### 1

#### Morality must be derived a priori:

#### 1) Is/Ought Gap – experience in the phenomenal world only tells us what is since we can only perceive what is, not what ought to be. But it’s impossible to derive an ought from descriptive premises, so there needs to be additional a priori premises within the noumenal world to make a moral theory.

#### The existence of extrinsic goodness requires unconditional human worth—that means we must treat others as ends in themselves.

Korsgaard ’83 (Christine M., “Two Distinctions in Goodness,” The Philosophical Review Vol. 92, No. 2 (Apr., 1983), pp. 169-195, JSTOR) OS/Recut Lex AKu \*brackets for gendered language

The argument shows how Kant's idea of justification works. It can be read as a kind of regress upon the conditions, starting from an important assumption. The assumption is that when a rational being makes a choice or undertakes an action,[they] he or she supposes the object to be good, and its pursuit to be justified. At least, if there is a categorical imperative there must be objectively good ends, for then there are necessary actions and so necessary ends (G 45-46/427-428 and Doctrine of Virtue 43-44/384-385). In order for there to be any objectively good ends, however, there must be something that is unconditionally good and so can serve as a sufficient condition of their goodness. Kant considers what this might be: it cannot be an object of inclination, for those have only a conditional worth, "for if the inclinations and the needs founded on them did not exist, their object would be without worth" (G 46/428). It cannot be the inclinations themselves because a rational being would rather be free from them. Nor can it be external things, which serve only as means. So, Kant asserts, the unconditionally valuable thing must be "humanity" or "rational nature," which he defines as "the power set to an end" (G 56/437 and DV 51/392). Kant explains that regarding your existence as a rational being as an end in itself is a "subjective principle of human action." By this I understand him to mean that we must regard ourselves as capable of conferring value upon the objects of our choice, the ends that we set, because we must regard our ends as good. But since "every other rational being thinks of his existence by the same rational ground which holds also for myself' (G 47/429), we must regard others as capable of conferring value by reason of their rational choices and so also as ends in themselves. Treating another as an end in itself thus involves making that person's ends as far as possible your own (G 49/430). The ends that are chosen by any rational being, possessed of the humanity or rational nature that is fully realized in a good will, take on the status of objective goods. They are not intrinsically valuable, but they are objectively valuable in the sense that every rational being has a reason to promote or realize them. For this reason it is our duty to promote the happiness of others-the ends that they choose-and, in general, to make the highest good our end.

#### Practical reason resolves regress - I can keep asking “why should I follow this” but asking “why reason” requires reason so its inescapable. Regress collapses to skep since no one can generate obligations absent grounds for accepting them.

#### Thus, the standard is consistency with liberty. Prefer:

#### 1] The state is obligated to prioritize freedom.

Otteson 09 [(James R., professor of philosophy and economics at Yeshiva University) “Kantian Individualism and Political Libertarianism,” The Independent Review, v. 13, n. 3, Winter, [2009](https://link.springer.com/article/10.1007/s10790-015-9506-9)] TDI

It is difficult to imagine a stronger defense of the “sacred” dignity of individual agency. Kantian individuality is premised on its rational nature and its entailed inherent dignity, and the rest of his moral philosophy arguably is built on this vision.1 Kant relies on a similarly robust conception of individuality in work other than his explicitly moral philosophy. The 1784 essay “An Answer to the Question: ‘What Is Enlightenment?’” (Kant 1991), for example, emphasizes in strong terms the threat that paternalism poses to one’s will. Kant argues that “enlightenment” (Aufklärung) involves a transition from moral and intellectual immaturity, wherein one depends on others to make one’s moral and intellectual decisions, to maturity, wherein one makes such decisions for oneself. One cannot effect this transition if one remains under another’s tutelage, and, as a corollary, one compromises another’s enlightenment if one undertakes to make such decisions for the other person—which, as Kant argues, is the case under a paternalistic government. Kant also writes in his 1786 essay “What Is Orientation in Thinking?” that “To think for oneself means to look within oneself (i.e. in one’s own reason) for the supreme touchstone of truth; and the maxim of thinking for oneself at all times is enlightenment” (1991, 249, italics and bold in the original). These passages are consistent with the position he takes in Grounding that a person who depends on others is acting heteronomously, not autonomously, and is to that extent not exercising a free moral will. These passages also help to clarify Kant’s notion of personhood and rational agency by indicating some of their practical implications. For example, on the basis of his argument, one would expect him to argue for setting severe limits on the authority that any group of people, including the state, may exercise over others: because individual freedom is necessary both to achieve enlightenment and to exercise one’s moral agency, Kant should argue that no group may impinge on that freedom without thereby acting immorally. Kant expressly draws this conclusion in his 1793 essay “On the Common Saying: ‘This May Be True in Theory, but It Does Not Apply in Practice’”: Right is the restriction of each individual’s freedom so that it harmonises with the freedom of everyone else (in so far as this is possible within the terms of a general law). And public right is the distinctive quality of the external laws which make this constant harmony possible. Since every restriction of freedom through the arbitrary will of another party is termed coercion, it follows that a civil constitution is a relationship among free men who are subject to coercive laws, while they retain their freedom within the general union with their fellows. (1991, 73, emphasis in original) Kant insists on the protection of a sphere of liberty for each individual to self-legislate under universalizable laws of rationality, consistent with the formulation of the categorical imperative requiring the treatment of others “always at the same time as an end and never simply as a means” (1981, 36). This formulation of the categorical imperative might even logically entail the position Kant articulates about “right,” “public right,” and “freedom.” Persons do not lose their personhood when they join a civil community, so they cannot rationally endorse a state that will be destructive of that personhood; on the contrary, according to Kant, a person enters civil society rationally willing that the society will protect both his own agency and that of others. Robert B. Pippen rightly says that for Kant “political duties are a subset of moral duties” (1985, 107–42), but the argument here puts it slightly differently: political rights, or “dignities,” derive from moral rights, which for Kant are determined by one’s moral agency. Thus, the only “coercive laws” to which individuals may rationally allow themselves to be subject in civil society are those that require respect for each others’ moral agency (and provide for the punishment of infractions thereof) (see Pippen 1985, 121). When Kant comes to state his own moral justification for the state in the 1797 Metaphysics of Morals, this claim is exactly the one he makes: the state is necessary for securing the conditions of “Right”—in other words, the conditions under which persons can exercise their autonomous agency (see 1991, 132–35). Consistent with this interpretation, Kant elsewhere endorses free trade and open markets on grounds that make his concern for “harmony” in the preceding passage reminiscent of Adam Smithian invisible-hand arguments. In his 1784 essay “Idea for a Universal History with a Cosmopolitan Purpose,” Kant writes: “Individual men and even entire nations little imagine that, while they are pursuing their own ends, each in his own way and often in opposition to others, they are unwittingly guided in their advance along a course intended by nature. They are unconsciously promoting an end which, even if they knew what it was, would scarcely arouse their interest” (1991, 41). This statement is similar to Smith’s statement of the invisible-hand argument.2 Kant proceeds to endorse some of the same laissez-faire economic policies that Smith advocated—for example, in his discussion in his 1786 work “Conjectures on the Beginning of Human History” of the benefits of “mutual exchange” and in his claim that “there can be no wealth-producing activity without freedom” (1991, 230–31, emphasis in original), as well as in his claim in the 1795 Perpetual Peace that “the spirit of commerce” is motivated by people’s “mutual self-interest” and thus “cannot exist side by side with war” (1991, 114, emphasis in original).3 Finally, although Kant argues that we cannot know exactly what direction human progress will take, he believes we can nevertheless be confident that mankind is progressing.4 Thus, in “Universal History” he writes: The highest purpose of nature—i.e. the development of all natural capacities—can be fulfilled for mankind only in society, and nature intends that man should accomplish this, and indeed all his appointed ends, by his own efforts. This purpose can be fulfilled only in a society which has not only the greatest freedom, and therefore a continual antagonism among its members, but also the most precise specification and preservation of the limits of this freedom in order that it can co-exist with the freedom of others. The highest task which nature has set for mankind must therefore be that of establishing a society in which freedom under external laws would be combined to the greatest possible extent with irresistible force, in other words of establishing a perfectly just civil constitution. (1991, 45–46, emphasis in original) Kant’s argument in this essay runs as follows: human progress is possible, but only in conditions of a civil society whose design allows this progress; because the progress is possible only as individuals become enlightened, and individual enlightenment is in turn possible only when individuals are free from improper coercion and paternalism, human progress is therefore possible only under a state that defends individual freedom. Kant believes that individuals have the best chance to be happy under a limited civil government, and he therefore argues that even such a laudable goal as increasing human happiness is not a justifiable role of the state: “But the whole concept of an external right is derived entirely from the concept of freedom in the mutual external relationships of human beings, and has nothing to do with the end which all men have by nature (i.e. the aim of achieving happiness) or with the recognized means of attaining this end. And thus the latter end must on no account interfere as a determinant with the laws governing external right” (“Theory and Practice,” 1991, 73, emphasis in original). The Kantian state is hence limited on the principled grounds of respecting agency; the fact that this limitation in his view provides the conditions enabling enlightenment, progress, and ultimately happiness is a great but ancillary benefit. Thus, the positions Kant takes on nonpolitical issues would seem to suggest a libertarian political position. And Kant explicitly avows such a state. In “Universal History,” he writes: Furthermore, civil freedom can no longer be so easily infringed without disadvantage to all trades and industries, and especially to commerce, in the event of which the state’s power in its external relations will also decline. . . . If the citizen is deterred from seeking his personal welfare in any way he chooses which is consistent with the freedom of others, the vitality of business in general and hence also the strength of the whole are held in check. For this reason, restrictions placed upon personal activities are increasingly relaxed, and general freedom of religion is granted. And thus, although folly and caprice creep in at times, enlightenment gradually arises. (1991, 50–51, emphasis in original) In “Theory and Practice,” Kant writes that “the public welfare which demands first consideration lies precisely in that legal constitution which guarantees everyone his freedom within the law, so that each remains free to seek his happiness in whatever way he thinks best, so long as he does not violate the lawful freedom and rights of his fellow subjects at large” and that “[n]o-one can compel me to be happy in accordance with his conception of the welfare of others, for each may seek his happiness in whatever way he sees fit, so long as he does not infringe upon the freedom of others to pursue a similar end which can be reconciled with the freedom of everyone else within a workable general law” (1991, 80, emphasis in original, and 74). In a crucial passage in Metaphysics of Morals, Kant writes that the “Universal Principle of Right” is “‘[e]very action which by itself or by its maxim enables the freedom of each individual’s will to co-exist with the freedom of everyone else in accordance with a universal law is right.’” He concludes, “Thus the universal law of right is as follows: let your external actions be such that the free application of your will can co-exist with the freedom of everyone in accordance with a universal law” (1991, 133, emphasis in original).5 This stipulation becomes for Kant the grounding justification for the existence of a state, its raison d’être, and the reason we leave the state of nature is to secure this sphere of maximum freedom compatible with the same freedom of all others. Because this freedom must be complete, in the sense of being as full as possible given the existence of other persons who demand similar freedom, it entails that the state may—indeed, must—secure this condition of freedom, but undertake to do nothing else because any other state activities would compromise the very autonomy the state seeks to defend. Kant’s position thus outlines and implies a political philosophy that is broadly libertarian; that is, it endorses a state constructed with the sole aim of protecting its citizens against invasions of their liberty. For Kant, individuals create a state to protect their moral agency, and in doing so they consent to coercion only insofar as it is required to prevent themselves or others from impinging on their own or others’ agency. In his argument, individuals cannot rationally consent to a state that instructs them in morals, coerces virtuous behavior, commands them to trade or not, directs their pursuit of happiness, or forcibly requires them to provide for their own or others’ pursuits of happiness. And except in cases of punishment for wrongdoing,6 this severe limitation on the scope of the state’s authority must always be respected: “The rights of man must be held sacred, however great a sacrifice the ruling power may have to make. There can be no half measures here; it is no use devising hybrid solutions such as a pragmatically conditioned right halfway between right and utility. For all politics must bend the knee before right, although politics may hope in return to arrive, however slowly, at a stage of lasting brilliance” (Perpetual Peace, 1991, 125). The implication is that a Kantian state protects against invasions of freedom and does nothing else; in the absence of invasions or threats of invasions, it is inactive.

#### Contention –

#### 1] Libertarianism mandates a market-oriented approach to space—that negates

Broker 20 [(Tyler, work has been published in the Gonzaga Law Review, the Albany Law Review and the University of Memphis Law Review.) “Space Law Can Only Be Libertarian Minded,” Above the Law, 1-14-20, <https://abovethelaw.com/2020/01/space-law-can-only-be-libertarian-minded/>] TDI

The impact on human daily life from a transition to the virtually unlimited resource reality of space cannot be overstated. However, when it comes to the law, a minimalist, dare I say libertarian, approach appears as the only applicable system. In the words of NASA, “2020 promises to be a big year for space exploration.” Yet, as Rand Simberg points out in Reason magazine, it is actually private American investment that is currently moving space exploration to “a pace unseen since the 1960s.” According to Simberg, due to this increase in private investment “We are now on the verge of getting affordable private access to orbit for large masses of payload and people.” The impact of that type of affordable travel into space might sound sensational to some, but in reality the benefits that space can offer are far greater than any benefit currently attributed to any major policy proposal being discussed at the national level. The sheer amount of resources available within our current reach/capabilities simply speaks for itself. However, although those new realities will, as Simberg says, “bring to the fore a lot of ideological issues that up to now were just theoretical,” I believe it will also eliminate many economic and legal distinctions we currently utilize today. For example, the sheer number of resources we can already obtain in space means that in the rapidly near future, the distinction between a nonpublic good or a public good will be rendered meaningless. In other words, because the resources available within our solar system exist in such quantities, all goods will become nonrivalrous in their consumption and nonexcludable in their distribution. This would mean government engagement in the public provision of a nonpublic good, even at the trivial level, or what Kevin Williamson defines as socialism, is rendered meaningless or impossible. In fact, in space, I fail to see how any government could even try to legally compel collectivism in the way Simberg fears. Similar to many economic distinctions, however, it appears that many laws, both the good and the bad, will also be rendered meaningless as soon as we begin to utilize the resources within our solar system. For example, if every human being is given access to the resources that allows them to replicate anything anyone else has, or replace anything “taken” from them instantly, what would be the point of theft laws? If you had virtually infinite space in which you can build what we would now call luxurious livable quarters, all without exploiting human labor or fragile Earth ecosystems when you do it, what sense would most property, employment, or commercial law make? Again, this is not a pipe dream, no matter how much our population grows for the next several millennia, the amount of resources within our solar system can sustain such an existence for every human being. Rather than panicking about the future, we should try embracing it, or at least meaningfully preparing for it. Currently, the Outer Space Treaty, or as some call it “the Magna Carta of Space,” is silent on the issue of whether private individuals or corporate entities can own territory in space. Regardless of whether governments allow it, however, private citizens are currently obtaining the ability to travel there, and if human history is any indicator, private homesteading will follow, flag or no flag. We Americans know this is how a Wild West starts, where most regulation becomes the impractical pipe dream. But again, this would be a Wild West where the exploitation of human labor and fragile Earth ecosystem makes no economic sense, where every single human can be granted access to resources that even the wealthiest among us now would envy, and where innovation and imagination become the only things we would recognize as currency. Only a libertarian-type system, that guarantees basic individual rights to life, liberty, and the pursuit of happiness could be valued and therefore human fidelity to a set of laws made possible, in such an existence.

#### 2] Property rights in space can be consistent with international law

Simberg 12 [(Rand, MSE in technical management from West Coast University, recognized as an expert in space transportation by the Office of Technology Assessment) “Homesteading the Final Frontier A Practical Proposal for Securing Property Rights in Space,” Competitive Enterprise Institute, April 2012, <https://cei.org/wp-content/uploads/2012/04/Rand-Simberg-Homesteading-the-Final-Frontier.pdf>] TDI

But is it true that any recognition of off-planet property claims is de facto a violation of the Outer Space Treaty? Not necessarily. For instance, one could argue that the existence of the Moon Treaty is in and of itself a refutation of the notion that the Outer Space Treaty outlaws private property in space, or else there would be no need for another treaty that essentially explicitly does so. And there is at least one potential loophole that could be exploited by appropriately worded legislation. There are two key assumptions in the legal argument used by opponents of off-planet property claims: 1) that the recognition by a government would only recognize claims by its own citizens; and 2) that it would defend them by force. That need not necessarily be so. Under the treaty, it would in fact be possible for a government, or group of governments, to recognize the property claims of anyone who met specified conditions, regardless of their citizenship or nationality. Such cooperation would obviate the need for physical force to defend claims. The argument that the treaty permits individual property rights was actually made from the very beginning. In 1969, two years after the treaty went into force, the late distinguished space-law professor, Stephen Gorove, noted that under it, “[A]n individual acting on his own behalf or on behalf of another individual or a private association or an international organization could lawfully appropriate any part of outer space, including the [M]oon and other celestial bodies.”32 This clearly provides support for the concept of individual claims off planet under Article II.

#### 3] Space appropriation and exploration originates from private companies such as Space X and Blue Origin. Preventing such is a restriction on the ability of companies to set and pursue their ends and these companies gain contracts with the government for projects which turns promise breaking offense.

### 2

#### Private sector development is happening now and is necessary to scale up and lock in India’s status as a powerhouse in space.

EdexLive, 06-25-2020, "Opening space sector will enable India to play important role in global space economy: ISRO chief," New Indian Express, https://www.edexlive.com/news/2020/jun/25/opening-space-sector-will-enable-india-to-play-important-role-in-global-space-economy-isro-chief-12874.html TDI

SRO chief K Sivan on Thursday stated that opening the space sector for private enterprises will help scale up benefits from space technology and enable Indian industry to be an important player in the global space economy. "If the space sector is opened (for private enterprises), the potential of the entire country can be utilised to scale up benefits from space technology. It will not only result in the accelerated growth of the sector but also enable Indian industry to be an important player in the global space economy," the Indian Space Research Organisation chief said. Sivan said that far-reaching reforms in space technology in India will put the country in the league of the select countries. "As part of longer socio-economic reform, space reforms will improve access to space-based services for India's development. Far-reaching reforms will put India in the league of few countries with efficient promotional and authorisation mechanism for private-sector space activities," he said. Talking about reforms that the government is planning to implement in the country's space sector, he said, "Space sector, where India is among a handful of countries with advanced space technology, can play a significant role in boosting the industrial base of India." "The government's decision is to implement reform measures to leverage ISRO's achievement by opening the space sector for private enterprises," he added. He further said that "Department of Space will promote sector space activities to enable it to provide end to end space services, including building and launching of rockets and satellites as well as providing space-based services on a commercial basis." "With this, there is an opportunity for large scale employment in the technology sector and India becoming a global technology powerhouse," ISRO chief added. Sivan also talked about the government's decision to establish an autonomous nodal agency for taking independent decisions for regulating the activities of private companies. "Government has approved the establishment of an autonomous nodal agency - Indian National Space, Promotion and Authorisation Centre - for taking independent decisions with respect to permitting and regulating the activities of private companies in the space sector," said ISRO chief. "It will act as a national nodal agency for handholding and promoting the private sector in space endeavours and for this ISRO will share its technical expertise as well as facilities," he added.

#### India private sector is key to space success – low cost operations, transparency, and accountability.

Rajagopalan ’20 [Dr Rajeswari (Raji) Pillai Rajagopalan is the Director of the Centre for Security, Strategy and Technology (CSST) at the Observer Research Foundation, New Delhi., 5-24-2020, "India’s Space Programme: A role for the private sector, finally?," ORF, <https://www.orfonline.org/research/indias-space-programme-a-role-for-the-private-sector-finally-66661/>] TDI

India’s finance minister Nirmala Sitharaman announced last week that India’s private sector will play a key role in augmenting India’s space programme, and that the government intends to share the facilities of the Indian Space Research Organisation (ISRO) with the private sector. This announcement was part of the Narendra Modi government’s call for new and bold reforms in an effort to promote its ‘self-reliant India’ mission. It is the fourth segment of the Rs 20 lakh crore Aatma Nirbhar Bharat Abhiyan special economic stimulus. Sitharaman’s announcement entails a role for the private sector, possibly with the goal of greater investments in technology development and acquisition, capacity-building and space exploration, including planetary exploration. The minister, while announcing these reforms, appeared to understand that the private sector can help augment India’s space capability. While praising the work done by ISRO, she also pointed out that the private sector is also doing a lot of work in developing space technology. She also acknowledged that the existing regulations prevent private entities from using or even testing their products. Therefore, to level the playing field, the government “will make a provision for the private sector to benefit from the assets which are available to ISRO and for India (in general) to benefit from.” The minister also said the new reforms would allow the private sector to play an active role in “satellites, launches and space-based services”. But as always, implementation is key. Properly executing these reforms will require enabling policies and appropriate regulatory frameworks. That the new reforms will allow private sector players to use ISRO facilities is a big deal. This indeed must be music to the ears of commercial players who have been seeking to get a fair share of the pie in terms of manufacturing of satellites and propellant technologies, among other areas. It should not be too difficult for India’s private space sector because there is a sizeable talent pool available outside ISRO. More importantly, the entry of the private sector, as in the telecom sector, can bring several advantages in terms of cost and access. Following the announcement, ISRO tweeted that it will follow the government’s guidelines to allow the private sector to undertake space activities in the country. Though this did not seem particularly welcoming of the government’s initiative, ISRO’s support is critical to making it a success. ISRO has in the last few years been opening up to the Indian private space sector in a gradual manner – mostly as a matter of compulsion because ISRO simply does not have the in-house capacity to address India’s growing requirements. Today, the Indian space programme is not just about civilian applications for remote-sensing, meteorology and communication, as in the early decades. India’s space sector and its requirements have grown enormously in the last decade to include television and broadband services, space science and exploration, space-based navigation and, of course, defence and security applications. Among others, Ambassador Rakesh Sood has articulated the need for legislation to facilitate ISRO’s partnership with industries and entrepreneurs. Narayan Prasad and Prateep Basu, two prominent faces in the Indian space start-up segment, have argued that despite ISRO’s successes, “India’s space competitiveness has suffered from the absence of a globally reputed, private space industry.” The private sector, especially the NewSpace industry and start-ups, have an advantage in terms of low-cost operations, which itself should be a big incentive for the government to make it an active stakeholder. A certain amount of democratisation of space technology with the participation of the private sector can ensure costs are kept low. And expanding the number of stakeholders will also ensure more transparency and better accountability and regulatory practices. This has been missing in India’s space sector. The same agency has undertaken promotion, commercialisation and regulatory functions – which is not healthy.

#### India key to taking up the climate change and alternative energy cause

GPC 17 [(Greater Pacific Capital, investing institution designed to identify and develop investing opportunities in and between India and other international economies), “Path to Power: India’s Great Opportunity in the Changing World Order,” 7/17/17, Greater Pacific Capital, <https://greaterpacificcapital.com/path-to-power-indias-great-opportunity-in-the-changing-world-order/>]TDI

Taking up the Climate Change and Alternative Energy Cause**.** The US withdrawal from the Paris Climate Accord has left a serious gap in climate change leadership that has yet to be filled.  While the rest of the world has vowed to continue without the US and China has signalled its willingness to play a greater role in the process, the size of the challenge facing the world exceeds any one country’s ability to lead alone on the matter. India, as the world’s fifth largest producer of energy has a strong position to be one of a small number of countries to lead the way in fighting climate change. India is targeting to grow renewable energy production fourfold within five years, and with its low-cost base can become a core source of mass-produced cost effective renewable solutions for the rest of the world.

#### The affirmative denies our ability to stop climate change because they completely restrict India and other nations abilities to stop climate change through the private sector.

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### Case

#### Space platinum mining is better for the environment

Hein et al 17 [Andreas Hein, Laboratoire Genie Industriel, Michael Saldani, Laboratoire Genie Industriel, Hortense Tollu, Laboratoire Genie Industriel, “Exploring Potential Environmental Benefits of Asteroid Mining,” 69th International Astronautical Congress, <https://arxiv.org/ftp/arxiv/papers/1810/1810.04749.pdf>] /Triumph Debate

If we compare these rough estimates with the CO2eq values for Earth-based platinum mining, **we immediately see that the global warming effect of Earth-based mining is several orders of magnitude larger,** even for secondary platinum. Table 2 shows the ratio between the Earth-based platinum mining emissions and the space-based mining emissions. **A difference of two orders of magnitudes for primary platinum and one order of magnitude for secondary platinum is observed. For a mixture of primary and secondary platinum, we get values with two orders of magnitude difference.**

#### Allowing companies to pursue stellar mining makes further exploration much more possible and also decreases asteroid risk

Ursul & Ursul 20 [Arkady Ursul, Ecology @ Academy of Sciences of Moldova, Tatiana Ursul, Philosophy @ National Research Technical University, “On the Path to Space Mining and a Cosmic Sustainable Way of Socio-Natural Interaction,” Philosophy and Cosmology, <http://ispcjournal.org/journals/2020/02/PhC_25_UrsulUrsul.pdf>] /Triumph Debate

The beginning of **the interaction between mining engineering, mining, and astronautics did not come by accident** at the present time of space exploration. It became obvious that **space activities would not continue to develop effectively without the “support” of the mining industry and its emergence beyond the terrestrial atmosphere. Along with this, both further space exploration and geospace safety promotion**, i.e., protection of the planet against threats from space, **will be impossible without the development of space mining**. It is appropriate to recall that Konstantin Tsiolkovsky proved the necessity of space exploration proceeding not only from the demands of social and economic development but primarily from the need to ensure the safety and preservation of mankind. He also reckoned the emergence of an “industry in the ether.” Therefore, **the development of mining,** and through it, the other industries, **is in line with the reduction of anthropogenic pressure on the biosphere** under the conditions of the population growth. **The development of space resources and their processing outside the Earth**, directly in space, **drastically changes the principles and trajectories of space missions**, as well as the ways of creating space technology, bringing this technological process beyond the biosphere. **The priority of space resources is water. It can be found in circumterrestrial asteroids in the amount of several trillion tons. If it becomes possible to extract water from natural cosmic bodies** (which decomposes under the influence of an electric current to oxygen and hydrogen) and other necessary products for space technology and to produce fuel outside the planet on the basis of hydrogen**, it will reduce the price of further space development by twenty times**. It is believed that the first space field is likely to be not asteroids (which may contain rare earth elements, platinoids, and other rare and precious metals) but the Moon, where the priority extracted resource will be the water used to provide life support to people and fuel for rockets and space vehicles. The need to use lunar natural resources for the creation of lunar bases, the construction of space infrastructure for the purposes of further space exploration, including mine shafts, tunnels and other underground structures, especially for refueling space vehicles, attests to the early development of the Moon (Krichevsky, 2020; Krichevsky & Bagrov, 2019; Mayboroda, 2018; Slyuta, 2017). However, **more than a thousand asteroids are flying near the Earth**, and they can be achieved much more easily than the Moon. At the same time**, some of them represent a very serious threat to our planet, which is often reported** by the media. However, the Moon still does not significantly affect the problem of geocosmic safety, while some asteroids and comets constitute a threat to the planet on a short-term horizon. **It is evident that the asteroid-comet hazard has to be prevented, and it can fundamentally affect the choice of further ways and methods of space activities since security is always more important than commercial and other activities.** In fact**, it is also necessary to stand secure in order to develop the economy.** The basic idea of SD in its terrestrial and space variants is to ensure the safe existence of mankind (Ursul, 2016). It is important not to place in jeopardy the ability of future generations to meet their needs and, **above** **all, the basic need for a safe existence and sustainable development on the Earth and in space.** After all, the more space and objects of space will be mastered on a larger scale, the greater the chance of a further continuation of mankind existence (Ursul & Ursul, 2019).

#### Private companies compete, lowering costs for taxpayers. For example, SpaceX lowered the cost of military satellite launches by over a million dollars

**Weichert 21** [Brandon J. Weichert, Brandon J. Weichert is the author of “Winning Space: How America Remains a Superpower” (Republic Book Publishers). He runs The Weichert Report: World News Done Right and is a contributor at the Asia Times, “The Future of Space Exploration Depends on the Private Sector”, 07/05/2021, The National Review, <https://www.nationalreview.com/2021/07/the-future-of-space-exploration-depends-on-the-private-sector/#slide-1>] /Triumph Debate

As Jeff Bezos, the wealthiest man on the planet, readies to launch himself into space aboard one of his own rockets, the world is watching the birth of a new dawn in space. Previously, America relied on its government agency, NASA, to propel it to the cosmos during the last space race with the Soviet Union. **Today, America’s greatest hopes are with its private sector.** Jeff Bezos is not engaging in such risky behavior simply because he’s an adrenaline junky. No, he’s launching himself into orbit because his Blue Origins is in a titanic struggle with Elon Musk’s SpaceX — and Bezos’s firm is losing. **Whatever happens, the American people will benefit from the competition that is shaping up between America’s space entrepreneurs. This has always been how innovation occurs: through the dynamic, often cutthroat competition between actors in the private sector. While money is their ultimate prize, fame and fortune are also alluring temptations to make men like Musk and Bezos risk much of their wealth to change the world.** **The private space race among these entrepreneurs is part of a far more important marathon between Red China and the United States.** Whichever nation wins the new space race will determine the future of the earth below. Consider this: **Since winning its initial contracts to launch sensitive U.S. military satellites into orbit, SpaceX has lowered the cost of military satellite launches on taxpayers by “over a million dollars less” than what bigger defense contractors can do. Elon Musk is convinced that he can bring these costs down even more, thanks to his reusable Falcon 9 rocket**. **The competition between the private space start-ups is fierce — just as the competition between Edison and Westinghouse was — but the upshot is ultimately greater innovation and lower costs for you and me.** In fact, Elon Musk insists that if NASA gives SpaceX the contract for building the Human Landing System for the Artemis mission, NASA would return astronauts to the lunar surface by 2024 — four years before NASA believes it will do so. (Incidentally, 2024 is also when China anticipates having a functional base on the moon’s southern pole.) Whereas China has an all-of-society approach to its space race with the United States, Washington has yet to fully galvanize the country in the way that John F. Kennedy rallied America to wage — and win — the space race in the Cold War. America’s private sector, therefore, is the silver bullet against China’s quest for total space dominance. If left unrestricted by meddlesome Washington bureaucrats, these companies will ensure that the United States retains its overall competitive advantage over China — and all other challengers, for that matter. Indeed, the next four years could prove decisive in who will be victorious. Enter the newly minted NASA director, Bill Nelson, whose station at the agency has effectively poured cold water on the private sector’s ambitious space plans. “Space is not going to be the Wild West for billionaires or anyone else looking to blast off,” Nelson admonished an inquiring reporter. Why not? America’s actions during its western expansion created a dynamic and advanced nation that was well-positioned to dominate the world for the next century. Should we not attempt to emulate this in order to remain dominant in the next century? More important, this is precisely how China treats space: as a new Wild West . . . but one in which Beijing’s forces will dominate. China takes a leap-without-looking approach to space development — everything that can be done to further its grand ambition of becoming the world’s most dominant power by 2049 will be done. Meanwhile, the Biden administration wants to prevent America’s greatest strength, the free market, from helping to beat its foremost geopolitical competitor. Nelson’s comments are fundamentally at odds with America’s spirit and animating principles. Whatever one’s opinion about Bezos or Musk, **the fact is that their private space companies are inspiring greater innovation today in the space sector after years of its being left in the sclerotic hands of the U.S. government.** Sensing that the federal government’s dominance of U.S. space policy is waning, the Biden administration would rather cede the strategic high ground of space to China than let wildcatting innovators do the hard work. Today, the Federal Aviation Authority (FAA) and NASA are contriving new ways for strangling the budding private space sector, just as it is taking flight. Risk aversion is not how one innovates. Risk is what led Americans to the moon just 66 years after the Wright brothers flew their first airplane. A willingness for risk doesn’t exist today in the federal government — which is why the feds shouldn’t be running space policy. The U.S. government should be partnering with the new space start-ups, not shunning them. The FAA should be automatically approving SpaceX launches, not stymying them. The federal government will not win space any more than it could win the West or build the locomotive. It takes strong-willed, brilliant individuals of a rare caliber to do that. All government can do is to give the resources and support to private-sector innovators and let them make history for us. The next decade will decide who wins space. Let it be America — and let America’s dynamic start-ups win that race, not China’s state capitalism.

#### This impact is especially huge during times like these – millions of families across the world are suffering because of COVID-19. Relieving taxes is the first step in regaining economic growth globally