# NC

### NC -- Nozick NC

#### The value must be justice, defined as giving each their due, as per the word ‘unjust’ in the resolution. Justice is distinct from ethics – what’s just is what arises out of a just history of transfers regardless of the outcomes.

Nozick 74 [Robert Nozick, Renowned American Philosopher, “Anarchy, State and Utopia,” Part II, Section I, ]/ lm

If the hypothetical just history involves each person's consenting to the institutional structure and to any limitations on his rights (specified by the moral side constraints on the behavior of others) it embodies, then if some actual person would not consent, one must view the institutional structure as unjust (unless it counts as just via some other hypothetical history). Similarly, one must hold the institutional structure unjust if the hypothetical just history involves some people's consenting who didn't, and some now would not assent to those others having done so. If the institutional structure could arise by some hypothetical just history which does not involve anyone's consent to that structure, then one's evaluation of the structure will depend upon one's evaluation of the process which would give rise to it. If that process is viewed as better (along dimensions other than justice where, by hypothesis, it excels) than the actual history, this probably will improve one's evaluation of the structure. That a just process would have led to the institutional structure, but only if manned by despicable individuals, will not enhance one's evaluation of that institutional structure.

The entitlement principles of justice in holdings that we have sketched are historical principles of justice. To better understand their precise character, we shall distinguish them from another subclass of the historical principles. Consider, as an example, the principle of distribution according to moral merit. This principle requires that total distributive shares vary directly with moral merit; no person should have a greater share than anyone whose moral merit is greater. (If moral merit could be not merely ordered but measured on an interval or ratio scale, stronger principles could be formulated.) Or consider the principle that results by substituting “usefulness to society” for “moral merit” in the previous principle. Or instead of “distribute according to moral merit,” or “distribute according to usefulness to society,” we might consider “distribute according to the weighted sum of moral merit, usefulness to society, and need,” with the weights of the different dimensions equal. Let us call a principle of distribution patterned if it specifies that a distribution is to vary along with some natural dimension, weighted sum of natural dimensions, or lexicographic ordering of natural dimensions. And let us say a distribution is patterned if it accords with some patterned principle. (I speak of natural dimensions, admittedly without a general criterion for them, because for any set of holdings some artificial dimensions can be gimmicked up to vary along with the distribution of the set.) The principle of distribution in accordance with moral merit is a patterned historical principle, which specifies a patterned distribution. “Distribute according to I.Q.” is a patterned principle that looks to information not contained in distributional matrices. It is not historical, however, in that it does not look to any past actions creating differential entitlements to evaluate a distribution; it requires only distributional matrices whose columns are labeled by I.Q. scores. The distribution in a society, however, may be composed of such simple patterned distributions, without itself being simply patterned. Different sectors may operate different patterns, or some combination of patterns may operate in different proportions across a society. A distribution composed in this manner, from a small number of patterned distributions, we also shall term “patterned.” And we extend the use of “pattern” to include the overall designs put forth by combinations of end-state principles.

Whether or not Locke’s particular theory of appropriation can be spelled out so as to handle various difficulties, I assume that any adequate theory of justice in acquisition will contain a proviso similar to the weaker of the ones we have attributed to Locke. A process normally giving rise to a permanent bequeathable property right in a previously unowned thing will not do so if the position of others no longer at liberty to use the thing is thereby worsened. It is important to specify this particular mode of worsening the situation of others, for the proviso does not encompass other modes. It does not include the worsening due to more limited opportunities to appropriate (the first way above, corresponding to the more stringent condition), and it does not include how I “worsen” a seller’s position if I appropriate materials to make some of what he is selling, and then enter into competition with him. Someone whose appropriation otherwise would violate the proviso still may appropriate provided he compensates the others so that their situation is not thereby worsened; unless he does compensate these others, his appropriation will violate the proviso of the principle of justice in acquisition and will be an illegitimate one.\* A theory of appropriation incorporating this Lockean proviso will handle correctly the cases (objections to the theory lacking the proviso) where someone appropriates the total supply of something necessary for life.\*

#### Thus, the value criterion is consistency with the Self Ownership Proviso.

Feser 05 [Edward C. Feser is an American philosopher. He is Associate Professor of Philosophy at Pasadena City College in Pasadena, California, Social Philosophy and Policy Foundation, “There is no such thing as unjust initial acquisition,” Section II]/ lm

If what I have argued so far is correct, then the way is opened to the following revised case for strongly libertarian Lockean-Nozickian prop erty rights: We are self-owners, having full property rights to our body parts, powers, talents, energies, etc. As self-owners, we also have a right, given the SOP, not to have our self-owned powers nullified—we have the right, that is, to act within the extra-personal world and thus to acquire rights to extra-personal objects that the use of our self-owned powers requires.39 This might involve the buying or leasing of certain rights or bundles of rights and, correspondingly, the acquiring of lesser or greater degrees of ownership of parts of the external world, but as long as one is able to exercise one’s powers to some degree and is not rendered incapable of acting within that world, the SOP is satisfied. In any case, such rights can only be traded after they are first established by initial acquisition. In initially acquiring a resource, an agent does no one an injustice (it was unowned, after all). Furthermore, he has mixed his [their] labor with the resource, significantly altering it and/or bringing it under his control, and is himself solely responsible for whatever [the] value or utility the resource has come to have. Thus, he has a presumptive right to it, and, if his control and/or alteration (and thus acquisition) of it is (more or less) complete, his ownership is accordingly (more or less) full. The system of strong private property rights that follows from the acts of initial acquisition performed by countless such agents results, as a matter of empirical fact, in a market economy that inevitably and dramatically increases the number of resources available for use by individuals, and these benefited individuals include those who come along long after initial acquisition has taken place. (Indeed, it especially includes these latecomers, given that they were able to avoid the hard work of being the first to “tame the land” and draw out the value of raw materials.)40 The SOP is thus, in fact, rarely, if ever, violated. The upshot is that a system of Lockean-Nozickian private property rights is morally justified, with a strong presumption against tampering with existing property titles in general. In any case, there is a strong presumption against any general egalitarian redistribution of wealth, and no case whatsoever to be made for such redistribution from the general theory of property just sketched, purged as it is of the Lockean proviso, with all the egalitarian mischief-making the proviso has made possible.

This outcome has the virtue of restoring to Nozick’s system the theoretical simplicity and elegance that his (rather unsystematically articulated) commitment to the Lockean proviso threatened to distort. At the same time, replacement of the Lockean proviso with the self-ownership proviso allows us to sidestep the (arguably) counterintuitive consequences of rejecting the former. Still, since there is no such thing as an unjust initial acquisition, very strong property rights to unowned external objects come to be quite easy to obtain; and they, together with the thesis of self-ownership, give us Nozick’s principle of justice in transfer, with all its highly anti-egalitarian and anti-redistributionist consequences. The picture that results is very much a libertarianism with foundations.

#### Prefer --

#### 1] Justice is intrinsic -- its not just to imprison an innocent person even if it deters others from committing crime -- takes out precedent setting.

#### 2] Performativity -- debate presumes you have ownership over a] yourself and b] your labor in the form of args, and c] that you have freedom of speech.

#### 3] Textuality -- Self Ownership is most textual as it specifically outlines how appropriation relates to justice, and when its unjust.

#### Now negate – Appropriation in initial acquisition of space isn’t unjust since no one has a claim to it.

Feser 05 [Edward C. Feser is an American philosopher. He is Associate Professor of Philosophy at Pasadena City College in Pasadena, California, Social Philosophy and Policy Foundation, “There is no such thing as unjust initial acquisition,” Section II]/ lm

There is a serious difficulty with this criticism of Nozick, however. It is just this: There is no such thing as an unjust initial acquisition of resources; therefore, there is no case to be made for redistributive taxation on the basis of alleged injustices in initial acquisition.

Giving what I shall call “the basic argument” for this audacious claim will be the task of Section II of this essay. The argument is, I think, compelling, but by itself it leaves unexplained some widespread intuitions to the effect that certain specific instances of initial acquisition are unjust and call forth as their remedy the application of a Lockean proviso, or are otherwise problematic. (A “Lockean proviso,” of course, is one that forbids initial acquisitions of resources when these acquisitions do not leave “enough and as good” in common for others.) Thus, Section III focuses on various considerations that tend to show how those intuitions are best explained in a way consistent with the argument of Section II. Section IV completes the task of accounting for the intuitions in question by considering how the thesis of self-ownership itself bears on the acquisition and use of property. Section V shows how the results of the previous sections add up to a more satisfying defense of Nozickian property rights than the one given by Nozick himself, and considers some of the implications of this revised conception of initial acquisition for our understanding of Nozick’s principles of transfer and rectification.

The reason there is no such thing as an unjust initial acquisition of resources is that there is no such thing as either a just or an unjust initial acquisition of resources. The concept of justice, that is to say, simply does not apply to initial acquisition. It applies only after initial acquisition has already taken place. In particular, it applies only to transfers of property (and derivatively, to the rectification of injustices in transfer). This, it seems to me, is a clear implication of the assumption (rightly) made by Nozick that external resources are initially unowned. Consider the following example. Suppose an individual A seeks to acquire some previously unowned resource R. For it to be the case that A [them to] commits an injustice in acquiring R, it [there] would also have to be the case that there is some individual B (or perhaps a group of individuals) against whom A commits the injustice. But for B to have been wronged by A’s acquisition of R, B [they] would have to have had a rightful claim over R, a right to R. By hypothesis, however, B did not have a right to R, because no one had a right to it—it was unowned, after all. So B was not wronged and could not have been. In fact, the very first person who could conceivably be wronged by anyone’s use of R would be, not B, but A himself, since A is the first one to own R. Such a wrong would in the nature of the case be an injustice in transfer—in unjustly taking from A what is rightfully his—not in initial acquisition. The same thing, by extension, will be true of all unowned resources: it is only after someone has initially acquired them that anyone could unjustly come to possess them, via unjust transfer. It is impossible, then, for there to be any injustices in initial acquisition.7

### NC -- SpaceCol DA

#### The private sector is the key internal link to space exploration and colonization.

**Sharma 9/7** [Maanas Sharma, 9-7-2021, "The Space Review: The privatized frontier: the ethical implications and role of private companies in space exploration," The Space Review, https://www.thespacereview.com/article/4238/1]//DDPT

In recent years, private companies have taken on a larger role in the space exploration system. With lower costs and faster production times, they have displaced some functions of government space agencies. Though many have levied criticism against privatized space exploration, it also allows room for more altruistic actions by government space agencies and the benefits from increased space exploration as a whole. Thus, we should encourage this development, as the process is net ethical in the end. Especially if performed in conjunction with adequate government action on the topic, private space exploration can overcome possible shortcomings in its risky and capitalistic nature and ensure a positive contribution to the general public on Earth.

The implications of commercial space exploration have been thrust into the limelight with the successes and failures of billionaire Elon Musk’s company SpaceX. While private companies are not new to space exploration, their prominence in American space exploration efforts has increased rapidly in recent years, fueled by technological innovations, reductions in cost, and readily available funding from government and private sources.[1] In May 2020, SpaceX brought American astronauts to space from American soil for the first time in almost 10 years.[2] Recognizing the greatly reduced costs of space exploration in private companies, NASA’s budget has shifted to significantly relying on private companies.[3] However, private space companies are unique from government space agencies in the way they experience unique sets of market pressures that influence their decision-making process. Hence, the expansion of private control in the space sector turns into a multifaceted contestation of its ethicality.

The most obvious ethical concern is the loss of human life. Critics contend that companies must answer to their shareholders and justify their profits. This contributes to a larger overall psyche that prioritizes cost and speed above all else, resulting in significantly increased risks.[4] However, the possible increase in mishaps is largely overstated. Companies recognize the need for safety aboard their expeditions themselves.[5] After all, the potential backlash from a mishap could destroy the company’s reputation and significantly harm their prospects. According to Dr. Nayef Al-Rodhan, Head of the Geneva Centre for Security Policy’s Geopolitics and Global Futures Programme, “because there were no alternatives to government space programs, accidents were seen to some degree as par for the course… By comparison, private companies actually have a far more difficult set of issues to face in the case of a mishap. In a worst case scenario, a private company could make an easy scapegoat.” [6]

Another large ethical concern is the prominence capitalism may have in the future of private space exploration and the impacts thereof. The growth of private space companies in recent years has been closely intertwined with capitalism. Companies have largely focused on the most profitable projects, such as space travel and the business of space.[7] Many companies are funded by individual billionaires, such as dearMoon, SpaceX’s upcoming mission to the Moon.[8] Congress has also passed multiple acts for the purpose of reducing regulations on private space companies and securing private access to space. From this, many immediately jump to the conclusion that capitalism in space will recreate the same conditions in outer space that plague Earth today, especially with the increasing push to create a “space-for-space” economy, such as space tourism and new technologies to mine the Moon and asteroids. Critics, such as Jordan Pearson of VICE, believe that promises of “virtually unlimited resources” are only for the rich, and will perpetuate the growing wealth inequality that plagues the world today.[9]

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]

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.

#### It solves a litany of existential threats – don’t put all your eggs in one basket.

Fitzgerald 3/9 [(Shanon, Assistant Websites Editor at Liberty Fund), “Why Human Space Exploration Matters,” March 9 2021, https://www.econlib.org/why-human-space-exploration-matters/]

While the yields to space exploration and the development of spaceflight technology may appear minimal in the immediate future, shifting our perspective to the longer term renders the human situation vis a viz space exploration extremely clear: if humans want to survive in perpetuity, we need to establish ourselves on other planets in addition to Earth. It is as simple as that. And yet we are not doing all that much to make that happen. To be clear, I’m long on Earth, too, and hope that technological improvements will continue to allow our species to get “more from less” right here on the third rock from the sun, enabling us to keep occupying the planet that saw us evolve into consciousness. I like to imagine that the distant future on Earth has the potential to be an extremely pleasant one, as advances in our scientific understanding and bio-technical praxis should hopefully allow our descendants to clean up any of the remaining messes previous generations will have left behind (e.g., nuclear and industrial waste, high amounts of atmospheric carbon, other lingering nasties) and stable-state free societies will hopefully allow all persons (or very nearly all persons) to live free and meaningful lives in productive community and exchange with their fellows. As the previous qualification highlights, the trickiest problems here on Earth and extending to wherever humans end up in the spacefaring age will still be social and political, and their successful resolution will depend more on the future state of our governing arts than our hard sciences. But regarding the negative events that could very well happen to Earth I think we all need to be equally clear: life might not make it here. There is no guarantee that it will, and in the very long run, with the expansion and subsequent death of our sun, we know with near certainty that it will not. Consider just a few possible extinction-level events that could strike even earlier: large meteors, supervolcanic eruptions, drastic climactic disruption of the “Snowball Earth” variety. As SpaceX founder and Tesla CEO Elon Musk recently observed on the Joe Rogan Experience podcast, “A species that does not become multiplanetary is simply waiting around until there is some extinction event, either self-inflicted or external.” This statement, applied to the human species, is obviously true on its face. As doomsday events go a giant asteroid might be more shocking, since we (people living today) have never experienced one before while concerned atomic scientists warn us about the nuclear bomb all the time, but the odds that we blow ourselves up are still there. Slim, but there. It’s more plausible that a severe nuclear war and the nuclear winter it would likely trigger would leave the human population greatly reduced as opposed to completely extinct, but then the question becomes: why is that a risk we would want to take? The bomb is here to stay for now, but there is no reason that 100% of known life in the universe needs to stay here on Earth to keep it company, waiting around for something even more destructive to show up. While we’re on that happy subject: Do you have any good intuitions about our collective chances against hostile, or simply arrogant or domineering, technologically-advanced extraterrestrial lifeforms, if and/or when they decide to pay us a visit on our home turf? These scary situation sketches will suffice. At bottom, the core reason I am a believer in the need to make life—and not just human life—multiplanetary is the same basic reason I would never counsel a friend to keep all their money and valuables in one place: diversification is good. Wisdom and experience suggest we store precious resources in multiple safe(ish) places. Diversification limits our exposure to risk, and increases our resilience when bad things do happen. One reserve gets hit, two or three others survive, and you probably feel that the effort to spread things out was worth it. What I’m saying here has strong undercurrents of common sense, yet our approach to the human population itself—the universal store and font of “human capital”—does not currently prioritize diversification to the degree our technological capabilities would allow. The distribution of the human population, and of almost all human knowledge and works, is overwhelmingly local. (Let us set to one side the possibility that aliens somewhere maintain an archive of captured human information.) Establishing outposts at least as large as those we maintain in Antarctica on the Moon and Mars, or other more suitable sites, by the end of this century would be a great first step toward genuinely diversifying the physical locations of the most precious resources known to us: human consciousness and creativity, human love and human soul, the great works in which all these things are displayed. Add also to this list repositories of scientific knowledge and knowhow, seed reserves, and certain materials necessary to re-start the manufacturing of fundamental technologies. Spreading these goods to a few additional locations within the solar system would be a major species-and-civilization-level accomplishment that all living at the time could feel satisfied by, and even take some pride in. And this is something that we seem to be just on the cusp of being able to do, given our recent and rapid technological advances in rocketry, computers, and materials science and engineering, among other important fields for space exploration and settlement. Quickly the uniplanetary human situation is becoming, if it is not already, one of pure choice.

### NC -- CP

#### Counterplan: Establish an international body to regulate Commercial Space Activity.

**Iliopoulos 20** [Iliopoulos, Nikolaos [University of Tokyo], and Miguel Esteban [Waseda University]. "Sustainable space exploration and its relevance to the privatization of space ventures." Acta Astronautica 167 (2020): 85-92.]

The envisioned legal regime to encourage private firms to undertake the high risk and high cost involved in activities of space exploration would have to explicitly recognize extra-terrestrial property claims of individuals and corporations that meet specified conditions. As such, based on the conclusions made through this paper ,it is considered that with the right negotiation terms, the current treaties can be revised so as to become steppingstones for the advancement of space exploration that could potentially bring forth significant changes to the environment surrounding planet Earth. Finally, one way that such privatization efforts could be seen to benefit of [hu]mankind as a whole is that any taxation resulting from it should be paid directly to the United Nations, or that at least some fraction of the profits should fund this organization.

#### That solves the aff.

Fladeland 19 [Fellow at the Outer Space Institute, Logan, Aaron C. Boley, Michael Byers, Meteoroid Stream Formation Due to the Extraction of Space Resources from Asteroids, Conference paper for the 1st International Orbital Debris Conference, December 2019, <https://arxiv.org/abs/1911.12840>, accessed 6-25-21]

Fortunately, it may be possible to establish simple measures that could mitigate some of these concerns, particularly the formation of debris streams with non-trivial mass fluxes. Examples include establishing an international body with the authority to grant mining permits, much like the International Seabed Authority established under the 1982 United Nations Convention on the Law of the Sea. In any scenario, safety and sustainability requirements should be part of the licensing regime. Some of these requirements could limit mining rates or require a company to produce a risk-to-Earth assessment plan. Some asteroids could even be deemed untouchable for safety or scientific reasons. As space law is redefined in the NewSpace era, it must be fully informed by the astrophysical context.

### NC -- Underview

#### Presumption negates – infinite ways for something to be false but only one way for them to be true, and the aff has the burden of proof. Permissibility negates – doing the aff isn’t obligatory then the squo is permissible.

# Case

#### Moral uncertainty means you should prioritize preventing extinction over all else.

Bostrom 13 [Nick. &quot;Existential risk prevention as global priority.&quot; Global Policy 4.1 (2013): 15-31. (Faculty ofPhilosophy and Oxford Martin School University of Oxford.]

These reflections on moral uncertainty suggest an alternative, complementary way of looking at existential risk; they also suggest a new way of thinking about the ideal of sustainability. Let me elaborate. Our present understanding of axiology might well be confused. We may not now know — at least not in concrete detail — what outcomes would count as a big win for humanity; we might not even yet be able to imagine the best ends of our journey. If we are indeed profoundly uncertain about our ultimate aims, then we should recognize that there is a great option value in preserving — and ideally improving — our ability to recognize value and to steer the future accordingly. Ensuring that there will be a future version of humanity with great powers and a propensity to use them wisely is plausibly the best way available to us to increase the probability that the future will contain a lot of value. To do this, we must prevent any existential catastrophe.

#### OST Fails and is bad.

**Evanoff 17** [Kyle Evanoff, Kyle is a research associate in international economics and U.S. foreign policy at the Council on Foreign Relations 10/10/17, "The Outer Space Treaty’s Midlife Funk," Council on Foreign Relations [https://www.cfr.org/blog/outer-space-treatys-midlife-funk accessed 12/11/2021](https://www.cfr.org/blog/outer-space-treatys-midlife-funk%20accessed%2012/11/2021)] Adam

Half a century later, however, the Outer Space Treaty has entered something of a funk. Despite the universal aspirations of the UN Committee on the Peaceful Uses of Outer Space, which molded the document into its completed form, many of the principles enshrined within the text are less suited to the present than they were to their native Cold War milieu. While the anachronism has not reached crisis levels, current and foreseeable developments do present challenges for the treaty, heightening the potential for disputes. At the crux of the matter is the ongoing democratization of space. During the 1950s and ‘60s, when the fundamental principles of international space law took shape, only large national governments could afford the enormous outlays required for creating and maintaining a successful space program. In more recent decades, technological advances and new business models have broadened the range of spacefaring actors. Thanks to innovations such as reusable rockets, micro- and nanosatellites, and inflatable space station modules, costs are decreasing and private companies are crowding into the sector. This flurry of activity, known as New Space, promises nothing less than a complete transformation of the way that humans interact with space. Asteroid mining, for example, could eliminate the need to launch many essential materials from Earth, lowering logistical hurdles and enabling largescale in-space fabrication. Companies like Planetary Resources and Deep Space Industries, by extracting and selling useful resources in situ, could help to jumpstart a sustainable space economy. They might also profit from selling valuable commodities back on terra firma. As a recent (bullish) Goldman Sachs report noted, a single football-field-sized asteroid could contain $25 to $50 billion worth of platinum—enough to upend the terrestrial market. With astronomical sums at stake and the commercial sector kicking into high gear, legal questions are becoming a major concern. Many of these questions focus on Article II of the Outer Space Treaty, which prohibits national appropriation of space and the celestial bodies. Since another provision (Article VI) requires nongovernmental entities to operate under a national flag, some experts have suggested that asteroid mining, which would require a period of exclusive use, may violate the agreement. Others, however, contend that companies can claim ownership of extracted resources without claiming ownership of the asteroids themselves. They cite the lunar samples returned to Earth during the Apollo program as a precedent. Hoping to promote American space commerce, Congress formalized this more charitable legal interpretation in Title IV of the 2015 U.S. Commercial Space Launch Competitiveness Act. Luxembourg, which announced a €200 million asteroid mining fund last year, followed suit with its own law in August. Controversies like the one surrounding asteroid mining are par for the course when it comes to the Outer Space Treaty. The agreement’s insistence that space be used “for peaceful purposes” has long been the subject of intense debate. During the treaty-making process, Soviet jurists argued that peaceful meant “non-military” and that spy satellites were illegal; Americans, who enjoyed an early lead in orbital reconnaissance, interpreted peaceful to mean “non-aggressive” and came to the opposite conclusion. Decades later, the precise meaning of the phrase remains a matter of contention. While the Outer Space Treaty has survived past disputes intact, some experts and policymakers believe that an update is in order. Senator Ted Cruz (R-TX), for instance, worries that legal ambiguity could undermine the nascent commercial space sector—a justifiable concern. Russia and Brazil, among other countries, hold asteroid mining operations to constitute de facto national appropriation. And while there are plenty of asteroids to go around for now (NASA has catalogued nearly 8,000 near earth objects larger than 140 meters in diameter), more supply-side 22saturation could lead to conflicts over choice space rocks. The absence of clear property rights makes this prospect all the more likely. Plans to establish outposts on the moon and Mars present a bigger challenge still. Last week, prior to the first meeting of the revived National Space Council, Vice President Mike Pence described the need for “a renewed American presence on the moon, a vital strategic goal” in an op-ed for the Wall Street Journal. His piece came on the heels of SpaceX Founder and Chief Executive Officer Elon Musk’s announcement at the 2017 International Astronautical Congress of a revised plan to colonize the red planet, with the first human missions slated for 2024. Musk hopes for the colony to house one million inhabitants within the next fifty years. While mining might require only temporary use of the celestial bodies, full-fledged colonies would necessarily be more permanent affairs. With some national governments arguing that mining operations would constitute territorial claims, lunar and Martian bases are almost certain to enter the legal crosshairs. And, even under the favorable U.S. interpretation of the Outer Space Treaty, states and private companies would need to avoid making territorial claims. If viable colony locations are relatively few and far between, fierce competition could make asserting control a practical necessity. Even so, policymakers should avoid hasty attempts to overhaul the Outer Space Treaty. The uncertainties associated with altering the fundamental principles of international space law are greater than any existing ambiguities. Commercial spacefaring already entails high levels of risk; adding new regulatory hazards to the mix would jeopardize investment and could slow progress in the sector. While the current property rights regime may be untenable over longer timelines, it remains workable for now.