Space Aff Case

I affirm the resolution resolved: The appropriation of outer space for private entities is unjust.

Before I read my case, I would like to offer the following definitions

Outerspace: the physical universe beyond the earth's atmosphere.- oxford languages
Private entity: any person or private group - Cornell
Unjust: not based on or behaving according to what is morally right and fair- Merriam Webster
Appropriation: the act of taking or using in an unfair/illegal way- merriam webster

My single standard is ecocentricism

Prefer for two reasons

Ecocentrism is essential in solving environmental crisis and pushing us away from human first thinking.

Kopnina et Al 2017 Cryer, Paul, Kopnina, Helen, Piccolo, John J., Taylor, Bron, Washington, Haydn July 4, 2017 https://mahb.stanford.edu/blog/statement-ecocentrism/ [Wrench]

"We believe that **ecocentrism**, through its recognition of humanity's duties towards nature, **is central to solving our unprecedented environmental crisis. Its importance is for multiple reasons**: In ethical terms: **ecocentrism expands the moral community (and ethics) from being just about ourselves. It means we are not concerned *only* with humanity; we extend respect and care to all life, and indeed to terrestrial and aquatic ecosystems themselves.** In evolutionary terms: **ecocentrism reflects the fact *Homo sapiens* evolved out of the rich web of life on Earth** - a legacy stretching back an almost unimaginable 3.5 billion years. **Other species literally are our cousins and relatives** (close and distant), **recognition of a *biological kinship* that many have recognized confers moral responsibilities toward all species.** In spiritual terms: Many people and some societies have developed ecocentric moral sentiments. There is increasing evidence that ecocentric values are being fused into nature-based, ecocentric spiritualities, many of which are innovative and new. With such spiritualities, even people who are entirely naturalistic in their worldviews, often speak of the Earth and its ecosystems as 'sacred' and thus worthy of reverent care and defense. In ecological terms: **ecocentrism reminds us that**

all life is interdependent and that *both* humans and nonhumans are absolutely dependent on the ecosystem processes that nature provides. "

In pushing us away from anthropocentric ideologies is good; An human first or anthropocentric worldview abdicates us of our moral responsibility to prevent ecocide and species extinction

Kopnina, 16 (Helen, PhD, researcher and lecturer at The Hague University of Applied Science, "Nobody Likes Dichotomies (But Sometimes You Need Them)," Anthropological Forum, 2016) http://dx.doi.org/10.1080/00664677.2016.1243515 //cb

Anthropocentric Bias An anthropocentric bias extends to poaching and to dislocation, since critics of conservation do not discuss non-human displacements or indeed colonisation in a broader sense. The defining characteristic of 'colonisation' in general, along with the increase of social inequalities, is the ever-greater instrumentalism in human engagements with non-human inhabitants (Strang 2016). This entails the self-proclaimed right to undermine another species' very existence and the evolutionary unfolding in the noble quest for social justice (Kopnina 2012a, 2012b, 2014a; Cafaro and Primack 2014), in effect **condoning 'nonhuman genocide'** (Crist 2012, 140). Accusations that conservationists are 'out of control' to save the near-extinct species (Büscher 2015) **testifies to a robust anthropocentric bias, and a refusal to acknowledge the legal repercussions of ecocide** (Higgins 2010). **The perpetuation of social inequality and the increasing extinctions of non-human species fundamentally alter the ethics of anthropological practice. These ethics are subject to value judgements – of what or who is accorded rights, and in what proportion.** Caplan (2003) has argued that extreme cultural relativity (in which it is possible, for example, to ignore major abuses of human rights) is an abdication of moral responsibility. By the same token, presenting even the concern over loss of biodiversity as a social construction of sentimental elites, or by profit-seeking neo-colonial regimes, **abdicates moral responsibility to non-humans.** The proponents of social justice keep perpetuating the dichotomies between the indigenous communities and the Western elites (e.g. Chapin 2004), or between poor rural peasants and neoliberal conservationists (e.g. Holmes 2013). However, historically, protected areas were rarely created to benefit particular groups of people (such as tourists), because most national parks have been established for the people, everywhere in the world, and not just in post-colonial nations (e.g. Doak et al. 2015). In fact, national parks can be seen as protecting cultural identity against severe changes to the local environment, such as logging. As Brosius (1999, 39) has noted in the case of Penan in Malaysia, 'logging not only undermines the basis of Penan subsistence but, by transforming sites with biographical, social, and historical significance, also destroys those things that are iconic of their existence as a society'. **Conservation** does not threaten people's liberty, as Fletcher (2009) would have it – rather it **enables one to live in a world of natural richness.** In the words of Wakild (2015, 44):

Contention 1: Space travel causes an unhealthy amount of debris

Subpoint A: By allowing more space travel, debris will multiply

O'Callaghan 21, Jonathan O'Callaghan, "What is space junk and why is it a problem?"

(O'Callaghan 21) Some space junk results from collisions or anti-satellite tests in orbit. When two satellites collide, they can smash apart into thousands of new pieces, creating lots of new debris. This is rare, but several countries including the USA, China and India have used missiles to practice blowing up their own satellites. This creates thousands of new pieces of dangerous debris which can enter the ecosystem.

Subpoint B: This debris does not just pose a threat to space, but Earth as well.

Luke 21, Charlotte Luke, "What is Space Junk and How does it affect the Environment," September 6, 2021
https://earth.org/space-junk-what-is-it-what-can-we-do-about-it/

(Luke 21) A proportion of the space junk in low Earth orbit will gradually lose altitude and burn up in Earth's atmosphere; larger debris, however, can occasionally impact with Earth and have detrimental effects on the environment. For example, debris from Russian Proton rockets, launched from the Baikonur cosmodrome in Kazakhstan, litters the Altai region of eastern Siberia. This includes debris from old fuel tanks containing highly toxic fuel residue, unsymmetrical dimethylhydrazine (UDMH), a carcinogen which is harmful to plants and animals. While efforts are made to contain fallout from launches within a specified area, it is extremely difficult to achieve completely.

Contention 2: Space travel also has a recognizable impact on carbon emissions

Subpoint A: Travel emissions; A single rocket launch has significant carbon emission

Gammon 21, Katherine Gammon, "How the Billionaire space race could be one giant leap for pollution," July 19, 2021

https://www.theguardian.com/science/2021/jul/19/billionaires-space-tourism-environment-emissions

(Gammon 21) The carbon emissions from rockets are small compared with the aircraft industry, she says. But they are increasing at nearly 5.6% a year, and Marais has been running a simulation for a decade, to figure out at what point will they compete with traditional sources we are familiar with. For one rocket launch 200-300 tonnes of carbon dioxide are split between 4 or so passengers, according to Marais. But emissions from rockets are emitted right into the upper atmosphere, which means they stay there for a long time: two to three years. Even water injected into the upper atmosphere – where it can form clouds – can have warming impacts, says Marais. "Even something as seemingly innocuous as water can have an impact." Closer to the ground, all fuels emit huge amounts of heat, which can add ozone to the troposphere, where it acts like a greenhouse gas and retains heat. In addition to carbon dioxide, fuels like kerosene and methane also produce soot. And in the upper atmosphere, the ozone layer can be destroyed by the combination of elements from burning fuels.

Space tourism and increased number of flights has an unreasonable negative ecological footprint

Heilweil 21, Rebecca Heilweil, "How bad is private space tourism for the environment," July 25, 2021

https://www.vox.com/recode/22589197/space-travel-tourism-bezos-branson-rockets-blue-origin-virgin-galactic-spacex

(Heilweil 21) The emissions of a flight to space can be worse than those of a typical airplane flight because just a few people hop aboard one of these flights, so the emissions per passenger are much higher. That pollution could become much worse if space tourism becomes more popular. Virgin Galactic alone eventually aims to launch 400 of these flights annually. A study from 2010 found that the soot released by 1,000 space tourism flights could warm Antarctica by nearly 1 degree Celsius. "There are some risks that are unknown," Paul Peeters, a tourism sustainability professor at the Breda University of Applied Sciences, told Recode. "We should do much more work to assess those risks and make sure that they do not occur or to alleviate them somehow — before you start this space tourism business." Overall, he thinks the environmental costs are reason enough not to take such a trip.

Subpoint B: Increased Carbon Emissions only increases Climate Change

EPA No Date [Environmental Protection Agency "Causes of Climate Change" No date accessed 23-12-2021 https://www.epa.gov/climatechange-science/causes-climate-change] Wrench

Since the Industrial Revolution, **human activities have released large amounts of carbon dioxide and other greenhouse gases into the atmosphere, which has changed the earth's climate.** Natural processes, such as changes in the sun's energy and volcanic eruptions, also affect the earth's climate. However, they do not explain the warming that we have observed over the last century. Scientists have pieced together a record of the earth's climate by analyzing a number of indirect measures of climate, such as ice cores, tree rings, glacier lengths, pollen remains, and ocean sediments, and by studying changes in the earth's orbit around the sun.2 This record shows that the climate varies naturally over a wide range of time scales, but this variability does not explain the observed warming since the 1950s. Rather, it is extremely likely (> 95%) that human activities have been the dominant cause of that warming.3 **Human activities have contributed substantially to climate change through: Greenhouse Gas Emissions,** Reflectivity or Absorption of the Sun's Energy. Concentrations of the key greenhouse gases have all increased since the Industrial Revolution due to human activities. Carbon dioxide, methane, and nitrous oxide concentrations are now more abundant in the earth's atmosphere than any time in the last 800,000 years.4 **These greenhouse gas emissions have increased the greenhouse effect and caused the earth's surface temperature to rise.** Burning fossil fuels changes the climate more than any other human activity. **Carbon dioxide: Human activities currently release over 30 billion tons of carbon dioxide into the atmosphere every year.5 Atmospheric carbon dioxide concentrations have increased by more than 40 percent since pre-industrial times, from approximately 280 parts per million (ppm) in the 18th century6 to 414 ppm in 2020.**7

Subpoint C: Climate Change Causes Extinction

Romàn-Palacios and Wiens 2020 [Cristian Román-Palacios, John J. Wiens Recent responses to climate change reveal the drivers of species extinction and survival Proceedings of the National Academy of Sciences Feb 2020, 117 (8) 4211-4217; DOI: 10.1073/pnas.1913007117] Wrench

In summary, our study identifies the **specific climatic factors that are associated with the widespread local extinctions that have already occurred due to anthropogenic climate change.** We find that **the absolute increases in hottest temperatures during the year are most strongly associated with local extinction, more so than changes in precipitation or in other temperature-related variables.** Our results also show that mean annual temperatures might be misleading about the impacts of climate change, given that local extinctions were most common at sites where increases in this variable are smaller, not larger.

Extinction of one species leads to a domino effect destroying ecosystems

Noseworthy 14 – forester and conservation biologist working in the Atlantic Region for the Nature Conservancy of Canada (Josh, "The Jenga theory of biodiversity: The tipping point of ecosystems and the diversity of species" http://www.natureconservancy.ca/en/blog/the-jenga-theory-of.html)–

(Noseworthy 14) With only 20 seconds left of a roughly seven-minute interview, I ended up using a metaphor of Jenga — that surprisingly simple game that gives you just enough anxiety to make it fun. I described how each species can be seen as a block in the tower. If you take a block out (representing species extinction) it might not make the tower fall, but it does make it weaker. Every block removed increases the chances of the tower collapsing by taking away the support of the blocks that remain, and also by shifting the balance of the tower as a whole. After a while it doesn't take much to knock the whole thing down. The final blow might be the removal of that all-important block, or it might be caused by outside forces — a wobbly table, a heavy breather, or maybe just a fault in one of the blocks that went unnoticed. The resilience of the Jenga tower becomes increasingly compromised, and everyone sitting around the table knows that someone will eventually be responsible for a disorderly pile of blocks (amidst squeals of delighted laughter by those that aren't responsible, of course). Sea otter, Vancouver Aquarium (Photo by Wikimedia Commons, Stan Shebs) Sleeping sea otter at the Vancouver Aquarium (Photo by Wikimedia Commons, Stan Shebs) Probably the most well known "block" relevant to the topic of biodiversity is the sea otter. The "tower" that the Sea otter supported was the kelp forest ecosystem of pacific North America. After being driven close to extinction by early European explorers, the lack of sea otters allowed sea urchins, their favourite food, to explode in numbers, which in turn caused the disappearance of the kelp forests. Sea urchins munched these kelp beds into oblivion since the otters weren't around to control the urchin population, which then resulted in the disappearance of all the other marine life that depended on the kelp beds as habitat, from shrimp to whales. We know this because fortunately, remnant populations of sea otters were discovered before it was too late, and the impacts of their reintroduction to their natural habitat were recorded. After putting the otters back, the rich kelp forest ecosystem with all its diversity of creatures began to return (albeit slowly), including those that are commercially important for people (we're just another block, after all). On the island of Mauritius in the Indian Ocean, previously home to the infamous dodo bird, there was once a species of 600-pound tortoise. The story goes that when Dutch sailors first arrived on the island in 1638 there were so many tortoises that they could walk exclusively on the turtles' backs without touching the ground (a bit of a stretch most likely, but you get the idea). Then they ate them all — every last one. The extinction did not seem to have any obvious impacts on the surrounding ecosystem, until in the 1970s researchers began to notice that the native tree species (which can live for centuries) were not reproducing and were becoming threatened by extinction. If the trees were lost, so would be the insect pollinators, the birds that fed on their foliage, the bats that roosted in their branches and the orchids that grew in their canopies. After some frantic research, it turned out those trees needed their fruit to pass through the gut of a tortoise in order to germinate. No tortoise, no trees. In a desperate and controversial attempt to reverse the decline, a similar species of tortoise was relocated from a nearby island with some promising results. Although there are still no guarantees of success due to the unknowns surrounding the ecology of both the tortoise and the tree species, it goes to show how the removal of a seemingly unnecessary block could have huge repercussions down the road. Whether the impacts of extinction happen right away or centuries later, they will undoubtedly happen. No species stands alone, and the loss of one will always have some form of impact on others, often in a chain reaction. We've only scratched the surface of discovering the interconnectedness within ecosystems; in many cases we know nothing at all. What we do know however, is that at the end of the day resilient ecosystems — those that are best suited to remain stable and continuously provide us with goods and services — are the ones that maintain their full diversity.

For these reasons I affirm and stand open for cross-x.