

Resolved: The appropriation of outer space by private entities is unjust.

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The standard is upholding the most life.

1] Humanity faces extinction within the next 100 years; only space colonization can solve it.

Arjun **Kharpal**, Kharpal is CNBC's senior technology correspondent, May 05 **2017**, "Stephen Hawking says humans must colonize another planet in 100 years or face extinction", <https://www.cnbc.com/2017/05/05/stephen-hawking-human-extinction-colonize-planet.html> // crosini

Humans need to colonize another planet within 100 years or face the threat of extinction, high-profile physicist Stephen Hawking has warned. In a new BBC documentary called "Stephen Hawking: Expedition New Earth" set to air later this year, the professor will "present his predictions that the human race only has 100 years before we need to colonize another planet," a press release from earlier this week said. **"With climate change, overdue asteroid strikes, epidemics and population growth, our own planet is increasingly precarious."** Previously, Hawking theorized that humanity probably has around 1,000 years left before it becomes extinct. His timeline appears now to have shortened. The famous physicist has issued a number of warnings about the future over the past few years. At the start of 2016, Hawking warned about the dangers from nuclear war, global warming, genetically-engineered viruses and artificial intelligence (AI). **"Although the chance of a disaster to planet Earth in a given year may be quite low, it adds up over time, and becomes a near certainty** in the next thousand or ten thousand years," Hawking told the BBC in an interview at the time.

2] Per the Outer Space Treaty (OST), life is a priority.

Masson-Zwaan & Cassar 19 [Tanja Masson-Zwaan, assistant professor and Deputy Director of the International Institute of Air and Space Law at Leiden University, and Roberto Cassar, educator with a LLM in Advanced Studies in Air and Space Law, at the International Institute of Air and Space Law at Leiden University, 2019, "THE PEACEFUL USES OF OUTER SPACE," Oxford Handbook of United Nations Treaties, <https://www.oxfordhandbooks.com/view/10.1093/law/9780190947842.001.0001/law-9780190947842-chapter-12>]/Kanee // crosini

2.1 The Evolution of Hard Space Law Notwithstanding the swift pace at which COPUOS progressed in its nascent stages, its work appeared to hit a plateau in the three years following the adoption of the Declaration of Legal Principles. As the then-Chairman of the Legal Subcommittee stated during its fifth session toward the end of 1966, "in [those three years] little progress had been made towards ensuring that outer space was used for [the] advancement [of man] and not for his destruction.."⁵⁶ Yet, less than half a year later and barely 10 years after the decision was made to regulate this new domain of human endeavour, COPUOS presented to the General Assembly a treaty that the latter unanimously commended," and that eventually became known as the Magna Carta of space law: "the "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies" (the "Outer Space Treaty" or OST)." The rationale behind the OST was to crystallize the legal principles set forth in resolution 1962 (XVIII) for, although the latter was adopted unanimously" and although states, in principle, were and are to respect it by virtue of the maxim *venire contra factum proprium non valet*,¹ being a resolution, it could not be deemed legally binding.¹ The OST rectified precisely this weakness, and with virtually all of its provisions, except Article IV, being already agreed upon in the Declaration of Legal Principles," it expanded the latter into [is] a binding legal framework for the exploration and use of outer space." Prior to analyzing how the negotiations evolved from that day

onward, it is vital to mention that they were successful first and foremost by virtue of the then-Chairman of the LSC of COPUOS: Judge Manfred Lachs. It is beyond any doubt that the United States and the USSR reached a compromise and eventual agreement on the OST thanks to his diplomatic skills and legal brilliance, making him, in his own right, as much a father of this treaty as the states that negotiated it." 2.2 Negotiating the Outer Space Treaty Set amidst the Cold War, it comes as no surprise that the OST was the product of negotiations between the two major players thereof: the United States and the USSR. These negotiations in fact began on May 11, 1966, nearly three months after the landing of the Soviet "Luna IX" on the moon.⁶⁶ On that day; the United States proposed to the USSR an outline of 12 points, which, the former opined, were to be included in a treaty governing the exploration of the moon and other celestial bodies.⁶⁷ Swift in its reply, on May 30, the USSR requested the inclusion of the item "Conclusion of an international agreement on legal principles governing the activities of States in the exploration and conquest of the Moon and other celestial bodies" in the agenda of the 21st session of the General Assembly.⁶⁸ Accordingly, the USSR submitted the text of a draft treaty on June 16, 1966,⁶⁹ in light of which the United States submitted the text of its own draft treaty that same day.⁷⁰ Juxtaposing the draft of the USSR with that of the United States, a clear difference between the two emanates. The Soviet draft was intended as a general treaty on principles governing the activities of states in the exploration and use of outer space, including the moon and other celestial bodies,⁷¹ and thus may be regarded as a direct implementation of the Declaration of Legal Principles.⁷² The US draft had its scope limited to the moon and other celestial bodies,⁷³ and rather than attempting to convert resolution 1721 (XVI) and the Declaration of Legal Principles into hard law, it represented more of an adaptation of these resolutions to the special circumstances of the moon and other celestial bodies.⁷⁴ Thus, at the opening of the fifth session of the Legal Subcommittee, on July 12, 1966, the debate revolved around two drafts of a rather different nature, and although it soon became clear that the overwhelming majority of states were in favor of the USSR draft, substantial support was also found for many of the novel features included in the US draft.⁷⁵ The general debate ended in a spirit of cooperation between the United States and the USSR, with each declaring its readiness to consider the possibility of incorporating in its draft those features that appeared in the proposal of the other.⁷⁶ By way of example, the United States not only agreed to enlarge the scope of the treaty to apply to celestial bodies and outer space,⁷⁷ but also indicated its general preparedness to accept all proposals in the draft of the USSR that incorporated the terms of previous General Assembly resolutions on outer space.⁷⁸ Likewise, the USSR not only accepted the principles of freedom of, and international cooperation in scientific investigations contained in the draft of the United States,⁷⁹ but also demonstrated readiness to accept the proposal of the United States of free access to all installations on celestial bodies.⁸⁰ As a result, agreement was reached quite smoothly on what consequently became the first nine articles of the treaty, even though insofar as the substantive articles of the treaty were concerned, agreement had yet to be reached on several facets.⁸¹ One of these facets that proved to be a major stumbling block for the treaty as a whole was the Soviet proposal that each contracting state must grant equal rights, subsequently limited to equal facilities for tracking space objects, to all other contracting states engaged in the exploration of outer space.⁸² When the Legal Subcommittee resumed its fifth session on September 12, 1966, it became clear that its members, bar those in the Soviet bloc, were generally unwilling to agree to the equivalent of an unconditional "most-favoured nation clause" on tracking facilities.⁸³ This seemed problematic since the USSR made it clear that it regarded this provision a sine qua non of the treaty; without an agreement on this article, the USSR was not prepared to take the treaty further.⁸⁴ No further progress had been made by the time COPUOS reconvened on September 19, 1966.⁸⁵ However, on September 22, the United States informed the USSR that, if the latter truly desired to provide for tracking coverage from US territory, it was prepared to discuss with Soviet representatives the technical and other requirements involved with a view to reaching some mutually beneficial agreement.⁸⁶ Consequently, on October 4, the USSR submitted a revised draft of its treaty, the terms of which show that it had reached a compromise with the United States on tracking facilities,⁸⁷ along with agreement on several other facets such as the preamble, the use of military equipment, and the conditions governing visits to installations on celestial bodies.⁸⁸ With this progress, minor formalistic issues were created out and, on December 8, complete agreement was achieved.⁸⁹ The agreed text was submitted to the First Committee of the General Assembly on December 15,⁹⁰ which adopted it without objection on December 17.⁹¹ Ultimately, the treaty was opened for signature on January 27, 1967, and came into force on October 10, 1967. 2.3 Beyond the Outer Space Treaty Now that we have seen how the OST was brought to life, it is possible to provide some insight on its substance. Insight can be also provided on the substance of the four other treaties that followed the Magna Carta of space law, which, along with their predecessor, form the hard law regime of outer space. Composed of 13 substantive articles,⁹² the OST [states] lays down the fundamental legal rules on the use and exploration of outer space. While Articles I, II, and III of the OST expand upon what by then had become rather clear principles of space law-that is, the principles that the use and exploration of outer space shall be [for] the province of all mankind, that any sovereign or territorial claims in outer space are prohibited, and that space activities shall not violate international law, including the UN Charter-its subsequent provisions articulate an array of diverse and often innovative principles. Key among these other articles is Article IV, which, although far less celebrated than the previous three, provides the principle that the moon and other celestial bodies are to be used exclusively for peaceful purposes. The importance of this principle cannot be stressed enough: were it not for this principle, it is plausible that, by now, weapons would have been warehoused in outer space, with earth being their primary target. It is therefore by virtue of Article IV that life on earth has been able to flow on in relative peace. Over and above Articles I, II, III, and IV, the other articles of the OST inter alia provide that states are internationally responsible for governmental and private activities in outer space,⁹³ that states are liable for damages caused by space objects they launch,⁹⁴ and that states retain jurisdiction and control over the space objects they register.⁹⁵

Although the OST was a momentous leap in the evolution of space law, in view of the broadness of its legal rules it soon came to be seen as requiring further elaboration," and to this end four more treaties were negotiated under the auspices of the UN. These four subsequent treaties did not deviate from the OST; mostly, they served to elaborate on the basic principles enshrined within it so much so that they could be considered as a *lex specialis* thereof. However, a unique and new feature that was introduced in these four treaties is the possibility for intergovernmental organizations to declare their acceptance of the rights and obligations under them, and indeed, several of such organizations" have done so for the first three treaties addressed in this section. The first of these additional treaties was the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (the "Rescue Agreement"), adopted on December 19, 1967.⁹⁹ This treaty is an earth-oriented instrument as it provides that a state that learns that either an astronaut, or a space object, has landed anywhere on earth other than in the territory of another state, shall notify the launching authority and the Secretary-General of the UN of that landing,¹⁰⁰ and shall help return the astronaut or space object safely to the launching authority.¹⁰¹ Following this treaty came the Convention on International Liability for Damage Caused by Space Objects (the "Liability Convention") of November 29, 1971,¹⁰² which was crafted so as to build upon the principle of liability held within Article VII of the OST.¹⁰³ In achieving this, the Liability Convention provides that a "launching State" is absolutely liable to pay compensation for damages caused by its "space object" on the surface of earth or to aircraft in flight.¹⁰⁶ Furthermore, a state is liable to pay compensation if its space object causes "damage" elsewhere than on the surface of the earth to a space object, or persons or property on-board it, due to the fault of persons for whom it, as a state, is responsible.¹⁰⁷ The third treaty following the OST was the Convention on Registration of Objects Launched into Outer Space (the "Registration Convention"), adopted on November 12, 1974.¹¹ This treaty refined the registration principle contained in Article VIII of the OST by establishing, at its core, a dual system of registration of objects launched into outer space." Thus, the Registration Convention first provides that a "launching State" is to maintain a registry of space objects and enter on it a space object that it has launched into earth orbit or beyond,' then it further creates a UN Registry that fundamentally serves the same purpose." Last, the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (the "Moon Agreement") was adopted on December 5, 1979.¹¹⁴ The majority of this treaty, like the three previous ones, reiterates certain well-established principles such as that the moon shall be used exclusively for peaceful purposes,' and that the exploration of the moon shall be the province of all mankind." Nevertheless, this treaty goes beyond the Magna Carta of space law by addressing not only the "use" and "exploration" of the moon, but also the "exploitation" of its natural resources. It is impossible to overlook the fact that, in doing so, the Moon Agreement is much less successful than its predecessors." This stems from its classification of the moon and "a concept the natural resources thereof as "the common heritage of mankind,"¹ derived from the law of the sea, even though the Moon Agreement specifies that this term should "find its expression in [its] provisions."¹¹⁹ Suffice it to say that the concept of common heritage of mankind in the Moon Agreement has led to much debate and disagreement, especially in recent years with the prospect of commercially harvesting space resources having become more realistic.' Consequently, the limited role that the Moon Agreement has played thus far is not likely to change, despite its unanimous adoption by the General Assembly.

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My value is *life*, defined as a system that is composed of bounded micro-environments in thermodynamic equilibrium with their surroundings; capable of transforming energy to maintain their low-entropy states; and able to replicate structurally distinct copies of themselves from an instructional code perpetuated indefinitely through time despite the demise of the individual carrier through which it is transmitted according to the [Stanford Encyclopedia of Philosophy](#).

My criterion is *act utilitarianism*, defined as initiating an action that will create the greatest net utility, or good, according to the [Internet Encyclopedia of Philosophy](#).

FWI

Act utilitarianism measures life in terms of the standard of this case, upholding the most life. So, through act utilitarianism, an action will uphold the most life by promoting the most good. In terms of the resolution, the appropriation of space by private entities creates the most good, or benefits the most life, per the standard.

Thus, the CP: Private entities can appropriate outer space through public-private partnerships for the purposes of colonization.

With the appropriation of space by private entities, we can acknowledge the need to colonize space to support the most life and avoid possible extinction on Earth. The neg world is not against the appropriation of outer space by public or government-run entities. Therefore, only the neg permits the greatest number of entities to colonize space as a result of prioritizing life.

1] Public-Private Partnerships are beneficial.

Smith, 21 (Fisher Smith, NSS Legal Fellow, second year law student at the University of Mississippi, member of the Ole Miss Trial Advocacy Board, 3-31-2021, accessed on 1-5-2022, National Space Society - Working to Create a Spacefaring Civilization, "Public-Private Partnerships: The Way to Space - National Space Society", <https://space.nss.org/public-private-partnerships-the-way-to-space/>) // crosini

In recent years, private companies have begun to push the boundaries of outer space, making it more affordable to launch rockets and developing new technologies that have revolutionized the industry. SpaceX, Blue Origin, Nanoracks, Rocket Lab, and Made in Space (now Redwire), among others, have changed the space industry dramatically. As recently as the early 2000's, the only way to launch payloads into space was to go through governmental entities such as NASA, European Space Agency, Roscosmos and the China National Space Administration (CNSA). Today, the U.S. has been leading the way in purchasing launch services from private companies, and the private companies themselves work with other{s} companies and investors to launch non-government payloads. However, while these companies have accomplished much, there is still a need for an organized, governmental role in space development. Government involvement is necessary to ensure[s] that the public maintains access to space and to advance the frontier of development beyond Earth.

For instance, consider NASA and the American government. NASA's ongoing scientific efforts are characterized by four key strategic goals: 1) expanding knowledge of our human species, 2) creating "sustainable long-term exploration and utilization" of outer space for the whole species, 3) addressing national challenges and aiding in economic development, and 4) continuing to optimize and develop their capabilities and operations within outer space. NASA's ongoing commitments are to develop outer space and technology for the United States and for humanity as a whole. Their missions of exploration, scientific discovery and technological development have continued to advance humanity. The fundamental structure of democratic governments such as those in the U.S. allow regular people to influence and participate in space development policy. People can vote for and petition their elected representatives to promote certain policies for the use of outer space, or join non-profits such as the National Space Society (NSS) to represent their views. This allows anyone to have a say in our development of outer space.

While private companies are pushing the boundaries of outer space, NASA and the US government have the ability to create policies that encourage more rapid and beneficial development in space. The National Space Society (NSS) advocates that the government promote policies for infrastructure development and

reusability for outer space expansion. The successful model of public-private partnerships that has been used to transport both cargo and crew to the International Space station via the commercial purchase of launch services should be extended throughout cis-lunar space. **Further, through NASA, NSS recommends that the government continue to promote international cooperation.** The international community has cooperated in the past, particularly **with the International Space Station.** By continuing **this partnership, multiple States can contribute to outer space exploration and development, and private organizations can continue provide vital services at lower cost, allowing government funds to accomplish more in space.**

While past developments in outer space have been led by governments and governmental space agencies, that is no longer true. Private organizations have reignited space exploration and provided a way for humanity to continue to expand and revolutionize technology needed to expand beyond Earth, without many of the hurdles, including cost and regulations, that sometimes hamper government advances. But, the path to the stars is not paved by one or the other. Instead, cooperation, between States, governmental agencies, and private companies, will ensure that we continue to push our boundaries into space.

A detailed look at NSS recommendations for NASA and governmental actions to propel humanity into the stars can be found in the NSS Position Paper on U.S. Development and Settlement of the Moon and Near Earth Asteroids.

2] Space development exudes positive impacts.

Eren **Ozmen**, chairman and president of Sierra Nevada Corporation (SNC), a space technology company, March 30, **2021**

"The reason we can't fully explore space is fixable. Here's how," CNN Business, <https://www.cnn.com/2021/03/30/perspectives/space-exploration-biden-administration/index.html> (accessed 12/12/21) // crosini

But space exploration offers enormous benefits [such as] for all of us. There's a long list of innovations that have emerged as a result of space research that have already spawned entire industries: the Global Positioning System, phone cameras, portable computers, water-purification systems, cochlear implants, artificial limbs, wireless headphones, CAT scans, LASIK and even the dustbuster handheld vacuum. And many of us are able to live and thrive partly because satellites help farmers assess climate and growing conditions and decide which areas are best for cultivation, while also alerting them to unfavorable weather conditions or predictions of longer-term drought. Looking ahead, space commercialization — asteroid mining, manufacturing and scientific research — will require vast amounts of capital and the hiring of skilled labor, creating both wealth and jobs.

3] Private entities offer their own benefits.

Brenner, 18 (Laurie Brenner, freelance writer and editor, science fiction novelist, 3-20-2018, accessed on 1-7-2022, Sciencing, "Why Are Private Companies in Space?", <https://sciencing.com/how-the-man-who-found-the-titanic-plans-to-track-amelia-earhart-13721194.html>) // crosini

The biggest benefit to privatizing space starts with its cost-effectiveness. Commercial launches significantly affect the cost for NASA to send satellites into space by dropping the per-launch cost from

\$4 billion to less than \$50 million, allowing NASA to use its money elsewhere. Privatization also spurs innovation when companies compete to come up with new technologies. The drawbacks include promises by private companies that result in failure. Not everything designed for space works, and many private-company rockets blow up after launch or while on the pad. **Profit, not research, drives a private company's bottom line, leaving several space exploration projects on the table forever that might benefit humankind.**

4] Privatization massively increases economic growth and business development and accelerates space developments.

Khushi Kapoor and Keshav Todi, finance intern at Satin Creditcare Network Limited and expert in economics for capital markets, behavioral finance, and business skills, March 20, 2021

"The Privatisation of Space Exploration," FICS, <https://ficsrcc.com/the-privatisation-of-space-exploration/> (accessed 12/12/21) // crosini

Privatization of space exploration has had many benefits for the space industry in the 21st century. **Private companies have a greater degree of autonomy in making decisions, which enables them to take up new projects while taxpayer-funded institutions are accountable to the Government and hence, have to often limit themselves.** Moreover, **there is quick decision making in private companies while the same process in a public enterprise would have to pass through a number of stages. This advantage has allowed companies like SpaceX, Blue Origin, etc. to cut their costs substantially** and perform operations like launching a rocket to ISS at merely \$57 million per seat as compared to \$80 million per seat if aboard a Russian shuttle, and \$450 million each mission before NASA ended its space shuttle program. Moreover, **making reusable landing rocket launchers, improvements in assembly lines and other such operations further ensure lower costs. Due to the well-known success of the top few private space companies, many new small companies such as Firefly systems and Vector launch have been able to raise substantial private capital as well. The growth in the space industry also provides employment to millions all over the world, and the rise in the number of private space companies promotes competition amongst them and encourages constant improvements and advancements.** Lastly, the publicity of their operations, like live streaming launches, has sparked widespread interest in space exploration among the general public.

Solvency – Colonization

1] PPP is the key to colonization.

Dinkin, 4 (Sam Dinkin, regular columnist for the Space Review, space commercialization advocate, founder of Space Shot, journalist, entrepreneur, space investor, 7-26-2004, accessed on 1-7-2022, The Space Review, "The Space Review: Space privatization: road to freedom", <https://www.thespacereview.com/article/193/1>) // crosini

In "Space Privatization: Road to Conflict", Bruce Gagnon makes the case for defending the legal status quo. He first argues that privatization of space will lead to "more debris" and worries that, "Very soon we will reach the point of no return, where space pollution will be so great that an orbiting minefield will have been created that hinders all access to space." Space law and achievement as embodied in the 1967 Outer Space Treaty are stuck in the 1960s. Without amendment, the treaty is stuck without property rights for the Moon and the planets. Our achievement is stuck with an ISS that really does not improve much on Skylab or Mir. Our lift capability is backsliding. Our capability to get to the Moon has disappeared maybe to be reclaimed some day. So it may not be such a big deal to have to give up the ISS due to orbital debris because the public benefit from the station is so low. Of course, there are many useful devices in space with GPS and telecom satellites providing excellent service to the global economy. Since these rarely fail due to orbital debris, it might be too soon to declare an emergency. But if there is an orbital debris problem, it is self-limiting. The more debris there is, the less useful launches there will be so the less addition there will be to the debris problem. There are also several ways to solve the debris problem. Satellite launchers can be taxed for cleanup, kind of like a bottle deposit. If the deposit money were sufficient to de-orbit a satellite, then private industry would be very keen on de-orbiting satellites after their useful life in order to get the money back. Another way to solve the debris problem is to begin to ablate or collect the orbiting debris. In any case, there are two reasons that privatization will not substantially change the space debris situation. First, this debris problem will continue if space remains the preserve of big government even with business as usual. Second, regulations, such as the new FCC regulations for a minimum amount of propellant to continue broadcasting,

allow the government to keep the debris situation under control. Gagnon states, "As the privateers move into space...they hope to mine the sky. Gold has been discovered on asteroids, helium-3 on the moon, and magnesium, cobalt and uranium on Mars." If only this were viable, I would have a much easier time arguing for colonization. There are not too many things worth \$10,000/pound in propellant to get something back from the Moon or more from Mars. Gold weighs in at \$6,250/pound. Even Helium-3 (3He) does not fit the bill. Let's wait for someone to have a commercially viable reactor before we invest in going to the Moon to extract the 3He on a large scale. **Some things may be worth that transportation cost. Colonization in order to assure that our species outlasts the dinosaurs is priceless. Opening Mars to colonization will also create new opportunities for religious freedom and personal freedoms as the Pilgrims found when they immigrated to the New World. Space entertainment might pay its own way, as might suborbital tourism. Orbital hotels may be viable. Space science might be able to tag along, but science would have to be heavily subsidized. Maybe astronomical observing frequencies could be sold off on Earth to pay for a site on the far side of the Moon, but that would require much lower transport prices and higher spectrum prices than we've seen since the 3G crash. Suborbital point-to-point service from New York to Tokyo with a flight time less than the Concorde's New York-to-London time may emerge some time. There are some valuable military uses to space being explored by the Pentagon with its FALCON and RASCAL programs in addition to earth observing satellites. Further weaponization of space will probably be required to defend the US in the most economical manner and to defend the new civilian space assets. If no weaponization occurs by the US, we can definitely expect terrorists or other states to do so and for space to be stunted by lack of defensive protection. With no privatization and no military protection, there will not be much colonization.** Antarctica may be free of the intellectual pollution brought by property rights, but there are also no citizens, no development and very little in the way of commercial exports. Alaska, in contrast, hands out checks to its citizens rather than charging them taxes. Antarctica is also more inaccessible, so there may be another explanation for the disparity. Texarkana offers a starker side-by-side comparison of different law leading to different levels of commerce. The city has a street running down the center of town where one side is governed by Arkansas law and the other is governed by Texas law. The main difference between the two jurisdictions is the ability to collect a high rate of interest (Arkansas caps their interest rate at 5% above the federal funds rate). This minor limitation on commerce means that there are many more stores on the Texas side of the street. But suppose for a moment that we do have the opportunity to create a viable space economy. Gagnon continues, "Thus, after the taxpayers have paid all the R&D, private industry now intends to gorge itself on profits. Taxpayers won't see any return on our 'collective investment.'" They are seeing little return now on their collective investment. Public returns will be great indeed if space development is successful. **If privatization results in profits, those profits can be taxed. If private suborbital, orbital, point-to-point, lunar and planetary development lowers the price of access for public science, exploration and commerce, then that is a benefit. If colonization is successful, the public will have an insurance policy against extinction. Successful colonization will also energize the spirit of humanity. Colonizing Mars will double the amount of land available to the species and potentially more than double solar system GDP as a commerce of ideas and builds up between the growing Mars population and Earth.** Compare that to taxpayer return on public projects. What has the taxpayer return been on Social Security? It is as if the government mandated that everyone in the nation hold thousands of dollars in government bonds. Worse, the bonds pay below the market interest rate for federal savings bonds. While this is a boon to taxpayers because US borrowing is cheaper as a result, the elderly are getting a negative real return on their money. A privately-administered system with similar terms would surely have resulted in arrests and prosecutions. I love listening to NPR and watching PBS. GPS is cool. I don't like the Post Office. The Channel Tunnel was an excellent public-private partnership, but the private partner seems to be getting no return in that case. Central planning by the USSR failed dismally with their investment in collectives. Socialism is leaving many European countries with a money standard of living comparable to the poorest US states although their quality of life is quite high. To be charitable, I would say that the case for public returns from public management is mixed. In any case, there are few returns to give up in space's public sphere to let private industry have a go. Gagnon worries that, "Ultimately the taxpayers will be asked to pay the enormous cost incurred by creating a military space infrastructure that would control the 'shipping lanes' on and off the planet Earth." I think the taxpayers should assess the costs and the benefits. If the shippers are going to be paying enough extra taxes with the extra commerce in safe and protected space to warrant the protection, pay for the protection from taxpayers. If not, I will be in the vanguard of those asking for corporations to arm themselves against would-be space pirates. Gagnon implies that privatization of off-Earth development will prepare the way for the next "war system." This is not a disadvantage of privatization even if true. First, terrorists and rogue states will take war to the heavens whether there is public or private management of space so at best public management postpones the new war system. Second, energizing the human spirit with new challenges in space may actually result in a solar system with less conflict. Third, the next war system may provide security for Earth more economically than the existing Earth-based military. Gagnon finishes with, "Privatization also means that existing international space legal structures will be destroyed in order to bend the law toward private profit. Serious moral and ethical questions must be raised before another new 'frontier' of conflict is created." If space attracts no investment and no colonists, I say "Down with the legal structures!" As for the serious moral and ethical questions, I say, "Bring 'em on!"

Solvency – Public/Private Key

1] PPP solves because privatization lowers costs.

Augustine, 9 (Augustine, Chairman of the Review of U.S. Human Spaceflight Plans Committee (Augustine Commission), 2009, [Augustine Commission, "Seeking A Human Spaceflight Program Worthy Of A Great Nation", October 2009, p. 113-114) // crostini

The Committee has examined various future NASA system options and has observed that in many instances, **one of the more significant discriminators in development and operations costs is neither what NASA procures nor who supplies it**—but rather how NASA procures and operates a system. The way NASA specifies, acquires, and uses systems; the tools NASA uses to manage its workforce; and the agency’s authority to make purchase commitments: all have a very large impact on what NASA can achieve for a given budget. Currently, NASA labors under many restrictions and practices that impair its ability to make effective use of the nation’s industrial base. For example: • NASA is commonly not allowed to change the size and composition of its workforce or facilities, which limits its ability to save money through the purchase of commercially available products. • NASA has limited ability to shift funds between related projects to adapt to technical challenges without a protracted approval process. • NASA is not permitted to make loan guarantees or employ other mechanisms by which it could create a market for commercial providers that might otherwise invest private funds in meeting some of NASA’s needs. (The Department of Defense has procurement rules that allow this.) For example, NASA could very likely acquire propellant depots by making a “bankable” commitment to purchase propellant from such a depot; but depending on a “promise” from NASA today would almost certainly not be viewed as a reasonable risk by private investors. • NASA is expected to undertake long-term projects with little hope of budget stability. With regard to human spaceflight, it is the Committee’s view that NASA can and should be the source of: • **Research and technology** • **Technology maturation** • **System requirements** • Systems architecture • Procurement **[and] oversight** • Exploration operations • Expensive, multiple-user facilities NASA generally should not be its own supplier. Numerous studies have shown that **any organization, public or private, that is its own supplier lacks much of the incentive to deliver the most cost-efficient product.** Today NASA has many options available to procure systems innovatively. These include (but are not limited to): commercial purchases; Space Act agreements; COTS-like cost-sharing agreements; prizes for innovative technologies; and others. Determining the requirements for an engineering project while it is being built inevitably leads to a very expensive result. Requirements should be clearly established prior to beginning engineering development. Work that contains significant risk or for which scope cannot be accurately defined is generally best performed under cost-reimbursable contracts. Work with scope that can be accurately defined should generally be conducted under fixed-price contracts. The Committee is convinced that **NASA can substantially increase the opportunities for entrepreneurial, commercial involvement in its space programs by more aggressively utilizing the commercial authorities already granted to the agency, and by adopting benchmarks in commercial practices utilized in other federal agencies.**

Thus, you must negate the resolution.