## 1

#### [a] Interpretation: debaters cannot specify parts of the resolution. To clarify, they can’t spec parts they will ban.

#### [b] Violation: They specified.

#### [c] Standards:

#### 1] Topic education – If the other debater specifies something not mentioned in the res, then it isn’t topical. Making the debate around whatever they specified kills actual topic education. IE. they specified a specific part of appropriation, which means that they aren’t negating as per NSDA rules. They’ll say we get more education by specifying but that’s wrong since they can go for anything, and I won’t be able to engage as effectively since there is good lit for an infinite number of affs. Decks fairness and education.

#### 2] Predictability – Moves the debate into unpredictable ground which destroys clash. I don’t know what they are going to specify or CP, and this means I have a short time to come up with responses that won’t be as good which means we are getting less education. TVA solves. Because TVA solves it’s DTD. Not fair that they get access to grounds on stuff that isn’t part of the NSDA rules. They’ll say it is predictable, but it isn’t because we never know what they specify, but even then, their model of debate allows for specifying anything. They kill education and fairness.

#### 3] Prep Burdens – I can’t possibly prep for every single potential specification in the world. Their position advocates that I should. Now my responses can’t be as good which harms the education we receive from the round since they have the ability to literally go for anything. DTD again cause they choose to specify and not be topical. They’ll say disclosing solves, but no because 30 minutes etc isn’t enough for the days of prep you have with this plan. I can’t find as good cards, and the alt is a better more educational debate since we both know the topic. Kills education and fairness.

#### 4] Topicality – If it isn’t in the res, it isn’t topical which means their advocacy isn’t topical. Giving them the win for something that’s against NSDA rules doesn’t make sense, and I shouldn’t lose for following the rules. Their role is to affirm the resolution as it is, and that’s set by NSDA. Not being topical decks fairness.

#### I lost access to key ground like space colonization DAs, Innovation DAs, and mining DA’s WHICH IS THE MAJORITY OF THIS TOPIC THAT I LOST ACCESS TO.

#### [d] Voters:

#### 1] Education – is a voter because it is the goal and purpose of debate.

#### 2] Fairness – is a voter because it is necessary in any competition.

**It’s drop the debater – a] deter future abuse and b] set better norms for debate c] indicts the debater d] time investment**

**Competing interps – [a] reasonability is arbitrary and encourages judge intervention since there’s no clear norm, [b] it creates a race to the top where we create the best possible norms for debate.**

**No RVIs – a] illogical, you don’t win for proving that you meet the burden of being fair, logic outweighs since it’s a prerequisite for evaluating any other argument, b] RVIs incentivize baiting theory and prepping it out which leads to maximally abusive practices c] chills the checking of abuse**

## 2

**Interpretation: Aff debaters must send case thirty minutes before the round.**

Graphical user interface

Description automatically generated

**Violation – They didn’t send their case thirty minutes before round. All he told me was that it was most similar to the Barkley Quarters doc, but this allows for key changes.**

**Standards:**

**a] predictability –Sending the case thirty minutes before or open sourcing allows me to have an idea about the args that will be read. Predictability is key to education because in round clash can be maximized when the arguments are known beforehand. Clash increases education which is the purpose of debate.**

**b] reciprocity – I have my contact info on the wiki for disclosure, and I send the case 30 minutes before when asked if the docs are not open sourced. It harms fairness if I contribute to the norm, and they do not. I literally sent all the negs I’ve read at this tourney. They’ll say open sourcing solves, but no because you have the capability to read a new aff which means that unless you send the doc, I can’t prep good responses to your exact case which means I can’t clash with your case in depth which harms education too.**

**Voters:**

**a]. Education is a voter because education is the goal and purpose of debate. Education furthers life skills and thus must be protected.**

**b]. Fairness is a voter because debate is a competition, so protecting fairness in the round is key.**

**Cross apply the paradigm issues from the shell above.**

## 3

#### 1] Value morality

#### 2] Standard is mitigating existential risk

#### 3] Extinction first -- moral uncertainty.

**Bostrom 13** [Bostrom, Nick. “Existential Risk Prevention as Global Priority.” Existential Risk Prevention as a Global Priority, 2013, [www.existential-risk.org/concept.html./](http://www.existential-risk.org/concept.html./)] FMST

These reflections on moral uncertainty suggest an alternative, complementary way of looking at existential risk; they also suggest a new way of thinking about the ideal of sustainability. Let me elaborate. **Our** present **understanding** of axiology might well be **confused**. We may not now know — at least not in concrete detail — what outcomes would count as a big win for humanity; we might not even yet be able to imagine the best ends of our journey. **If we are** **indeed profoundly** uncertain about our ultimate aims, then **we should** recognize that there is a great option **value** in preserving — and ideally improving — **our ability to** recognize value and to **steer the future** accordingly**. Ensuring** that there will be **a future** version **of humanity** with great powers and a propensity to use them wisely is plausibly the best way available to us to increase the probability that the future will contain a lot of value. To do this, **we must prevent** any **existential catastrophe**.

#### 4] Ethical policy making mitigates:

**Bostrom 2** [Bostrom, Nick. “Existential Risk Prevention as Global Priority.” Existential Risk Prevention as a Global Priority, 2013, [www.existential-risk.org/concept.html./](http://www.existential-risk.org/concept.html./)] FMST

We also note that an existential catastrophe would entail the frustration of many strong preferences, suggesting that from a preference-satisfactionist perspective it would be a bad thing. In a similar vein, **an ethical view emphasizing that public policy should be determined through informed democratic deliberation by all stakeholders would favor existential-risk mitigation if we suppose, as is plausible, that a majority of the world's population would come to favor such policies upon reasonable deliberation (even if hypothetical future people are not included as stakeholders).** We might also have custodial duties to preserve the inheritance of humanity passed on to us by our ancestors and convey it safely to our descendants.23 **We do not want to be the failing link in the chain of generations, and** **we ought not to delete or abandon the great epic of human civilization that humankind has been working on for thousands of years, when it is clear that the narrative is far from having reached a natural terminus.** Further, many **theological perspectives** deplore naturalistic existential catastrophes, especially ones induced by human activities: **If God created the world and the human species, one would imagine that He might be displeased if we took it upon ourselves to smash His masterpiece** (or if, through our negligence or hubris, we allowed it to come to irreparable harm).24 We might also consider the issue from a less theoretical standpoint and try to form an evaluation instead by considering analogous cases about which we have definite moral intuitions. Thus, for example, if we feel confident that committing a small genocide is wrong, and that committing a large genocide is no less wrong, we might conjecture that committing omnicide is also wrong.>25 **And if we believe we have some moral reason to prevent natural catastrophes that would kill a small number of people, and a stronger moral reason to prevent natural catastrophes that would kill a larger number of people, we might conjecture that** **we have an even stronger moral reason to prevent catastrophes that would kill the entire human population.**

#### 5] Debate is roleplaying policy making, so we mitigate.

## Independent Voting Issue:

#### **Friedemann 16 is power tagged. He makes the claim that it warrants extinction, but nowhere in the card does it say that. It talks about a collapse of civilization, and we wouldn’t go extinct because some communities don’t use grids. IE. North Sentinel Island. Power tagging is and independent voting issue because it misrepresents evidence which is unfair and not educational.**

## Case

FW:

#### 1] mitigation comes first because real policy makers use it, and they conceded that debate is roleplaying policymakers.

#### 2] general util means that we leave minority groups at risk while mitigation treats everyone equally.

#### 3] Real policy makers always mitigate. IE: look to the Cold War where policymakers made decisions only focusing stopping the existential risk even when there were other factors that could’ve maximized well being.

#### 4] In order to solve for their problems we need to be alive.

#### 5] Moral uncertainty – we might be wrong which means everyone staying alive becomes the most important thing that’s Bostrom.

## General

#### The private sector can alleviate some of the stress which would decrease the likelihood of nuclear war, this means we solve for impacts better.

Cobb 21 [Wendy N. Whitman Cobb, Associate Professor of Strategy and Security Studies at the School of Advanced Air and Space Studies, “Privatizing Peace: How Commerce Can Reduce Conflict in Space,” 2021, Routledge, pp. 68-69, EA] FMST

Finally, given the involvement of an ever-larger number of private actors in space, states also need to consider the lost opportunity costs if private actors choose to forego research, development, and deployment of new technologies because the danger in space is too high. As space becomes more **commercialized**, these private **actors** can exert pressure on states **to** behave peacefully in order **to** promote further economic development. Gartzke and Quan Li argue that this can happen through the movement of capital from conflict-prone states or areas to non-conflictual states.50 This is not necessarily applicable to space because there is no area in space which is formally protected, but commercial space **actors may** choose **not** to **engage in new** economic **investment** which can in turn affect a state’s economic performance. To date, the size of the space sector is comparatively small, so, arguably, the potential economic loss would not be that great. Where the harm comes from is state reliance on private actors for military and national security space services. **As states contract out** space **services** to a greater extent, **private actors** exert an even greater influence over the state by having a capability they do not.

Why might private companies want a more conflict-free space? If there is weaponized conflict in space, they could potentially benefit through new launches to send up replacement satellites; this is similar to an argument that war can actually be beneficial to an economy because companies are needed to create materiel and weapons.51 But, **in a debris filled environment**, sending **replacements is** more difficult **and** dangerous. Some private companies want to engage in **human spaceflight**; a conflictual or more dangerous orbital environment would likely prevent those activities or increase their costs to such an extent that it becomes economically infeasible. James Clay Moltz argues specifically that “the growing presence of space tourists in low-Earth orbit would greatly increase the incentives for restraint in any future [ASAT] test programs.”52 Those **foregone** development costs and **commercial activities** can have a similar cost to states simply **by discouraging private actors** from participating in the market.

#### Even then the Aff plan isn’t sufficient to solve ANYTHING—Even one collision could undo years of progress, status quo is the same as the plan.

Kurt 15 [Joseph Kurt, JD- William & Mary School of Law, BA-Marquette University, NOTE: TRIUMPH OF THE SPACE COMMONS: ADDRESSING THE IMPENDING SPACE DEBRIS CRISIS WITHOUT AN INTERNATIONAL TREATY, 40 Wm. & Mary Envtl. L. & Pol'y Rev. 305 (2015)]

With respect to some common resource problems, the prospect of continued cooperation may be enough to suggest a successful resolution to the issue. Say, for example, that the farmers from Hardin's pasture recognize the threat of overgrazing and, after some negotiation, agree to slow the introduction of new cattle to sustainable levels. This would seem to resolve the issue. As long as farmers abide by that agreement, they will avoid the tragedy of the commons.

Achieving a more or less permanent solution to the space debris problem is not as straightforward. The reason is that even as the space debris problem is being redressed, the risk of space objects colliding remains as long as there are uncontrolled objects whizzing around the Earth's atmosphere. 214Link to the text of the note With millions of such objects now in orbit, this will indeed be the case for a very long time. 215Link to the text of the note

Improved tracking capabilities, avoidance maneuvers, and (eventually) ADR technologies all work together to make such collisions less likely. However, no remediation can remove the risk of accidents altogether, and some collisions could have devastating effects: the destruction of even one large satellite could double the amount of space debris in orbit. 216Link to the text of the note Of course, any such increase in the amount of debris in orbit then renders other collisions more likely to occur. 217Link to the text of the note It is thus possible that after a number of years making progress towards reaching a sustainable level of debris, a stroke of bad luck could rapidly undo such progress and unleash the dreaded Kessler Syndrome. 218Link to the text of the note

# 1NC—Collisions

#### Uncertainty from debris collisions creates restraint not instability.

MacDonald 16, B., et al. "Crisis stability in space: China and other challenges." Foreign Policy Institute. Washington, DC (2016). (senior director of the Nonproliferation and Arms Control Project with the Center for Conflict Analysis and Prevention)//Elmer

In any crisis that threatens to escalate into major power conflict, political and military leaders will face uncertainty about the effectiveness of their plans and decisions. This uncertainty will be compounded when potential conflict extends to the space and cyber domains, where weapon effectiveness is largely untested and uncertain, infrastructure interdependencies are unclear, and damaging an adversary could also harm oneself or one’s allies. Unless the stakes become very high, no country will likely want to gamble its well-being in a “single cosmic throw of the dice,” in Harold Brown’s memorable phrase. 96 The novelty of space and cyber warfare, coupled with risk aversion and worst-case assessments, could lead space adversaries into a situation of what can be called “hysteresis,” where each adversary is restrained by its own uncertainty

#### No Escalation over Satellites:

#### 1] Planning Priorities

Bowen 18 Bleddyn Bowen 2-20-2018 “The Art of Space Deterrence” <https://www.europeanleadershipnetwork.org/commentary/the-art-of-space-deterrence/> (Lecturer in International Relations at the University of Leicester)//Elmer

Space is often an afterthought or a miscellaneous ancillary in the grand strategic views of top-level decision-makers.

#### 2] Military Precedent

Zarybnisky 18, Eric J. Celestial Deterrence: Deterring Aggression in the Global Commons of Space. Naval War College Newport United States, 2018. (Senior Materiel Leader at United States Air Force)//Elmer

PREVENTING AGGRESSION IN SPACE While deterrence and the Cold War are strongly linked in the public’s mind through the nuclear standoff between the United States and the Soviet Union, the fundamentals of deterrence date back millennia and deterrence remains relevant. Thucydides alludes to the concept of deterrence in his telling of the Peloponnesian War when he describes rivals seeking advantages, such as recruiting allies, to dissuade an adversary from starting or expanding a conflict.6F 6 Aggression in space was successfully avoided during the Cold War because both sides viewed an attack on military satellites as highly escalatory, and such an action would likely result in general nuclear war.7F 7 In today’s more nuanced world, attacking satellites, including military satellites, does not necessarily result in nuclear war.

#### 3] 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.

#### 4] If we don’t have sufficient data we move the satellite to ‘lost’ category

Hoots ’15 [Felix; Fall 2015; Distinguished Engineer in the System Analysis and Simulation Subdivision, Ph.D. in Mathematics from Auburn University, M.S. in Mathematics from Tennessee Tech University; Crosslink, “Keeping Track: Space Surveillance for Operational Support,” <https://aerospace.org/sites/default/files/2019-04/Crosslink%20Fall%202015%20V16N1%20.pdf>; RP]

The JSpOC tasks these sensors to track specific satellites and to record data such as time, azimuth, elevation, and range. This data is used to create orbital element sets or state vectors that represent the observed position of the satellite. The observed position can then be compared with the predicted position. The dynamic models used for predicting satellite motion are not perfect; factors such as atmospheric density variation caused by unmodeled solar activity can cause the predicted position to gradually stray from the true position. The observations are used to correct the predicted trajectory so the network can continue to track the satellite. This process of using observations to correct and refine an orbit in an ongoing feedback loop is called catalog maintenance, and it continues as long as the satellite remains in orbit. Ideally, the process is automatic, with manual intervention only required when satellites maneuver or get near to reentry due to atmospheric drag.

Sometimes, however, more effort is required. For example, a sensor may encounter a satellite trajectory that does not correspond well to anything in the catalog. Such observations are known as partially correlated observations if they are somewhat close to a known orbit or uncorrelated observations (or uncorrelated tracks) if they are far from any known orbit. Also, if a satellite is not tracked for five days, it is placed on an attention list for manual intervention. In that case, an analyst will attempt to match the wayward satellite to one of these partially correlated or uncorrelated tracks. If that effort succeeds, then the element sets are updated, and the object is returned to automatic catalog maintenance. On the other hand, if the satellite cannot be matched to a partially correlated or uncorrelated track, the satellite information continues to age. If it reaches 30 days without a match, the satellite is placed on the lost list.

One of the most visible uses of the catalog is to warn about collision risks for active payloads. This function predicts potential close approaches three to five days in advance to allow time to plan avoidance maneuvers, if necessary. Unplanned maneuvers may disturb normal operations and deplete resources for future maneuvers, so one would like to have high confidence in the collision-risk predictions. The reliability of the predictions depends directly on the accuracy of the orbit calculation, which in turn depends on the quality and quantity of the tracking data, which is limited by the capability of the Space Surveillance Network. Simply put, there are not enough tracking resources in the network to achieve high-quality orbits for every object in the catalog. Furthermore, many smaller objects can only be tracked by the most sensitive radars, and this tracking is infrequent. Most objects in the catalog are considered debris, which can neither maneuver nor broadcast telemetry. On the other hand, some satellite operators depend exclusively on the satellite catalog to know where their satellites are, and users of the satellite orbital data depend on the catalog to know when the satellites will be within view.

This situation creates a challenging problem in balancing Space Surveillance Network resources to support the collision-warning task (tracking as many potential hazards as possible) while also providing highly accurate support to operational satellites (tracking the spacecraft as precisely as possible). The practical solution is to perform collision risk assessment using a large screening radius to ensure no close approaches are missed despite lower-quality predictions. Once an object is identified as having a potentially close approach, then the tasking level is raised, with the expectation that more tracking data will be obtained to refine the collision risk calculations. When the danger has passed, the object reverts to a normal tracking level.

Collisions and spontaneous breakups do happen. The first satellite breakup occurred on June 29, 1961, when residual fuel in an Ablestar rocket body exploded, creating 296 trackable pieces of debris. Since that time, there have been more than 200 satellite breakups, the most notable being the missile intercept of the Fengyun-1C satellite, which created more than 3300 trackable fragments. In most cases, these breakups are first detected by the phased-array radars in the Space Surveillance Network. When multiple objects are observed where only one was expected, the downstream sensors are alerted, but no tasking is issued because specific debris orbits are not yet established. Tracks are taken and tagged as uncorrelated. Analysts at JSpOC then attempt to link uncorrelated tracks from different sensors to form a candidate orbit. Subsequent tracking improves the orbit to the point that the object can be named and numbered and moved into the catalog for automatic maintenance.

#### But debris is good—

#### Satellite loss shuts down global fracking

Les Johnson 13, Deputy Manager for NASA's Advanced Concepts Office at the Marshall Space Flight Center, Co-Investigator for the JAXA T-Rex Space Tether Experiment and PI of NASA's ProSEDS Experiment, Master's Degree in Physics from Vanderbilt University, Popular Science Writer, and NASA Technologist, Frequent Contributor to the Journal of the British Interplanetary Sodety and Member of the American Institute of Aeronautics and Astronautics, National Space Society, the World Future Society, and MENSA, Sky Alert!: When Satellites Fail, p. 99-105

Energy, environment, farming, mining, land use. All of these areas and more are now inextricably linked to satellite data and would be devastated should that flow of data stop.

#### Fracking makes extinction inevitable---try-or die to shut it off

Rev. Mac Legerton 18, Co-Founder and Executive Director of the Center for Community Action, Member of the Board of Directors of the NC Climate Solutions Coalition, Member of the Board of Directors of the Windcall Institute, “Will The U.S. Blaze A Trail To Mass Extinction?”, APPPL News, 1/15/2018, https://www.apppl.org/news/will-the-u-s-blaze-a-trail-to-mass-extinction/

As an elder, I now realize that there is even a greater threat to humanity and life on Earth than nuclear war—though, unlike a nuclear exchange, this threat is a slow-motion catastrophe. Can you guess what it is? Here’s a clue: it is something with which most people don’t have a personal relationship. Tragically, some persons remain in total denial of its validity, much less its present danger. And that’s the problem – that’s why this threat needs to be more seriously addressed on the local, state, national, and international level.

What is it? It’s the slow-motion but rapidly growing catastrophe of climate change. There’s now good news amidst this seemingly overwhelming challenge. But the answer may surprise you. Today we know what is the #1 preventable cause of climate change. It’s not coal, it’s not nuclear, and it’s not oil and gasoline. It’s actually the use of the very fuel that is touted as being cleaner, greener, and cheaper than all the rest. This fuel is called “Natural Gas”.

Let’s start with its name – “Natural Gas”. What is “natural gas”? There’s actually nothing “natural” about it when it is forcibly extracted from the ground through hydraulic fracturing, commonly known as “fracking”. When something is forcibly ruptured from deep within the earth with the use of toxic chemicals, the last name you would use for it is “natural”.

Fracking disrupts the geologic fault lines causing earthquakes, uses millions of gallons of fresh water that becomes permanently poisoned by unknown, cancer-producing chemicals added to it, creates air pollution during the drilling process, increases the risk of injury and explosions, raises major health risks to both people and place in close proximity to it, and changes the nature of both neighborhoods and landscapes. Fracking also leaves a massive carbon footprint of drilling wells as deep as 8,000 feet and then drilling horizontally over 10,000 feet; On top of all this, it leaks major amounts of gas into the environment.

So, what is this gas? It is 90-95% methane gas which is a hydrocarbon compound made up of one carbon atom and four hydrogen atoms (CH4). It releases carbon into the atmosphere and produces carbon dioxide (C02) just like coal does when it is burned. Methane is not its trace element–it is its undisputed compound of this fossil fuel product. If a compound is 90-95% of a product, it makes sense to call it by that name. Doesn’t it? Well, actually not if you want people to believe and think that it is something that it is not. It is un-natural methane gas produced under massive and highly toxic pressure and hazardous conditions.

Now that we know what this gas is, what does it do to the atmosphere and climate that is so dangerous? This hydrocarbon has properties that block the radiation of heat from Earth’s surface 100 times more effectively than CO2 (released from burning coal) during its first 10 years of release and 86 times more effectively in its first 20 years. Because of the climate emergency underway, the first 10 or 20 years matter most.

When utility companies and the larger fossil fuel companies state that they are committed to lowering carbon emissions, this just isn’t true. They are radically escalating the most dangerous and worst of all fossil fuels in relation to its impact on the climate. Now the industry wants to expand production of methane gas all over the world by calling it “the most environmentally friendly fossil fuel”and a “bridge fuel” that we can safely use until we transition to 100% renewable energy sources.

Why would a major business industry want to call its product by another name? Perhaps for the same reason that the tobacco industry did not like the term “coffin nails” or “cancer sticks” for cigarettes. Honestly, there’s a striking similarity between what are called cigarettes and natural gas. When both were produced and named, their harm was not fully known. Once the industries promoting them learned of their significant harm, they did everything they could to hide this knowledge from the public. They even hired scientists to deny their dangers. The tobacco industry was eventually sued, the truth was acknowledged, and billions of dollars were paid out in the tobacco settlement.

This same scenario that occurred with the tobacco industry needs to occur with methane gas and the fossil fuel industry. The major difference in these two scenarios is that that this fossil fuel product doesn’t just threaten the lives of individuals who voluntarily breathe it in – it threatens the lives of not only every human being, but also all life on the planet. The outcome of this scenario needs to be a moratorium and eventual end to all use of methane gas as an energy source. For the sake of all of us, our communities, and world, the sooner the better. This abomination is different. There is no time to waste.

# 1NC—Astronomy

#### Chance of asteroids is tiny and no extinction

Robert **Walker 16**. Software Developer of Tune Smithy, Wolfson College, Oxford. 12-14-2016. "Why Resilient Humans Would Survive Giant Asteroid Impact." Science 2.0. https://www.science20.com/robert\_inventor/we\_wont\_go\_extinct\_after\_a\_major\_asteroid\_impact\_even\_96\_of\_species\_extinct\_0\_chance\_of\_humans\_extinct-187383

This is something you hear said so often - that we risk being hit by an asteroid that could make humans extinct. But do we really? This is the article I’m commenting on, a recently breaking news story: Earth woefully unprepared for surprise comet or asteroid, Nasa scientist warns. Some are already worrying that it means that we are all due to die in the near future from an asteroid impact. Well, no, it doesn't mean that. So, what is the truth behind it? The source of all this is a comment by Dr Joseph Nuth who warns: “But on the other hand they are the extinction-level events, things like dinosaur killers, they’re 50 to 60 million years apart, essentially. You could say, of course, we’re due, but it’s a random course at that point.” Photograph of comet Siding Spring by Hubble - right hand image is more processed. This comet did a close flyby of Mars and at one point was predicted to have a tiny chance of hitting Mars. In the end it missed Mars by more than a quarter of the distance from Earth to the Moon If you read the rest of the article, it’s a worthy goal, to prepare us for asteroid impacts of all sizes from the small Chelyabinsk one up to really large 10 km ones. There are a number of things potentially confusing about this statement however, if you read it as a non scientist. Although there is a risk of “mass extinction” if a large asteroid hit Earth, “mass extinction” there doesn’t mean “extinction of humans”, we are such a resilient species that we would certainly survive a giant asteroid impact. We are not “due” an extinction at all. Next giant impact is most likely to happen many millions of years into the future. As we'll see, there is almost zero chance of a giant impact in the next century. There is however much we can do to protect ourselves from smaller asteroids. As a result of extensive asteroid surveys over the last couple of decades: We can be pretty sure (as in perhaps 99.999999% sure) that there isn’t an extinction level asteroid headed our way in the next century. We know the orbits of all the Near Earth Asteroids that could do this and none will hit Earth over that timescale. That leaves comets, and the chance of that is something like 1 in 100 million per century, as a very rough guess (since 99% of the impacts are thought to be from asteroids). This risk has been pretty much retired due to the automated asteroid searches by the likes of Pan STARRS. But the chance of a smaller asteroid impact is still high enough to make it worth working on it, especially since this is the one natural hazard we can not only predict to the minute, decades in advance, with enough information but also prevent also, given a long enough timeline. We are already close to completing the survey of 1 km asteroids (90% done). With a bit more funding we could also find most of the asteroids down to 45 meters in diameter. As a result of new developments in the science of asteroid detection, this could be done for a cost of only $50 million to protect the entire Earth. We would then be able to deflect asteroids decades before they are due to hit, which is a far easier task than a last minute deflection. First when he said "You could say, of course, we’re due, but it’s a random course at that point.”" - that is a scientist speaking as a scientist. But of course people sharing this on social media, retweeting, writing new stories about it, pick up the “we are due” and omit the scientific qualification “but it’s a random course at that point”. To say that we are “due” a mass extinction is a bit like saying that after you throw nine heads, you are due to throw a tail. Not true. The chance that the next coin toss is a tail is always going to be 50/50 for a fair coin no matter how many heads you throw. It's the same with extinctions. So long as it is a random process, then an extinction that happens every 60 million years could happen tomorrow or it could be 60 million years or 120 million years before it happens. On average we would still expect to wait 60 million years for the next such mass extinction even if the last one happened hundreds of millions of years ago. It’s just as for the coin toss. Same for an extinction event of a size that happens every 100 million years. If you look at the diagram the big five are irregularly spaced. The last one happened 66 million years ago. But they are irregularly spaced so we can't conclude either that we need to wait 44 million years for the next big extinction either. Some scientists have tried to discern a periodicity in the extinctions of perhaps 26 to 30 million years. If they are right then we are due the next extinction perhaps 15 million years or so from now. But that is very controversial and if true, it wouldn’t cover all mass extinctions. At any rate that's so far into the future it makes no difference to us now, if they are right or wrong. We could get a mass extinction in the next few millions of years. But it is nearly impossibly unlikely in the next century.

#### Plus government mega constellations:

#### Forbes 20

https://www.forbes.com/sites/jonathanocallaghan/2020/07/03/uk-government-wins-controversial-bid-for-bankrupt-mega-constellation-firm-oneweb/?sh=2eb0b3b65b9d

**A consortium including the U.K. government has** won an **auction to purchase the bankrupt space internet mega constellation company** OneWeb it has been announced today, Friday, July 3, despite some confusion over what the company’s satellites will actually be used for. The winning $1 billion bid was from a consortium led by Indian conglomerate Bharti Enterprises, with $500 million expected to come from the U.K. government. The U.S. Bankruptcy Court for the Southern District of New York will decide whether to approve the sale by Friday, July 10. “This deal underlines the scale of **Britain’s ambitions** on the global stage,” U.K. Business Secretary Alok Sharma said in a [statement](https://www.gov.uk/government/news/uk-government-to-acquire-cutting-edge-satellite-network). “Our **access to a global fleet of satellites** has the potential to connect millions of people worldwide to broadband, many for the first time, and the deal presents the opportunity to further develop our strong advanced manufacturing base right here in the U.K.”

# 1NC—Sino-Indo war

#### No Sino-India war; India knows the status and relies on China too much that’s why we haven’t and will never see his impact.

https://www.bbc.com/news/world-asia-57234024

On its part**, Delhi realises** that **China is a superior military power and one of its largest trading partners**. W**ithout Chinese imports and investments, many Indian businesses will struggle. India is now desperately importing life-saving medical equipment and medical oxygen equipment from Chinese** entrepreneurs as the country reels from the pandemic. **That's why many are urging both countries to move on** from the current stand-off and **maintain peace and tranquillity along the border**. "I believe this is not a watershed moment in our bilateral relationship, **but it should be a turning point** for us **to** think how we can really **enhance confidence building measures**," Mr Zhou said.