### 1NC – Fairness

#### Our primary argument is that the affirmative should lose today’s debate because they do not defend the resolution, Resolved: the appropriation of outer space by private entities is unjust. Affirmatives that do not defend the topic should lose because the resolution was *negotiated* and *announced in advance*, providing both sides with a reasonable opportunity to prepare to engage one another’s arguments.

#### I offer the following definitions of the words in the resolution:

#### The word ‘Resolved’ indicates a legislative forum; thus, in order to be topical, the affirmative debater must defend the implementation of a policy action that requires states or private entities to recognize the injustice of private appropriation.

Blanche Ellsworth 81, English professor at SFSU and M.A. in English from UC Berkeley, 1/1/1981, *English Simplified*, 4th Edition, cc

A colon is also used to separate 3. THE SALUTATION OF A BUSINESS LETTER FROM THE BODY, Dear Sir Dear Ms. Weiner NOTE: In an informal letter, a comma follows the salutation: Dear Mary, Dear Uncle Jack 4. PARTS OF TITLES, REFERENCES, AND NUMERALS. TITLE: Principles of Mathematics: An Introduction REFERENCE: Luke 3:4—13 NUMERALS: 8:15 PM 5. PLACE OF PUBLICATION FROM PUBLISHER Indianapolis: Bobbs-Merrill 6. THE WORD RESOLVED FROM THE STATEMENT OF THE RESOLUTION. Resolved: That this committee go on record as favoring new legislation.

#### Next, the phrase “appropriation of outer space” by private entities refers to the exercise of exclusive control of space.

TIMOTHY JUSTIN TRAPP, JD Candidate @ UIUC Law, ’13, TAKING UP SPACE BY ANY OTHER MEANS: COMING TO TERMS WITH THE NONAPPROPRIATION ARTICLE OF THE OUTER SPACE TREATY UNIVERSITY OF ILLINOIS LAW REVIEW [Vol. 2013 No. 4]

The issues presented in relation to the nonappropriation article of the Outer Space Treaty should be clear.214 The ITU has, quite blatantly, created something akin to “property interests in outer space.”215 It allows nations to exclude others from their orbital slots, even when the nation is not currently using that slot.216 This is directly in line with at least one definition of outer-space appropriation.217 [\*\*Start Footnote 217\*\*Id. at 236 (“Appropriation of outer space, therefore, is ‘the exercise of exclusive control or exclusive use’ with a sense of permanence, which limits other nations’ access to it.”) (quoting Milton L. Smith, The Role of the ITU in the Development of Space Law, 17 ANNALS AIR & SPACE L. 157, 165 (1992)). \*\*End Footnote 217\*\*]The ITU even allows nations with unused slots to devise them to other entities, creating a market for the property rights set up by this regulation.218 In some aspects, this seems to effect exactly what those signatory nations of the Bogotá Declaration were trying to accomplish, albeit through different means.219

#### Outer Space is considered anything that sits above the Earth’s atmosphere

Betz 21 [(Eric Betz, Science & tech writer for @Discovermag, @Astronomymag and others), “The Kármán Line: Where does space begin?”, Astronomy, https://astronomy.com/news/2021/03/the-krmn-line-where-does-space-begin, March 5, 2021] SS

These days, spacecraft are venturing into the final frontier at a record pace. And a deluge of paying space tourists should soon follow. But to earn their astronaut wings, high-flying civilians will have to make it past the so-called Kármán line. This boundary sits some 62 miles (100 kilometers) above Earth's surface, and it's generally accepted as the place where Earth ends and outer space begins.

#### Private entities are non-governmental corporations

UpCounsel ND [(UpCounsel is an interactive online service that makes it faster and easier for businesses to find and hire legal help solely based on their preferences. “Private Entity: Everything You Need to Know”, UpCounsel, https://www.upcounsel.com/private-entity#importance-of-private-entities, No Date] SS

A private entity can be a partnership, corporation, individual, nonprofit organization, company, or any other organized group that is not government-affiliated. Indian tribes and foreign public entities are not considered private entities.

Unlike publicly traded companies, private companies do not have public stock offerings on Nasdaq, American Stock Exchange, or the New York Stock Exchange. Instead, they offer shares privately to interested investors, who may trade among themselves.

#### Justice implies a desirable departure from the status quo – that means the aff must rectify an unjust social interaction

IHS n.d. [(Institute for Humane Studies at George Mason University, non-profit organization that engages with students and professors) “What is Justice?”] JL

One of the most influential accounts of the origin and nature of justice comes from Plato’s Republic. According to Plato’s account, we can think of the principles of justice as mutually agreed to principles for the coordination and structure of social interaction that would benefit all who are subject to them. What those principles are will depend on the society. In addition, there’s a second theory of justice that Plato offers that’s more general. According to this second theory, justice is “each getting what is rightfully theirs and no one getting what is rightfully another’s.” In other words, questions of justice always ask, “Who has a right to what?”

#### Justice is a policy question

Merriam Webster ND [(Mesrriam Webster) “Justice” https://www.merriam-webster.com/dictionary/justice] BC

Essential Meaning of justice

1: the process or result of using laws to fairly judge and punish crimes and criminals

#### The affirmative does not defend a plan that is consistent with these definitions and should lose on that basis alone. The affirmative does not defend a policy in which states or private entities recognize the private appropriation of space as unjust. Instead, the affirmative defends an abstract methodology of anti-accident politics and the subsequent formation of a movement.

#### Not defending the topic is unfair and uneducational; it makes being negative impossible and gives the aff an unfair advantage in the debate. It also makes it so that the aff never has to learn about the topic, which inhibits education that can be garnered from debating the topic.

#### If the negative was expected to debate an aff that was outside the bounds of the resolution, that would create a disparate impact on under-resourced and minority debaters, who lack the coaching and prep resources to develop arguments in response to every possible idea that could be read as an affirmative

#### A model of debate where the affirmative doesn’t need to defend the topic is terrible for education – Repeated debates over core issues incentivize innovative argument production and improved advocacy based on feedback and nuanced responses from opponents.

#### Moreover, you should presume that all of the arguments the affirmative case makes are false because I have not been able to properly test their truth value as a result of the fact that the aff is completely unpredictable.

### 1NC – Case

#### First, the affirmative case solves nothing – the 1ar is going to claim that you should vote aff because they rupture the foundations of society, but the aff can’t change the material structures that result in technological advancement – they do not explain for voting aff spills up to impact structures of politics writ large – so you can vote neg simply because the aff doesn’t do anything meaningful.

#### Second, tech advancment is inevitable – it is a part of our evolutionary programming that we pursue technological progress – the early humans that were capable of developing fire survived, while those who could not did not survive – if pursuit of technology is inevitable, we should try our best to cultivate it for good. If we ignore it, then that leaves others to use technology for bad things.

## Framing

**Moral uncertainty means preventing extinction should be our highest priority.  
Bostrom 12** [Nick Bostrom. Faculty of Philosophy & Oxford Martin School University of Oxford. “Existential Risk Prevention as Global Priority.” Global Policy (2012)]  
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** nowknow — 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** indeedprofoundly **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.

### Innovation

#### Private space is key to space innovation.

Jaeger 4/12 [(Micheal, a partner and patent attorney in the Electronics, Computing and Physics group at European intellectual property firm, Withers & Rogers looks at what a commercial approach to innovation could mean for the space sector.) “Exploring a new approach to innovation in the space sector,” Aerospace manufacturing, 4/12/21. <https://www.aero-mag.com/exploring-a-new-approach-to-innovation-in-the-space-sector>] RR

Historically, the space sector has relied largely on grants provided by governments and other public bodies to carry out R&D activity. This has directed the focus of innovators to specific research programmes, rather than encouraging more cross-fertilisation of ideas and open innovation. However, increasing private sector investment in recent years has paved the way for more commercially-minded SME innovators.

The self-serving nature of many space industry research programmes, which are set up to meet the needs of specific government-backed briefs, has discouraged start-ups and other new entrants from getting involved. While this approach offered innovators some clear benefits, as they could be certain that they would have the funding they needed to complete their project, there were some significant downsides too. For example, without a more diverse ‘ecosystem’ made up of entrepreneurs and private investors, there was little incentive for innovators to take the risk of participating in a new initiative if it lacked a reliable source of funding.

For many years, this reluctance to take risks resulted in low levels of patent-filing activity, compared to some other fields of tech, as government funding did not require proof of innovative credentials. Inventions were created to order, to meet a research programme’s specific brief, rather than for commercial gain.

Attitudes towards innovation in the global space industry are evolving, however. Sometimes referred to as ‘Space 2.0’, there is a clear move away from purely research-based activities, and greater consumer awareness of research in areas such as space travel, led by some high-profile entrepreneurs, has helped to generate wider interest in this field of R&D. According to UKSpace, the UK’s space industry is worth £14.8 billion to the economy and the Government has set its sights on capturing 10% of the global space market by 2030. This ambitious goal could not be achieved without the involvement of innovative SMEs and private investors, adding value to public-funded research programmes.

Although government funding will remain key to innovators in the space industry, there are now a growing number of dedicated private sector funds and support structures. These include Seraphim, a global leader in SpaceTech investment, and the Catapult network, which assists thousands of innovative businesses across the UK and includes a dedicated Satellite Applications Catapult.

Satellites are a major focus of attention for SME innovators, with many businesses now recognising the commercial potential of nanosatellites, which are commonly launched to low Earth orbit. Previously, satellites were mainly used by large telecommunications companies, and the size of the satellites required large and expensive rockets to launch them. However, nanosatellites mean much smaller rockets can be used, reducing the amount of infrastructure needed and lowering launch costs significantly.

Nanosats can also be built to fulfil specific applications, allowing organisations to develop satellites to meet their particular needs. For example, Earth observation satellites can utilise different electromagnetic spectrums to record photographic data, which can then be used to inform research programmes or leveraged commercially. Climate change is high on the global agenda, so being able to view the Earth’s CO2 emissions from space, and identify major sources, holds considerable value.

Planet, a real-time Earth observation company, has taken this approach and now has over 200 active nanosatellites in space. Known as ‘Doves’, they make up the world’s largest constellation of Earth-imaging satellites, providing transformative data for a variety of industry sectors, from agriculture to finance. Planet has been able to launch satellites quickly and cost effectively by using inexpensive electronics and innovative design, meaning it can now build and launch satellites faster than any other company or government in the world.

#### Space innovation solves extinction – generates ecological survival mechanisms.

Sadedin 17 (Suzanne, PhD in Evolutionary Biology, 10-9, "Will Human Innovation Save Us From Future Extinction?," Forbes, https://www.forbes.com/sites/quora/2017/10/09/will-human-innovation-save-us-from-future-extinction/?sh=773a4f276c65) TDI

Does the human ability to innovate suggest an immunity to total extinction? Yes and no. Currently, innovation reduces our chance of extinction in some ways, and increases it in others. But if we innovate cleverly, we could become just about immune to extinction. The species that survive mass extinctions tend to share three characteristics. They're widespread. This means local disasters don't wipe out the entire species, and some small areas, called refugia, tend to be unaffected by global disasters. If you're widespread, it's more likely that you have a population that happens to live in a refugium. They're ecological generalists. They can cope with widely varying physical conditions, and they're not fussy about food. They're r-selected. This means that they breed fast and have short generation times, which allows them to rapidly grow their populations and adapt genetically to new conditions. Innovation gives humans the ability to be widespread ecological generalists. With technology, we can live in more diverse conditions and places than any other species. And while we can't (currently) grow our populations rapidly like an r-selected species, innovation does allow us to adapt quickly at the cultural level. Technology also increases our connections to one another and connectivity is a two-edged sword. Many species consist of a network of small, local populations, each of which is somewhat isolated from the others. We call this a metapopulation. The local populations often go extinct, but they are later re-seeded by others, so the metapopulation as a whole survives. Humans used to be a metapopulation, but thanks to innovation, we're now globally connected. Archaeologists believe that many past civilizations, such as the Easter Islanders, fell because of unsustainable ecological and cultural innovations. The impact of these disasters was limited because these civilizations were small and disconnected from other such civilizations. These days, a useful innovation can spread around the world in weeks. So can a lethal one. With many of the technologies and chemicals we're currently inventing, we can't be certain about their long-term effects; human biology is complex enough that we often can't be absolutely certain something won't kill us in a decade until we've waited a decade to see. We try to be careful and test things before they're released, and the probability that any particular invention could kill us all is tiny, but since we're constantly innovating, it's a real possibility. Pandemics pose the same problem for a well-connected species. There are certain possibilities where species extinction is really hard to avoid; fortunately, they're also very unlikely, but we are definitely not immune from this. The most likely cause of our extinction, in my opinion, is innovation in machine learning/AI. This could destroy the planet, but even if it doesn't, humans will be ultimately redundant to the dominant systems. They might keep us alive in a zoo somewhere, but I doubt it. A happier scenario (to me at least) is transhumanism, where humans become extinct in a sense because we've managed to liberate ourselves from biology. So how could innovation prevent our extinction? We seed the galaxy with independently evolving human populations to create a new metapopulation. These local populations would hopefully be sufficiently isolated that some would survive an innovation or disaster that wipes out the rest. They would, of course, evolve in response to local conditions, perhaps creating several new species. So you could say this is still extinction, but it's as close as we'll come to persistence in our ever-changing universe.

#### Capitalism and tech innovation solves warming— covid proves.

Friedman 21 [(Thomas L., Mr. Friedman was awarded the 1983 Pulitzer Prize for international reporting (from Lebanon) and the 1988 Pulitzer Prize for international reporting (from Israel). He also won the 2002 Pulitzer Prize for commentary.) “Want to Save the Earth? We Need a Lot More Elon Musks.,” New York Times, 11/16/21. <https://www.nytimes.com/2021/11/16/opinion/glasgow-climate-change.html>] RR

This is not serious — not when you’re talking about reversing all the ways that we have destabilized Earth’s systems, from ice caps and ocean currents to coral reefs and tropical forests to the density of carbon dioxide in the atmosphere. This is pretend.

Serious was how we responded to Covid-19, when it really did feel like the world economy was ending: We fought back with the only tools we have that are as big and powerful as Mother Nature — Father Profit and New Tech.

We combined innovative biotech firms — like Pfizer-BioNTech, Moderna and some small start-ups — with today’s massive computing power and a giant market demand signal, and what did we get? In a little over a year after first being locked down by the virus, I had an effective mRNA vaccine against Covid-19 in my body — followed by a booster!

That was an amazing feat of biotechnology and computerized logistics to develop and deliver vaccines. And I hope the scientists, employees and shareholders of those vaccine innovators make boatloads of money — because it will incentivize others to apply a similar formula to stem climate change.

I have nothing against Glasgow. I admire those leaders who are trying to inspire the world to cut CO2 emissions, preserve biodiversity and hold each other to account. But we will not decarbonize the global economy with a lowest-common-denominator action plan of 195 countries. Not possible.

We will get there only when Father Profit and risk-taking entrepreneurs produce transformative technologies that enable ordinary people to have extraordinary impacts on our climate without sacrificing much — by just being good consumers of these new technologies.

In short: we need a few more Greta Thunbergs and a lot more Elon Musks. That is, more risk-taking innovators converting basic science into tools yet to be imagined to protect the planet for a generation yet to be born.

The good news — it’s happening. Two examples:

The first is Planet.com, which I alluded to briefly in last week’s column from Glasgow. Founded in 2010 by three former NASA scientists based in San Francisco, Planet has some 200 earth-imaging satellites in orbit, most the size of a loaf of bread, to observe the entire global land mass every 24 hours in high resolution — in order to make the changes unfolding on the ground “visible, accessible and actionable.” No government in the world has this capacity.

With these new deep transparency tools we can begin to reshape capitalism. For years, the rules and incentives of capitalism enabled oil and coal companies to extract fossil fuels — and industries to use them — without paying the true cost of the damage they were causing. That was easy to do because nature was hard to value; destruction was often hard to see in real time; and consumers had no tools to react. They had to wait for the courts.

“Capitalism has produced enormous wealth, but in part that’s because it has been able to treat nature as self-replenishing, hyper-abundant and free,” explained Andrew Zolli, Planet’s chief impact officer.

That will not be so easy anymore. Satellites are now “enabling us to put natural capital on every company and every country’s balance sheet,’’ so it will not take account of just your business profits and losses, “but all of your impacts’’ on the environment as well, Will Marshall, one of Planet’s three co-founders and its C.E.O., said to me.

Planet’s satellites plus AI, Marshall explained, can track a country’s trees, farmlands, coral reefs, coastal mangroves and smokestack emissions with incredible precision — down to three meters — and provide transparency to show which trees are being illegally logged by whom and whose factories are violating their carbon dioxide emissions promises.

That data can then be used — in theory — to trigger consumer boycotts, spread through social networks, against the government or the food or mining company doing the damage, or it can stimulate foreign aid or investment in the country or community protecting its natural resources.

For instance, Planet, with a group of scientific and philanthropic partners, has helped create a detailed map — the Allen Coral Atlas — of all the world’s remaining coral reefs. The Philippines is using the atlas’s data about sea grass to plan nine new marine-protected areas throughout the country. At the same time, in a partnership paid by Norway, Planet is tracking deforestation in 64 tropical rainforest countries, including Brazil. Using Planet’s pinpoint accuracy, the Brazilian government has vastly increased the number of cease-and-desist citations against illegal loggers, according to Planet’s Brazilian partner, MapBiomas.

Even more important, Marshall said, is how Planet’s commercial business also helps by, for example, enabling farmers to do precision agriculture by giving them fine-grain images of their crops so they know exactly where to add water and fertilizer or when to harvest. “This may have the biggest ecosystem impact of all,” he said. More efficient crop yields that use less water and fewer fertilizers end up “reducing the need to plow up more tropical forest and strengthens the environment generally.”

The other company I am watching is Helion Energy, based in Redmond, Wash., which is working on “the world’s first fusion power plant.” Fusion energy has long been the holy grail for clean power generation — and it always seems 20 years away. As the International Atomic Energy Agency notes on its website: “The sun, along with all other stars, is powered by a reaction called nuclear fusion. If nuclear fusion can be replicated on earth, it could provide virtually limitless clean, safe and affordable energy.”

Last June, as the website New Atlas reported, Helion published results confirming that its latest system had managed to heat a fusion plasma to a temperature over 100 million degrees Celsius, “which is significant, since it’s around the point at which there’s enough thermal energy to create large amounts of fusion.”

On Nov. 5, in the midst of Glasgow, Helion, across the Atlantic in Redmond, announced that it had raised $500 million in new financing in a round led by Sam Altman, C.E.O. of OpenAI and former president of Y Combinator, along with a Who’s Who of tech entrepreneurs.

The current generation of Helion’s system, Techcrunch.com reported, “wouldn’t be able to replace your Tesla Powerwall and solar panels — the size of a generator is roughly the size of a shipping container. But at 50 megawatts, the generators could power around 40,000 homes.” As New Atlas pointed out, “Helion projects it will generate electricity at rock-bottom prices of around $10 per MWh … less than a third the price of coal-fired power or today’s solar PV installations.”

Is Helion THE holy grail? Don’t know. There are other companies with promising approaches — like Commonwealth Fusion Systems — all racing to the same goal. I just know this: We got into this hole thanks to the worst of capitalism — letting companies privatize their gains from despoiling the environment and warming the climate — while socializing the losses among all of us.

We can get out of it, in part, by accelerating the best of American capitalism. We need to re-energize our innovation ecosystem to where government funds basic research that pushes the boundaries of physics, chemistry and biology and then combines that innovation with immigration policies that amass the world’s best pools of engineering talent and then unleashes that talent — propelled by risk-takers — to invent new clean technologies to slow global warming at the warp speed and scale we need.