Thankfully, Russian leaders decided the incident was a false alarm. Climate change also poses its own risks. As I’ve written about before, serious veterans of climate science now suggest that global warming will spawn continent-sized superstorms by the end of the century. Farquhar said that even more conservative estimates can be alarming: UN-approved climate models estimate that the risk of six to ten degrees Celsius of warming exceeds 3 percent, even if the world tamps down carbon emissions at a fast pace. “On a more plausible emissions scenario, we’re looking at a 10-percent risk,” Farquhar said. Few climate adaption scenarios account for swings in global temperature this enormous. Other risks won’t stem from technological hubris. Any year, there’s always some chance of a super-volcano erupting or an asteroid careening into the planet. Both would of course devastate the areas around ground zero—but they would also kick up dust into the atmosphere, blocking sunlight and sending global temperatures plunging. (Most climate scientists agree that the same phenomenon would follow any major nuclear exchange.) Yet natural pandemics may pose the most serious risks of all. In fact, in the past two millennia, the only two events that experts can certify as global catastrophes of this scale were plagues. The Black Death of the 1340s felled more than 10 percent of the world population. Eight centuries prior, another epidemic of the Yersinia pestis bacterium—the “Great Plague of Justinian” in 541 and 542—killed between 25 and 33 million people, or between 13 and 17 percent of the global population at that time. No event approached these totals in the 20th century. The twin wars did not come close: About 1 percent of the global population perished in the Great War, about 3 percent in World War II. Only the Spanish flu epidemic of the late 1910s, which killed between 2.5 and 5 percent of the world’s people, approached the medieval plagues. Farquhar said there’s some evidence that the First World War and Spanish influenza were the same catastrophic global event—but even then, the death toll only came to about 6 percent of humanity. The report briefly explores other possible risks: a genetically engineered pandemic, geo-engineering gone awry, an all-seeing artificial intelligence. Unlike nuclear war or global warming, though, the report clarifies that these remain mostly notional threats, even as it cautions: [N]early all of the most threatening global catastrophic risks were unforeseeable a few decades before they became apparent. Forty years before the discovery of the nuclear bomb, few could have predicted that nuclear weapons would come to be one of the leading global catastrophic risks. Immediately after the Second World War, few could have known that catastrophic climate change, biotechnology, and artificial intelligence would come to pose such a significant threat.

## 4

### T

#### A topical affirmative must defend a theory of fair distributions

#### They violate—the plan uses the normative term “ought”

#### First—precision. Justice is distinct from and narrower than morality. Defending that the plan is moral does not make it just.

Swain 20

Dan Swain (Assistant professor of philosophy and social sciences at the Czech University of Life Sciences in Prague; research fellow at the Institute of Philosophy of the Czech Academy of Sciences). “None so Fit to Break the Chains: Marx's Ethics of Self-Emancipation.” Haymarket Books (October 6, 2020). JDN.

It is worth noting that this entire controversy only makes sense if what is meant by justice is something more specific than simply questions of right or wrong. Indeed, one of the ways in which this debate gets distorted is the sense that justice, in this sense, exhausts normative political theory. There is a marked tendency in some writings to assume that any substantive social wrong must ultimately boil down to a question of (in)justice. Increasingly, it becomes taken for granted that to say something **is unjust** and to condemn it are synonymous. For example, Nielsen, in attacking Wood’s arguments that Marx rejects the language of justice, suggests that this debate might merely be a ‘trivial verbal one’.20 Since Wood accepts that Marx condemns capitalism as severely unequal and exploitative he ‘must agree … that capitalism is indeed, in the plain untechnical sense of the term, an unjust social system’.21 Perhaps it is a symptom of too much political philosophy, but it is entirely unclear to me what the ‘plain, untechnical sense’ of justice is. Of course, if justice is defined differently, either less narrowly concerned with distribution, or more specifically concerned with domination, democracy and power, capitalist exploitation may be more easily integrated into a justice account. Young herself, for example, wants to hold on to the word justice but stresses that domination and oppression should be the primary terms in which it is thought of.22 However, in the main **discussions of justice remain dominated by distributive language**, and in particular by Rawls and the various variations and developments of his core approach.23 In any case, there is a **real difference** between saying something is wrong because it is unjust and saying it is wrong because it denies freedom (or indeed because it is heretical, illiberal, evil, lacks solidarity or many other terms of condemnation).

Thus, in denying that exploitation is a matter of justice, I am arguing three things: Firstly, it is not a question of an unfair, unjust or unequal transaction or exchange. Secondly, it is not a matter of distribution, either of starting point or outcome. Thirdly, it is not based on fundamental and universal principles that are derivable independently of given social conditions and integrated into a complete and over-arching theory.24

#### Second, education—most LD topics already use “ought” so any education gained from having one more util-deont debate is redundant and non-unique. This topic offers a chance to delve into unique and novel theories of fairness and distributive justice that their interp forecloses.

#### Third, the TVA—you can still read your China plan. You just need to use “unjust” as the evaluative term in the plan and support it with a theory of just distributions.

#### Drop the debater—T is a prima facie burden and it’s too late to redo the 1NC after the 1AR shifts.

# AFF

## Framing

### AT: Extinction First

#### Extinction doesn’t come first.

#### 1. It freezes policy-making—all action carries some risk of extinction which crowds out other values.

#### 2. Infinitarian paralysis—if they’re right that the value is infinite, any fraction of infinity is still infinity, which means the aff and neg world both have equal and infinite value, meaning all actions are equally permissible under util.

#### 3. It assumes the future will definitely have net positive value, but we could lock ourselves into a future of galactic suffering that is worse than extinction, which is net more likely if we disregard ethics.

## Debris

#### Now the debris advantage:

#### They solve 0% of this advantage- satellites don’t count as appropriation because no territory is being permanently claimed as a company’s property, just being temporarily occupied

#### Be extremely skeptical of their internal links: a] no internal link to nuclear war- the OST bans use and deployment of nukes in space b] all of their scenarios for escalation are extremely nebulous- which actors escalate? c] even without NewSpace, countries already have satellites and ASATs in space that inevitably trigger their impacts d] they have no evidence that says appropriation is key

#### The continued attempts to debris clean-up means better tech is on the way

**Weiner 21** [Chloee Weiner,  “New Effort To Clean Up Space Junk Reaches Orbit”. 3-21-2021. NPR. https://www.npr.org/2021/03/21/979815691/new-effort-to-clean-up-space-junk-prepares-to-launch. Accessed 7-18-2021]

A demonstration mission to test an idea to clean up space debris launched Monday morning local time from the Baikonur Cosmodrome in Kazakhstan. Known as **ELSA-d**, the mission will **exhibit technology that could help capture space junk**, the millions of pieces of orbital debris that float above Earth. The more than 8,000 metric tons of debris threaten the loss of services we rely on for Earth-bound life, including weather forecasting, telecommunications and GPS systems. The spacecraft works **by attempting to attach itself to dead satellites and pushing them toward Earth to burn up in the atmosphere.** ELSA-d, which stands for End-of-Life Services by Astroscale, will be carried out by a "servicer satellite" and a "client satellite" that launched together, according to Astroscale, the Japan-based company behind the mission. Using a magnetic docking technology, the servicer will release and try to "rendezvous" with the client, which will act as a mock piece of space junk. The mission, which will be run from the U.K., will carry out this catch and release process repeatedly over the course of six months. The goal is to prove the servicer satellite's ability to track down and dock with its target in varying levels of complexity. The spacecraft is not designed to capture dead satellites already in orbit, but **rather future satellites that would be launched with compatible docking plates on them.** Space junk has been a growing problem for years as human-made objects such as old satellites and spacecraft parts build up in low Earth orbit until they decay, deorbit, explode or collide with other objects, fragmenting into smaller pieces of waste. In 2019, for example, India blew apart one of its satellites orbiting Earth, creating hundreds of pieces of debris that threatened to collide with the International Space Station. According to a recent report by NASA, at least 26,000 of the millions of pieces of space junk are the size of a softball. Orbiting along at 17,500 mph, they could "destroy a satellite on impact." More than 500,000 pieces are a "mission-ending threat" because of their ability to impact protective systems, fuel tanks and spacecraft cabins. And the most common debris, more than 100 million pieces, is the size of a grain of salt and could puncture a spacesuit, "amplifying the risk of catastrophic collisions to spacecraft and crew," the report said. According to NASA, cleaning up space — and addressing the risks associated with debris — depend on preventing the accumulation of more waste and actively removing it. Space Junk: How Cluttered Is The Final Frontier? SHORT WAVE Space Junk: How Cluttered Is The Final Frontier? The development of other cleanup technologies has been underway for years. **In 2016, Japan's space agency sent a 700-meter tether** into space to try **to slow down and redirect space junk**. **In 2018**, a device called **RemoveDebris successfully cast a net around a dummy satellite**. The **European Space Agency also plans to send a self-destructing robot into orbit in 2025,** which the organization's former director general has **referred to as a space "vacuum cleaner." These effort**s could prove increasingly **important as private space ventures like SpaceX c**

### A2 Sats

#### No one’s going to war over a downed satellite

Bowen 18 [Bleddyn Bowen, Lecturer in International Relations at the University of Leicester. The Art of Space Deterrence. February 20, 2018. https://www.europeanleadershipnetwork.org/commentary/the-art-of-space-deterrence/]

Space is often an afterthought or a miscellaneous ancillary in the grand strategic views of top-level decision-makers. A president may not care that one satellite may be lost or go dark; it may cause panic and Twitter-based hysteria for the space community, of course. But the terrestrial context and consequences, as well as the political stakes and symbolism of any exchange of hostilities in space matters more. The political and media dimension can magnify or minimise the perceived consequences of losing specific satellites out of all proportion to their actual strategic effect.

#### Won’t go nuclear – seen as a normal conventional attack because of integration with ground forces

Firth 7/1/19 [News Editor at MIT Technology Review, was Chief News Editor at New Scientist. How to fight a war in space (and get away with it). July 1, 2019. MIT Technology Review]

Space is so intrinsic to how advanced militaries fight on the ground that an attack on a satellite need no longer signal the opening shot in a nuclear apocalypse. As a result, “deterrence in space is less certain than it was during the Cold War,” says Todd Harrison, who heads the Aerospace Security Project at CSIS, a think tank in Washington, DC. Non-state actors, as well as more minor powers like North Korea and Iran, are also gaining access to weapons that can bloody the noses of much larger nations in space.

## Mining

### Econ & Tyranny

#### TURN—Resource dependence kills economic development and empowers tyranny.

Patrick 12

(Stewart M. Patrick is a senior fellow at the Council on Foreign Relations (where he writes the blog The Internationalist) and Director of the Program on International Institutions and Global Governance.), "Why Natural Resources Are a Curse on Developing Countries and How to Fix It", The Atlantic, NCS 4/30/12, https://www.theatlantic.com/international/archive/2012/04/why-natural-resources-are-a-curse-on-developing-countries-and-how-to-fix-it/256508/

Among the many frustrations in development, perhaps none looms larger than the "resource curse." Perversely, the worst development outcomes--measured in poverty, inequality, and deprivation--are often found in those countries with the greatest natural resource endowments. Rather than contributing to freedom, broadly shared growth, and social peace, rich deposits of oil and minerals have often brought tyranny, misery, and insecurity to these nations. Fortunately, as my colleague Terra Lawson-Remer points out in a new CFR memo, all is not lost. There are concrete steps the international community can take to help break this curse First, a few facts. The correlation between energy dependence and authoritarianism is clear. "There are twenty-three countries in the world that derive at least 60 percent of their exports from oil and gas and not a single one is a real democracy," observes Larry Diamond of Stanford University. There are numerous hypotheses to account for this correlation, as I note in my book, Weak Links: Fragile States Global Threats and International Security. Most obviously, easy resource revenues eliminate a critical link of accountability between government and citizens, by reducing incentives to tax other productive activity and use the revenue to deliver social services effectively. The same revenues also generate staggering wealth that facilitates corruption and patronage networks. Together, they consolidate the power of entrenched elites and regime supporters, sharpening income inequality and stifling political reform. The history of the oil-rich Arab Middle East has long been a case in point--with Saudi Arabia being exhibit A. Natural resource revenues have also been linked to slow economic growth rates, inequality, and poverty. One culprit may be the so-called "Dutch disease," whereby resource revenues raise a country's exchange rate, hurting competitiveness in non-resource sectors. Other factors may include the volatility associated with commodity prices, which can have especially negative impacts on weak-state economies; and the underdevelopment of agricultural and manufacturing sectors during boom periods in resource-based economies. And even when oil abundance produces high growth, it often benefits only a few corrupt elites rather than translating into higher living standards for most of the population. Oil-rich Angola is a case in point. Despite having one of the world's highest growth rates from 2005 to 2010, averaging some 17 percent annually, its score on the human development index remained a miserable 0.49, and its infant mortality rate was lower than the sub-Saharan African average.

### Conflict

#### Economic dependence on natural resources increase conflict in developing countries.

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Finally, the very presence of oil and gas resources within developing countries exacerbates the risk of violent conflict. The list of civil conflicts fought at least in part for control of oil and gas resources is long. A partial list would include Nigeria, Angola, Burma, Papua New Guinea (Bougainville), Chad, Pakistan (Balochistan), and of course Sudan. Econometric studies confirm that the risk of civil war greatly increases when countries depend on the export of primary commodities, particularly fossil fuels. At least three factors could explain this correlation. First, the prospect of resource rents may be an incentive to rebel or secede. Second, wealth from resources may enable rebel groups to finance their operations. Third, the high levels of corruption, extortion, and poor governance that accompany resource wealth often generate grievances leading to rebellion.