### First: Fwk

**I Negate, Resolved: The appropriation of outer-space by private entities is unjust.**

**I value justice**

**Thus the value criterion is maximizing expected well-being.**

**Governments first obligation is to its own citizens, and accordingly must make decisions that are in the best interests of all their citizens, including those who are most vulnerable. Util provides the means of doing that as it is the only moral system available to policymakers.**

**Public policy-makers must look at the util first because they act on behalf of a collective body.**

**Woller 97’** Gary, Brigham Young University, “A Forum On The Role of Environmental Ethics in Restructuring Environmental Policy and Law for the Next Century”, Policy Currents, 1997 HSLA//SC

Moreover, virtually all public policies entail some redistribution of economic or political resources, such that one group's gains must come at another group's ex- pense. Consequently, public **policies** in a democracy **must be justified to the public**, and especially to those who pay the costs of those policies. Such justification cannot simply be assumed a priori by invoking some higher-order moral principle. Appeals to a priori moral principles, such as environmental preservation, also often fail to acknowledge that public policies inevitably entail trade-offs among competing values. **Thus** since policymakers cannot justify inherent value conflicts to the public in any philosophical sense, and since public policies inherently imply winners and losers, **the policymakers' duty to the public** interest **requires them to demonstrate that th**e redistributive **effects** and value trade-offs **implied by their polices are** somehow **to the overall advantage of society**. At the same time, deontologically based ethical systems have severe practical limitations as a basis for public policy. At best, a priori moral principles provide only general guidance to ethical dilemmas in public affairs and do not themselves suggest appropriate public policies, and at worst, they create a regimen of regulatory unreasonableness while failing to adequately address the problem or actually making it worse. For example, a moral obligation to preserve the environment by no means implies the best way, or any way for that matter, to do so, just as there is no a priori reason to believe that any policy that claims to preserve the environment will actually do so. Any number of policies might work, and others, although seemingly consistent with the moral principle, will fail utterly. That deontological principles are an inadequate basis for environmental policy is evident in the rather significant irony that most forms of deontologically based environmental laws and regulations tend to be implemented in a very utilitarian manner by street-level enforcement officials. Moreover, ignoring the relevant costs and benefits of environmental policy and their attendant incentive structures can, as alluded to above, actually work at cross purposes to environmental preservation. (There exists an extensive literature on this aspect of regulatory enforcement and the often perverse outcomes of regulatory policy. See, for example, Ackerman, 1981; Bartrip and Fenn, 1983; Hawkins, 1983, 1984; Hawkins and Thomas, 1984.) Even the most die-hard preservationist/deontologist would, I believe, be troubled by this outcome. The above points are perhaps best expressed by Richard Flathman, The number of values typically involved in public policy decisions, the broad categories which must be employed and above all, the scope and complexity of the consequences to be anticipated militate against reasoning so conclusively that they generate an imperative to institute a specific policy. It is seldom the case that only one policy will meet the criteria of the public interest (1958, p. 12). It **therefore** follows that in a democracy, **policymakers have an ethical duty to establish** **a** plausible link between **policy alternatives** and the problems they address, **and the public must be** reasonably **assured that a policy will actually do something about an existing problem;** this requires the means-end language and methodology of utilitarian ethics. Good intentions, lofty rhetoric, and moral piety are an insufficient though perhaps at times a necessary, basis for public policy in a democracy

## C1: Economy

#### **Private Companies** (Said private companies would not exist without the prospect of appropriation) **with appropriation in their mission like Space-X promote the economy by giving numerous jobs to those in smaller cities, and they are enriching small city economies with high salaries**

#### Private Companies with the goal of appropriation greatly and positively impact the Earth Economy

**Weinzierl and Sarang 21 (Matt Weinzierl and Mehak Sarang 2021 The Commercial Space Age is Here** [**https://hbr.org/2021/02/the-commercial-space-age-is-here**](https://hbr.org/2021/02/the-commercial-space-age-is-here)**)**

Last year, however, we crossed an important threshold: For the first time in human history, humans accessed space via a vehicle built and owned not by any government, but by **a private corporation with its sights set on affordable space settlement.** It was the first significant step towards building an economy both in space and for space. The implications — for business, policy, and society at large — are hard to overstate. **In 2019,**[**95%**](https://brycetech.com/reports)**of the estimated $366 billion in revenue earned in the space sector was from the**space-for-earth**economy:** that is, goods or services produced in space for use on earth. The space-for-earth economy includes telecommunications and internet infrastructure, earth observation capabilities, national security satellites, and more. **This economy is booming,** and though [research shows](https://hbsp.harvard.edu/product/716037-PDF-ENG) that **it faces the challenges of overcrowding and monopolization that tend to arise whenever companies compete for a scarce natural resource,**[projections for its future](https://hbsp.harvard.edu/product/720027-PDF-ENG) are optimistic. **Decreasing costs for launch and space hardware** in general have **enticed new entrants into this market,** and companies in a variety of industries have already begun leveraging satellite technology and access to space to drive innovation and efficiency in their earthbound products and services.

#### Space Industries with the clear intention of appropriation raise global revenues and lowers costs for NASA that helps the taxpayer; therefore, helping the economy and is key to PREVENT economic collapse (Economic collapse would also follow extinction and lack of innovation)

**Gurdus 21 (Lizzy Gurdus 2021 Private companies such as SpaceX are driving costs down for everyone in the space race, says man behind UFO ETF https://www.cnbc.com/2021/02/27/private-companies-like-spacex-are-driving-industry-costs-down-ceo.html)**

Morgan Stanley has said **the global space industry could produce revenues of over $1 trillion by 2040.** **Current** global **revenues are roughly $350 billion.** “**They’re able to get the cost of launch down and that’s going to allow more companies to send things into outer space cheaper**,” Chanin said in the Wednesday interview. “**They’re** really **opening up the entire environment for space companies and future would-be space companies to lower those barriers of entry.**” They’re also **lowering costs for government-sponsored space programs** by competing amongst themselves **for NASA** contracts, Chanin said.

## C2: Recources

#### Companies who plan to appropriate space are creating beneficial innovation; the benefits to innovation SAVE the world from preventable death and extinction by promoting life-saving technologies and advances

**Castle 21 (Scott Castle 2021 The new space race: A breeding ground for innovation? https://artificialintelligence-news.com/2021/09/22/the-new-space-race-breeding-ground-for-great-innovation/)**

**The advent of** SpaceX, **Blue Origin, and Virgin Galactic have generated a** highly entrepreneurial, private sector-led new **space technology ecosystem**, with startups offering services and applications that are highly innovative and customer-focused. By factoring **in the product innovations downstream that impact our daily life on Earth** thanks to [technology transfer](https://spinoff.nasa.gov/), there is good reason for this optimism. Meanwhile**, UK tech innovation continues to grow.** In the [Future UK Tech Built tech nation report 2021](https://technation.io/report2021/#key-statistics), UK tech VC investment is third in the world, hitting a record high of £10B in 2020 in the face of challenging conditions. UK deep tech investment also rose by 17% in 2020, the highest rate of growth globally. In the UK, **the space industry is on an upward trajectory.** Research findings from the latest ‘[Size and Health of the UK Space Industry](https://www.gov.uk/government/news/more-than-3000-jobs-created-as-space-sector-grows-across-the-uk)’ report, commissioned by the UK Space Agency shows **the sector supports a highly skilled and productive workforce** that’s growing across the country. SpaceX**, Blue Origin, and Virgin Galactic have ushered in radical and disruptive innovation into the aerospace and space technology sector.**

#### Space Resources that have been appropriated could be helpful in ending resource wars and dependence on Earth

**Abbud-Madrid 21 (Angel Abbud-Madrid 2021 Space Reasource Utilization https://oxfordre.com/planetaryscience/view/10.1093/acrefore/9780190647926.001.0001/acrefore-9780190647926-e-13)**

In the near term, **resources could be transformed into useful materials or energy** at the body where they are found to extend mission duration and **to eliminate the dependence on material sent from Earth.** This living-off-the-land approach is commonly referred to asIn Situ Resource UtilizationorISRU(Sacksteder & Sanders, [2007](https://oxfordre.com/planetaryscience/view/10.1093/acrefore/9780190647926.001.0001/acrefore-9780190647926-e-13#acrefore-9780190647926-e-13-bibItem-0101)). Ever since the first rockets were launched into space, all fuel, materials, and human consumables have been sent from Earth. Unfortunately, our planet sits in a deep gravity well, and considerable rocket propellant and energy are necessary to lift mass and put it into space. This is a direct result of the exponential nature of the Tsiolkovsky rocket equation, which governs spaceflight. It takes 10 times more energy to get into geosynchronous Earth orbit (GEO) from the surface of the Earth than from the surface of the Moon, and an estimated 10% of all near-Earth asteroids discovered to date are more accessible than the Moon (in terms of rocket propellant needed). As a result, in order to eliminate the costly dependence on material sent from Earth, extend the reach and payload-carrying capacity of robotic missions, and allow humans to settle beyond our planet, resources for making propellants, providing life support, enabling habitat construction and advanced manufacturing of components, and building all related infrastructure, must come from space. Following this rationale, human-made space debris already orbiting our planet from unspent rockets and defunct satellites can also be considered as space resources given its potential as raw material for fabricating structures, parts, and tools that can be manufactured in orbit. Once local needs are satisfied and a resource recovery infrastructure is in place, in the medium term a space transportation network could be developed and fueled by propellant produced outside Earth, drastically reducing the cost of access to space, and significantly increasing the activities beyond low Earth orbit (LEO). In the long term, **if found to be economically feasible, solar energy converted to microwaves by orbiting collectors, goods manufactured in space, and extraterrestrial material could also be brought to Earth.** This near-, medium- and long-term utilization approach is the same one that has been taken **by humans who have used local resources during the exploration and settling of our planet for more than 100,000 years**; space is just the next destination in the **quest for further exploration, resource utilization, and expansion of our species.**

#### Space Mining (ALL Space Mining is Appropriation) Could Save the World from Extinction

**Whitwam 21 (Ryan Whitwam 2021 5 Reasons Space Exploration is More Important than Ever https://www.extremetech.com/extreme/268062-5-reasons-space-exploration-is-more-important-than-ever)**

As we develop new technologies on Earth, **the strain on our natural resources continues to increase.** **The extraction of valuable minerals has led to a host of problems, including environmental damage and human exploitation**, but there’s a wealth of precious materials in space. **Startups like Planetary Resources want to mine asteroids instead of Earth**, which would mean an **effectively unlimited supply of raw materials that are rare on Earth.**

## C3: Public Reliance

**Companies like NASA require support from private entities.**

**Without these entities no space exploration or appropriation of any kind would be possible.**

#### Private firms are necessary for public good

**Tim Fernholz, 6-24-2021, "NASA has always needed private companies to go to the moon," Quartz, https://qz.com/2024339/nasa-has-always-needed-private-space-companies-to-go-to-the-moon/**

**Private firms are now willing to invest** their own capital **alongside the government, saving public money.** **They can take more risk,** and **use more advanced program management techniques than government-run programs**. And they seem to result in more accountability for taxpayers when things go wrong: NASA shoulders the extra cost for Boeing’s long-delayed and over-budget SLS rocket, a traditional program; the same company is paying hundreds of millions of dollars to re-test its Starliner spacecraft, bought through a public-private partnership. As the US plans its return to the Moon, a debate is emerging about the role of private firms. NASA has hired them to do everything from sending robots on the lunar surface to developing the landers that will carry humans there. In the House, lawmakers like science committee chair Eddie Bernice Johnson are skeptical that companies can take on these tasks. This isn’t a crazy worry: Landing on another astronomical body is a greater challenge than flying to low-earth orbit, and there are far fewer obvious non-government customers in the lunar transit market. For now, **NASA has hired** Elon Musk’s **SpaceX to build lunar landers**. Jeff Bezos’ Blue Origin is challenging the government’s choice, delaying the whole program until at least August. **The** corporate tussle, and the two companies’ decision to market themselves as personal projects of their controversial **billionaire founders**, have led opponents to portray NASA’s partnerships as corporate handouts. But make no mistake: The alternative **is still money for corporations—likely much more, and with fewer strings attached.**

#### Privatized entities doesn’t mean unrestraint

Maanas **Sharma**, 9-7-20**21**, "The Space Review: The privatized frontier: the ethical implications and role of private companies in space exploration," No Publication, https://www.thespacereview.com/article/4238/1

However, others contend that **just because private space exploration has some capitalist elements,** it is **by no means an embodiment of unrestricted capitalism. A healthy balance of restricted capitalism**—for example, private space companies working through contracts with government agencies or independently under monitoring and regulation by national and international agreements—will **avoid the pitfalls that capitalist colonialism faced down here on Earth.** Even those who are generally against excessive government regulation should see the benefits of them in space. Lacking any consensus on definitions and rights in space will create undue competition between corporations as well as governments that will harm everyone rather than helping anyone. To create a conducive environment for new space-for-space exploration, one without confrontation but with protection for corporate astronauts, infrastructure, and other interests, governments must create key policies such as a framework for property rights on asteroids, the Moon, and Mars.[7,10] hough there is no one set way governments will interact with companies, the consensus is that they must radically reimagine their main purpose as the role of private space exploration continues to grow. **Another key matter to note is restricted capitalism in space “could also be our salvation.**”[11] Private space exploration **could reap increased access to resources and other benefits that can be used to solve the very problems on Earth that critics of capitalism identify. Since governments offset some of their projects to private companies, government agencies can focus on** altruistic **projects that** otherwise **would not fit in the budget before** and do not have the immediate commercial use that private companies look for. Scott Hubbard, an adjunct professor of aeronautics and astronautics at Stanford University, discusses how “this strategy allows the space agency to continue ‘exploring the fringe where there really is no business case’” but still has important impacts on people down on Earth.[12] Indeed, this idea is a particularly powerful one when considering the ideal future of private companies in space exploration. Though there is no one set way governments will interact with companies, the consensus is that they must radically reimagine their main purpose as the role of private space exploration continues to grow. As governments utilize services from private space companies, “[i]nstead of being bogged down by the routine application of old research, NASA can prioritize their limited budget to work more on research of other unknowns and development of new long-term space travel technologies.”[13] According to the Council on Foreign Relations, such technologies have far-reaching benefits on Earth as well. Past developments obviously include communications satellites, by themselves a massive benefit to society, but also “refinements in artificial hearts; improved mammograms; and laser eye surgery… thermoelectric coolers for microchips; high-temperature lubricants; and a means for mass-producing carbon nanotubes, a material with significant engineering potential; [and h]ousehold products.”[2] Agencies like NASA are the only actors able to pursue the next game-changing missions, “where the profit motive is not as evident and where the barriers to entry are still too high for the private sector to really make a compelling business case.”[8] These technologies have revolutionized millions, if not billions, of lives, demonstrating the remarkable benefits of space exploration. It follows then that it is net ethical to prioritize these benefits. This report concludes that the private sector, indeed, has a prominent role to play in the future of space exploration. Further, though private space exploration does bring the potential of increased danger and the **colonization of space**, these concerns **can be effectively mitigated.** Namely, **strong government** frameworks**—particularly international ones—will minimize possible sources of ethical violations** and ensure an optimal private sector role in space. This also allows government agencies to complete significantly more difficult, innovative projects which have transformative benefits for life on Earth.