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Framework:

Because unjust in the resolution is defined as - not based on or behaving according to what is morally right and fair. [Oxford Lang](#)

My value is **Morality**

The standard is **maximizing expected wellbeing**

[1] Pleasure and pain are the starting point for moral reasoning—they're our most baseline desires and the only things that explain intrinsic value

Moen 16, Ole Martin (PhD, Research Fellow in Philosophy at University of Oslo). "An Argument for Hedonism." Journal of Value Inquiry 50.2 (2016): 267.

Let us start by observing, empirically, that a widely shared judgment about intrinsic value and disvalue is that **pleasure is intrinsically valuable and pain is intrinsically disvaluable**. On virtually any proposed list of intrinsic values and disvalues (we will look at some of them below), pleasure is included among the intrinsic values and pain among the intrinsic disvalues. This inclusion makes intuitive sense, moreover, for **there is something undeniably good about the way pleasure feels and something undeniably bad about the way pain feels**, and neither the goodness of pleasure nor the badness of pain seems to be exhausted by the further effects that these experiences might have. "Pleasure" and "pain" are here **understood inclusively**, as encompassing anything hedonically positive and anything hedonically negative. 2 The special value statuses of pleasure and pain are manifested in how we treat these experiences in our everyday reasoning about values. If you tell me that you are heading for the convenience store, I might ask: "What for?" This is a reasonable question, for when you go to the convenience store you usually do so, not merely for the sake of going to the convenience store, but for the sake of achieving something further that you deem to be valuable. You might answer, for example: "To buy soda." This answer makes sense, for soda is a nice thing and you can get it at the convenience store. I might further inquire, however: "What is buying the soda good for?" This further question can also be a reasonable one, for it need not be obvious why you want the soda. You might answer: "Well, I want it for the pleasure of drinking it." If I then proceed by asking "But what is the pleasure of drinking the soda good for?" the discussion is likely to reach an awkward end. **The reason is that the pleasure is not good for anything further; it is simply that for which going to the convenience store and buying the soda is good**. 3 As Aristotle observes: "We never ask [a man] what his end is in being pleased, because we assume that pleasure is choice worthy in itself." 4 Presumably, a similar story can be told in the case of pains, for if someone says "This is painful!" we never respond by asking: "And why is that a problem?" We take for granted that **if something is painful, we have a sufficient explanation of why it is bad**. If we are onto something in our everyday reasoning about values, it seems that **pleasure and pain are both places where we reach the end of the line in matters of value**. Although **pleasure and pain thus seem to be good candidates for intrinsic value and disvalue**, several objections have been raised against this suggestion: (1) that pleasure and pain have instrumental but not intrinsic value/disvalue; (2) that pleasure and pain gain their value/disvalue derivatively, in virtue of satisfying/frustrating our desires; (3) that there is a subset of pleasures that are not intrinsically valuable (so-called "evil pleasures") and a subset of pains that are not intrinsically disvaluable (so-called "noble pains"), and (4) that pain asymbolia, masochism, and practices such as wiggling a loose tooth render it implausible that pain is intrinsically disvaluable. I shall argue that these objections fail. Though it is, of course, an open question whether other objections to P1 might be more successful, I shall assume that if (1)–(4) fail, we are justified in believing that P1 is true itself a paragon of freedom—there will always be some agents able to interfere substantially with one's choices. The effective level of protection one enjoys, and hence one's actual degree of freedom, will vary according to multiple factors: how powerful one is, how powerful individuals in one's vicinity are, how frequent police patrols are, and so on. Now, we saw above that what makes a slave unfree on Pettit's view is the fact that his master has the power to interfere arbitrarily with his choices; in other words, what makes the slave unfree is the power relation that obtains between his master and him. The difficulty is that, in light of the facts I just mentioned, there is no reason to think that this power relation will be unique. A similar relation could obtain between the master and someone other than the slave: absent perfect state control, the master may

very well have enough power to interfere in the lives of countless individuals. Yet it would be wrong to infer that these individuals lack freedom in the way the slave does; if they lack anything, it seems to be security. A problematic power relation can also obtain between the slave and someone other than the master, since there may be citizens who are more powerful than the master and who can therefore interfere with the slave's choices at their discretion. Once again, it would be wrong to infer that these individuals make the slave unfree in the same way that the master does. Something appears to be missing from Pettit's view. If I live in a particularly nasty part of town, then it may turn out that, when all the relevant factors are taken into account, I am just as vulnerable to outside interference as are the slaves in the royal palace, yet it does not follow that our conditions are equivalent from the point of view of freedom. As a matter of fact, we may be equally vulnerable to outside interference, but as a matter of right, our standings could not be more different. I have legal recourse against anyone who interferes with my freedom; the recourse may not be very effective—presumably it is not, if my overall vulnerability to outside interference is comparable to that of a slave— but I still have full legal standing.⁶⁸ By contrast, the slave lacks legal recourse against the interventions of one specific individual: his master. It is that fact, on a Kantian view—a fact about the legal relation in which a slave stands to his master—that sets slaves apart from freemen. The point may appear trivial, but it does get something right: whereas one cannot identify a power relation that obtains uniquely between a slave and his master, the legal relation between them is undeniably unique. A master's right to interfere with respect to his slave does not extend to freemen, regardless of how vulnerable they might be as a matter of fact, and citizens other than the master do not have the right to order the slave around, regardless of how powerful they might be. This suggests that Kant is correct in thinking that the ideal of freedom is essentially linked to a person's having full legal standing. More specifically, he is correct in holding that the importance of rights is not exhausted by their contribution to the level of protection that an individual enjoys, as it must be on an instrumental view like Pettit's. Although it does matter that rights be enforced with reasonable effectiveness, the sheer fact that one has adequate legal rights is essential to one's standing as a free citizen. In this respect, Kant stays faithful to the idea that freedom is primarily a matter of standing—a standing that the freeman has and that the slave lacks. Pettit himself frequently insists on the idea, but he fails to do it justice when he claims that freedom is simply a matter of being adequately (and reliably) shielded against the strength of others. As Kant recognizes, the standing of a free citizen is a more complex matter than that. One could perhaps worry that the idea of legal standing is something of a red herring here—that it must ultimately be reducible to a complex network of power relations and, hence, that the position I attribute to Kant differs only nominally from Pettit's. That seems to me doubtful. Viewing legal standing as essential to freedom makes sense only if our conception of the former includes conceptions of what constitutes a fully adequate scheme of legal rights, appropriate legal recourse, justified punishment, and so on. Only if one believes that these notions all boil down to power relations will Kant's position appear similar to Pettit's. On any other view—and certainly that includes most views recently defended by philosophers—the notion of legal standing will outstrip the power relations that ground Pettit's theory.

[2] Extinction is the most important impact to prioritize - without a human race nothing else matters

(MacAskill 14) [William, Oxford Philosopher and youngest tenured philosopher in the world, Normative Uncertainty, 2014]

The human race might go extinct from a number of causes: asteroids, supervolcanoes, runaway climate change, pandemics, nuclear war, and the development and use of dangerous new technologies such as synthetic biology, all pose risks (even if very small) to the continued survival of the human race.¹⁸⁴ And different moral views give opposing answers to question of whether this would be a good or a bad thing. It might seem obvious that human extinction would be a very bad thing, both because of the loss of potential future lives, and because of the loss of the scientific and artistic progress that we would make in the future. But the issue is at least unclear. The continuation of the human race would be a mixed bag: inevitably, it would involve both upsides and downsides. And if one regards it as much more important to avoid bad things happening than to promote good things happening then one could plausibly regard human extinction as a good thing. For example, one might regard the prevention of bads as being in general more important than the promotion of goods, as defended historically by G. E. Moore,¹⁸⁵ and more recently by Thomas Hurka.¹⁸⁶ One could weight the prevention of suffering as being much more important than the promotion of happiness. Or one could weight the prevention of objective bads, such as war and genocide, as being much more important than the promotion of objective goods, such as scientific and artistic progress. If the human race continues its future will inevitably involve suffering as well as happiness, and objective bads as well as objective goods. So, if one weights the bads sufficiently heavily against the goods, or if one is sufficiently pessimistic about humanity's ability to achieve good outcomes, then one will regard human extinction as a good thing.¹⁸⁷ However, even if we believe in a moral view according to which human extinction would be a good thing, **we still have strong reason to prevent near-term human extinction.** To see this, we must note three points. First, we should note that the **extinction** of the human race **is an extremely high stakes** moral issue. Humanity could be around for a very long time: if humans survive as long as the median mammal species, we will last another two million years. On this estimate, the number of humans in existence in the future, given that we don't go extinct any time soon, would be 2×10^{14} . So if it is good to bring new people into existence, then it's very good to prevent human extinction. Second, human **extinction is** by its nature an **irreversible** scenario. If we continue to exist, then we always have the option of letting ourselves go extinct in the future (or, perhaps more realistically, of considerably reducing population size). But if we go extinct, then we can't magically bring ourselves back into existence at a later date. Third, **we should expect ourselves to progress, morally**, over the next few centuries, **as we have progressed in the past. So** we should expect that **in a few centuries' time we will have better evidence about how to evaluate human extinction** than we currently have. Given these three factors, it would be better to prevent the near-term extinction of the human race, even if we thought that the extinction of the human race would actually be a very good thing. To make this concrete, I'll give the following simple but illustrative model. Suppose that we have 0.8 credence that it is a bad thing to produce new people, and 0.2 certain that it's a good thing to produce new people; and the degree to which it is good to produce new people, if it is good, is the same as the degree to which it is bad to produce new people, if it is bad. That is, I'm supposing, for simplicity, that we know that one new life has one unit of value; we just don't know whether that unit is positive or negative. And let's use our estimate of 2×10^{14} people who would exist in the future, if we avoid near-term human extinction. Given our stipulated credences, the expected benefit of letting the human race go extinct now would be $(.8-.2) \times (2 \times 10^{14}) = 1.2 \times (10^{14})$. Suppose that, **if we** let the human race continue and **did research for 300 years**, we would know for certain whether or not additional people

are of positive or negative value. If so, then with the credences above we should think it 80% likely that we will find out that it is a bad thing to produce new people, and 20% likely that we will find out that it's a good thing to produce new people. So there's an 80% chance of a loss of $3 \times (10^{10})$ (because of the delay of letting the human race go extinct), the expected value of which is $2.4 \times (10^{10})$. But there's also a 20% chance of a gain of $2 \times (10^{14})$, the expected value of which is $4 \times (10^{13})$. That is, in expected value terms, **the cost of waiting** for a few hundred years **is vanishingly small compared with** the benefit of **keeping one's options open** while one gains new information.

Advocacy: (0:58)

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

the act of taking something for your own use, usually without permission:

<https://www.dictionary.com/browse/appropriation>

<https://dictionary.cambridge.org/us/dictionary/english/appropriation>

OST adds by defining appropriation as occupation, use, or any other means

<https://www.space.com/33440-space-law.html#:~:text=Space%20is%20free%20for%20all,in%20other%20outer%2Dspace%20locations.>

“Appropriation” includes claims to natural resources, not just real property.

Amanda M. **Leon**, Associate*, Caplin & Drysdale, Chtd., '18, Virginia Law Review [“MINING FOR MEANING: AN EXAMINATION OF THE LEGALITY OF PROPERTY RIGHTS IN SPACE RESOURCES” Vol. 104:497 2018] TDI

Appropriation. The term “appropriation” also remains ambiguous. Webster’s defines the verb “appropriate” as “to take to oneself in exclusion of others; to claim or use as by an exclusive or pre-eminent right; as, let no man appropriate a common benefit.”¹⁶⁵ Similarly, **Black’s Law Dictionary describes “appropriate” as an act “[t]o make a thing one’s own; to make a thing the subject of property; to exercise dominion over an object to the extent, and for the purpose, of making it subserve one’s own proper use or pleasure.”**¹⁶⁶ Oftentimes, appropriation refers to the setting aside of government funds, the taking of land for public purposes, or a tort of wrongfully taking another’s property as one’s own. The term **appropriation is often used not only with respect to real property but also with water.** **According to U.S. case law, a person completes an appropriation of water by**

diversion of the water and an application of the water to beneficial use.¹⁶⁷ This common use of the term “appropriation” with respect to water illustrates two key points: (1) the term applies to natural resources—e.g., water or minerals—not just real property, and (2) mining space resources and putting them to beneficial use—e.g., selling or manufacturing the mined resources—could reasonably be interpreted as an “appropriation” of outer space. While the ordinary meaning of “appropriation” reasonably includes the taking of natural resources as well as land, whether the drafters and parties to the OST envisioned such a broad meaning of the term remains difficult to determine with any certainty. The prohibition against appropriation “by any other means” supports such a reading, though, by expanding the prohibition to other types not explicitly described.¹⁶⁸ As illustrated by this analysis, considerable ambiguity remains after this ordinary-meaning analysis and thus, the question of Treaty obligations and property rights remains unresolved. In order to resolve these ambiguities, an analysis of preparatory materials, historical context, and state practice follows.

C1 - Space Exploration (2:27)

Private entities focused on outer space appropriation draw jobs and influence away from NASA while wedging them out of the loop altogether.

NASA is the primary driver for space exploration and innovation, these tasks become impossible as a result of private appropriation.

Davenport 21 [(Christian, Reporter covering NASA and the space industry, Colby College, B.A., American Studies), “As private companies erode government’s hold on space travel, NASA looks to open a new frontier,” February 25, 2021, <https://www.washingtonpost.com/technology/2021/02/25/nasa-space-future-private/>] TDI

The four astronauts who will fly on a SpaceX mission by the end of the year will be a bunch of private citizens with no space experience. One’s a billionaire funding the mission; another is a health care provider. The third will be selected at random through a sweepstakes, and the last seat will go to the winner of a competition. In the new Space Age, you can buy a ticket to orbit — no need to have been a fighter pilot in the military or to compete against thousands of other overachievers for a coveted spot in NASA’s astronaut corps. In fact, for this mission, the first composed entirely of private citizens, NASA is little more than a bystander. It does not own or operate the rocket that will blast the astronauts into space or the capsule they will live in for the few days they are scheduled to circle Earth every 90 minutes. **NASA has no say in selecting the astronauts, and it will not train or outfit them — that will all be done by Elon Musk’s SpaceX. The money to pay for the flight also will not come from NASA**

— or any other government account. The cost of the project is being borne by a billionaire, Jared Isaacman, who has set it up as a fundraiser for St. Jude’s Research

Hospital and a promotional device for his business, Shift4Shop, which helps businesses set up websites and process payments. **This is the new look of human space exploration as government's long-held monopoly on space travel continues to erode**, redefining not only who owns the vehicles that carry people to space, but also the very nature of what an astronaut is and who gets to be one. And it comes as NASA confronts some of the largest changes it has faced since it was founded in 1958 when the United States' world standing was challenged by the Soviet Union's surprise launch of the first Sputnik into orbit. **Now it is NASA's unrivaled primacy in human spaceflight that is under challenge. Thanks to NASA's investments and guidance, the private space sector has grown tremendously – no entity more than SpaceX,** which according to CNBC is now worth \$74 billion. The commercial space industry is taking on ever more roles and responsibilities — flying not just cargo and supplies to the International Space Station, but even NASA's astronauts there. The private sector will launch some of the major components of the space station NASA wants to build in orbit around the moon, and private companies are developing the spacecraft that will fly astronauts to and from the lunar surface. Space enthusiasts, including NASA, see enormous benefit in the shift — a new era of space exploration that will usher in a more capable and efficient space industry. But **the changing dynamic also has left NASA, which for decades has set the pace for the American space project, with an uncertain role, a development NASA's Safety Aerospace Safety Advisory Panel warns could have consequences for years to come. The growth of companies like SpaceX has "tremendous upside potential — and are accompanied by equally tremendous challenges for managing the risk of human space exploration,"** it said in its annual report, released last month. **"NASA leadership in human space exploration is still preeminent, but the agency's role is evolving with critical implications for how risk and safety will be managed."** So far, NASA has done well "as it shifts from principally executing its programs and missions to commercially acquiring significant key elements and services," it said. But as the agency continues to evolve, **"NASA must make some strategically critical decisions, because of their momentous consequences for the future of human space exploration** and, in particular, for the management of the attendant risks." In an interview, Steve Jurczyk, NASA's acting administrator, said the agency is well aware of how its identity and role are changing, and he likened the agency's role to how the U.S. government fostered the commercial aviation industry in the early 20th century. NASA's predecessor, NACA, or the National Advisory Committee for Aeronautics, "did research, technology development to initially support defense ... but also later on supporting a burgeoning commercial aircraft industry and aviation industry," he said. "So that may be how we evolve, moving forward on the space side. **We're going to do the research and the technology development and be the enablers for continuing to support the commercial space sector."** **NASA has not ceded all ground. It still leads major exploration and science programs that no company could match** Last week, for example, it landed a rover the size of a car on Mars, hitting a precise landing target after traveling nearly 300 million miles. Later this year, it is scheduled to launch the James Webb telescope, which is designed to look back in time to the origins of the universe. And it also recently snagged a sample of rocks and soil from an asteroid 200 million miles from Earth to return them to Earth for study. **"NASA works,"** Rob Manning, the chief engineer at NASA's Jet Propulsion Laboratory, said after the Perseverance landed safely on Mars. "When we put our arms together and our hands together and our brains together, we can succeed. **This is what NASA does."** Those big, daring, push-the-envelope missions is where **NASA's future lies, agency and industry officials agree. Not in looking for financial gain, but blazing the trail and opening new frontiers,** and then allowing private industry to take over in the way homesteaders expanded into the West. Within NASA, there is still some resistance to that paradigm shift. "NASA feels like that's our domain," said Phil McAlister, NASA's director of commercial spaceflight. "And my response is, the solar system is a big place. We at **NASA should always be doing the next thing, the thing 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."** Jan Worner, the outgoing general director of the European Space Agency, agrees. "I believe space agencies have to change," he said in an interview. "If you are fixed permanently to the same thing that you did in the past, you will lose." **But NASA officials are concerned that much of the future workforce is going to be**

attracted to a growing number of commercial companies doing amazing things. There is Planet, for example, which is **putting up constellations of small satellites** that take an image of Earth every day. Or Relativity Space, which is 3-D printing entire rockets. Or Axiom Space, which is **building a commercial space station.** Or Astrobotic, which intends to **land a spacecraft** on the moon later this year. **The question NASA faces, then, is an urgent one: “How do you maintain that NASA technical expertise?”** Jurczyk said. **The agency does not know.** “It may mean people are hiring more midcareer from industry or having people come to NASA, then go to industry, and come back. Or a different model where maybe you’re not coming to NASA and staying for your 35-, 40-year career,” he said. “We’re still thinking through that.” **The workforce predicament was not on NASA’s mind when it embarked on this road in 2006.** That is when it awarded relatively small contracts to see whether the private sector could develop spacecraft capable of taking cargo to the International Space Station. At the time, SpaceX, which won an award, was largely unknown and on the verge of bankruptcy, with just one successful flight to orbit for its Falcon 1 rocket after three failures. Outside of what Musk once called “the weird rebels within NASA,” few thought the program would work. It was not taken seriously by the mainstream aerospace industry or even by NASA’s leadership. “Let’s just give these annoying commercial people enough money so that they can fail, and we can say, ‘That was dumb. We don’t have to do that again,’” Musk once told The Washington Post. But it did work. And now NASA is relying on the private sector not only to deliver supplies and science experiments to the surface of the moon, but also its most precious cargo — its astronauts — there. Turning over human spaceflight to the private sector was a line many thought NASA would never cross. But last year, SpaceX successfully flew two crewed missions to the space station, and Boeing, the other company with the human spaceflight contract, is hoping to fly its first later this year. **NASA has been eager to build on that success and hire private-sector companies to build and operate the spacecraft that would take astronauts to and from the surface of the moon.** And **while** NASA’s flagship rocket, the Space Launch System, would be used to fly astronauts to the moon and be the most powerful ever built, it has suffered all sorts of cost overruns and technical delays. A test of its engines that was supposed to last as long as eight minutes was cut short after just one because of a technical problem. And the redo of the test was recently postponed by NASA, which said it was looking into a problem with one of the valves. Recently, the NASA inspector general said the total cost of the rocket would reach \$27 billion through 2025. That enormous cost has outraged critics of the space program, who have derided the effort as little more than a jobs program for select congressional districts and dubbed it the “Senate Launch System.” Recently, the Bloomberg editorial board called for the Biden administration to “scrap the Space Launch System,” asking, “Why is the U.S. government building a space rocket?” “No doubt, the era of government spacefaring had its glories,” the editorial read. “But space is now a \$424 billion business, with U.S. companies at its forefront. The new administration should embrace this revolution — and bring the power of private enterprise to bear in crossing the next cosmic frontier.” Some high-level NASA officials, including former NASA Administrator Jim Bridenstine, have indicated that **if the commercial sector can develop lower-cost alternatives, the space agency would have no choice but to consider those instead.** NASA has already shifted one major mission from SLS — recently it announced that a commercial rocket, and not SLS, as Congress had mandated for years, would launch the Europa Clipper spacecraft that would study Jupiter’s moon. That alone would save NASA “over \$1.5 billion compared to using an SLS rocket,” according to NASA’s fiscal year 2021 budget request. **NASA has always relied on contractors to build its hardware** — from the Apollo lunar module built by Grumman to the space shuttle, built largely by North American Rockwell. But NASA defined the precise requirements, took ownership of the spacecraft and operated them. That is not the case with many of its programs **today.** It works alongside the companies to validate their rockets and spacecraft and ensure they meet the agency’s safety standards. But **the hardware and the launch procedures remain in private hands.** The private astronaut mission, dubbed Inspiration4, marks the next iteration in this transition. Isaacman, the billionaire founder and chief executive of Shift4Shop, a payments technology company, paid an undisclosed sum for the SpaceX flight. Isaacman, an accomplished pilot, will occupy one of the four seats. Another will go to Hayley Arceneaux, a 29-year-old physician assistant at St. Jude Children’s Research Hospital. The third is to be raffled off as part of a fundraising effort for the hospital. And the fourth seat will go to the winner of a competition among entrepreneurs who use Shift4Shop’s platform. Isaacman has donated \$100 million to St. Jude and hopes the fundraising effort will match that. “We will, of course, coordinate this with NASA,” Musk said on a call with reporters earlier this month to discuss the mission. “NASA has been briefed on this and is supportive.” But it will be SpaceX and the crew that will determine the flight parameters and training requirements, not NASA. “Wherever you want to go, we’ll take you there,” Musk said to Isaacman on the call. Meet the people paying \$55 million each to fly to the space station. That mission will be followed by a second flight made up entirely of civilians — three wealthy business executives, who are each paying \$55 million, in addition to the commander, Michael Lopez-Alegria, a former NASA astronaut who now serves as a vice president at Axiom. Instead of spending a few days inside SpaceX’s Dragon spacecraft, which has about as much interior room as a large SUV, they will fly to the International Space Station. They will spend eight days there before flying back. **Ultimately, Axiom’s goal is even bigger — to build a space station of its own.** The ISS is getting old and will need to come down at some point. NASA has said that it would eventually get out of the space station business — and outsource that to the private sector as well. Axiom is one of the leading candidates to build the successor. **If Axiom is successful, it could then proceed to its ultimate goal: charter missions of private citizens, flying on private rockets to a private space station with little to no involvement from NASA.**

Private entities cannot lead new space exploration and innovation, but disallow NASA to do so— that moots space exploration as a whole.

(Tyson 12) Neil deGrasse Tyson, “Neil deGrasse Tyson: Bringing Commercial Space Fantasies Back to Earth,” BigThink, 2012, <https://bigthink.com/videos/neil-degrasse-tyson-bringing-commercial-space-fantasies-back-to-earth/> // AKRG

Tyson went on to earn his BA in Physics from Harvard and his PhD in Astrophysics from Columbia. He is the first occupant of the Frederick P. Rose Directorship of the Hayden Planetarium. His professional research interests are broad, but include star formation, exploding stars, dwarf galaxies, and the structure of our Milky Way. Tyson obtains his data from the Hubble Space Telescope, as well as from telescopes in California, New Mexico, Arizona, and in the Andes Mountains of Chile. Tyson is the recipient of nine honorary doctorates and the NASA Distinguished Public Service Medal. His contributions to the public appreciation of the cosmos have been recognized by the International Astronomical Union in their official naming of asteroid “13123 Tyson”. Tyson’s book is *Letters From an Astrophysicist* (2019). <https://bigthink.com/people/neildegrasse Tyson/>

Neil deGrasse Tyson: **There is a lot of talk lately about what role the privatization of space might play in our future ambitions of space exploration, and from where I sit there is a lot of delusional thinking there.** For example, unlike what Newt Gingrich said in a presidential debate—there he is saying had we given the money we had given to NASA to the private sector we would have been on the moon and Mars by now and we would have done it more cheaply and everything would be fine and dandy. . . . No, it doesn’t work that way. **Private enterprise in the history of civilization has never led large, expensive, dangerous projects with unknown risks. That has never happened because when you combine all these factors you cannot create a capital market valuation of that activity. The first Europeans to the new world were not sailors on the Dutch East India Trading Company ships. It was Columbus. It was Magellan. And these were voyages funded by governments. Somebody has to draw the maps. Somebody has to see where the danger spots are, where it’s safe, what the prevailing winds are.** Once that is established, then private enterprise can come in and say, “Here’s the risk, I need an investor, here’s your payback, we can turn this into an enterprise.” **So no, private enterprise is not going to lead us to the moon. They’re not going to lead us to Mars.** What would be nice for them to do is take on our low earth orbit activities. Been there, done that. **Back in the 60s low earth orbit was a frontier. We didn’t know, well, can a human survive? Can you even swallow if you’re in orbit? Would saliva get caught in your throat? Simple questions like that were unknown and unanswered at the time. We’re well past that.** We know how to get to low earth orbit. **It’s done.** The patents are offered—are given, granted—and so that would be the ideal place for private enterprise to take over. Tourism would easily drive that. Look how much money Americans in the world spend on tourism. You could have tourist lotteries where you could win a much more expensive vacation than you could otherwise afford, and I’d certainly buy lottery tickets if it meant taking a vacation in space, or rather in orbit around earth—which I guess we’ll still call that space, but if NASA is advancing a space frontier that’s kind of really just driving around the block at that point, but that could surely sell tickets, and I’d be first in line.

Only Public Sector Space Exploration generates the immense knowledge and innovation that spills over to the commercial sector and greater society.

(ISCE 13) International Space Exploration Coordination Group. (2013, September). //ear Benefits Stemming from Space Exploration. **Nasa.Gov**. Retrieved December 8, 2021, from <https://www.nasa.gov/sites/default/files/files/Benefits-Stemming-from-Space-Exploration-2013-TAGGED.pdf> ISECG is a collab between NASA and other governments space programs.

To a great extent, the benefits from space exploration are rooted in the generation of new knowledge, which is the first reward and which has inherent value to humankind.

Technological knowledge, generated when high-performance space systems are developed to address the extreme challenges of space missions, yields many innovations that benefit the public. Scientific knowledge acquired from space expands humankind's understanding of nature and frequently unlocks creative and useful Earth-based applications for society.

In the longer term, the knowledge accumulated over many missions and the expansion of human presence into the Solar System help people gain perspective on the fragility and rarity of life in the Universe and on humankind's accomplishments, potential, and destiny. **Space exploration stimulates the creation of both tangible and intangible benefits for humanity.**

Tangible impacts include all the innovation-related applications and benefits resulting from investments in these programmes, such as new devices and services that spin off into the marketplace. **In addition, space exploration leads to advances in science and technology, and furthers workforce development and industrial capabilities, thus leading to an overall stimulation of private companies and industries, all of which contributes significantly to the economic progress of space-faring nations.** Space exploration is also known to attract young people into careers in science and technology to the general benefit of society and the economy (see chapter 2.1). Space exploration also results in various intangible impacts due to the social and philosophical dimensions that address the nature and meaning of human life.

Intangible benefits include the enriching of culture, the inspiration of citizens, and the building of mutual understanding as a result of international cooperation among space-faring nations. **The fundamental benefits generated by space exploration are grouped in this document as follows: (i) innovation; (ii) culture and inspiration; and (iii) new means to address global challenges.** The delivery of these benefits to society provides the main rationale for investment in space exploration. An illustration on how these benefits are delivered by space agencies is given in the box below. Space exploration's capacity to continue delivering significant benefits to humanity was recognized by high-level government representatives from around the world when they convened in Lucca, Italy, in November 2011. They concluded that space exploration provides:

Technology developed from space innovation is key to resolve climate change

Derr, E. (2021, September 17). Space is Crucial to Understanding Climate Change. Nuclear Energy Institute. Retrieved December 9, 2021, from <https://www.nei.org/news/2021/space-is-crucial-to-understanding-climate-change> //ear Emma Derr works as a Manager, Digital Communications at Nuclear Energy Institute, which is a

Membership Organizations company with an estimated 133 employees; and founded in 1994. They are part of the Digital Marketing team within the Marketing Department and their management level is Manager. Emma is currently based in Washington, D.C., United States.

Space developments in the last two decades have greatly contributed to our understanding of our planet's climate. Satellite imaging, space exploration, and new technologies give us an idea of the big picture and how we can adapt to address climate change. For example, satellites in space have played a critical role in our understanding of the causes of global warming by providing us with a large body of data to examine the variations in the Earth's orbit. Data from these capabilities were essential inputs into the Intergovernmental Panel on Climate Change's (IPCC) recent report that focused on how the physical science of climate change informs likely impacts under five different emissions scenarios. The report also found that climate change is happening quicker than we thought, making the need to reduce emissions imminent. To address this, space infrastructure such as positioning, navigation, and timing (PNT) can help identify efficient transportation routes and sources of emissions, ultimately aiding mitigation efforts.

Time Progression of the Ozone Hole Over Antarctica This series of images shows the size and shape of the thinning ozone layer over Antarctica each year from 1979-2019. Red and yellow areas indicate the ozone hole. **Credit to nasa.gov. NASA's Earth System Observatory, the next generation of Earth science satellites that will launch** in the next decade, reflect the importance of Earth imaging. This constellation of satellites is designed to provide information about our planet ranging from the location of forest fires to the sea level rise to our agricultural processes. It will be able to collect data at the regional and local levels and connect critical interactions between the atmosphere, land, ocean and ice, **significantly bolstering our understanding of the Earth's climate. Another large focus of the initiative is predicting severe weather and answering questions surrounding aerosols, which are particles in the atmosphere that are a key source of uncertainty in predicting climate change.** Alongside adding funding to FEMA, the Biden Administration announced the development of the Earth System Observatory, indicating its support for the program in understanding how climate change is impacting communities. **Space exploration is foundational to climate science because it provides us with more information about the Earth, our solar system and the role of gases in our atmosphere, and nuclear energy has played an important role powering our missions into space.** In 1969, NASA launched Nimbus III, a nuclear-powered spacecraft, that is the first U.S. satellite to gather vital oceanographic data, such as measurements of sea ice and the ozone layer. The spacecraft also measured atmospheric temperature, water vapor and ozone, as well as the amount of ultraviolet radiation reaching our atmosphere from the sun. Cassini, a nuclear-powered probe into Saturn and its moons, released the Huygens probe which collected important data about what earth may have looked like in its state before humans evolved. The mission revealed Titan to be one of the most Earth-like worlds we've encountered and has shed light on the history of our home planet. Nuclear energy has powered dozens of interplanetary missions, which have gathered critical information about our universe. These make up some of the most successful and inspiring missions in U.S. space exploration history. **Climate and space technologies build off of each other, as evidenced by**

solar photovoltaic panels first gaining a foothold in the space industry. Nuclear energy can be positioned to experience such a catalyst with new investments in nuclear space technologies. As climate change intensifies, space exploration and Earth observation will become increasingly important to gathering critical data. We must meet the moment by investing in these missions and recognizing nuclear power's important role in space technologies.

Warming causes extinction - TF is key we have a short window before the point of no return

Krososky '21 [Andrew, Green Matters Journalist, "How Global Warming May Eventually Lead to Global Extinction", Green Matters, 03-11-2021, <https://www.greenmatters.com/p/will-global-warming-cause-extinction>]/pranav

Eventually, yes. Global warming will invariably result in the mass extinction of millions of different species, humankind included. In fact, the Center for Biological Diversity says that global warming is currently the greatest threat to life on this planet. Global warming causes a number of detrimental effects on the environment that many species won't be able to handle long-term. Extreme weather patterns are shifting climates across the globe, eliminating habitats and altering the landscape. As a result, food and fresh water sources are being drastically reduced. Then, of course, there are the rising global temperatures themselves, which many species are physically unable to contend with. Formerly frozen arctic and antarctic regions are melting, increasing sea levels and temperatures. Eventually, these effects will create a perfect storm of extinction conditions. The melting glaciers of the arctic and the searing, unmanageable heat indexes being seen along the Equator are just the tip of the iceberg, so to speak. The species that live in these climate zones have already been affected by the changes caused by global warming. Take polar bears for example, whose habitats and food sources have been so greatly diminished that they have been forced to range further and further south. Increased carbon dioxide levels in the atmosphere and oceans have already led to ocean acidification. This has caused many species of crustaceans to either adapt or perish and has led to the mass bleaching of more than 50 percent of Australia's Great Barrier Reef, according to National Geographic. According to the Center for Biological Diversity, the current trajectory of global warming predicts that more than 30 percent of Earth's plant and animal species will face extinction by 2050. By the end of the century, that number could be as high as 70 percent. We won't try and sugarcoat things, humanity's own prospects aren't looking that great either. According to The Conversation, our species has just under a decade left to get our CO₂ emissions under control. If we don't cut those emissions by half before 2030, temperatures will rise to potentially catastrophic levels. It may only seem like a degree or so, but the worldwide ramifications are immense. The human species is resilient. We will survive for a while longer, even if these grim global warming predictions come to pass, but it will mean less food, less water, and increased hardship across the world — especially in low-income areas and developing countries. This increase will also mean more pandemics, devastating storms, and uncontrollable wildfires.

C2 - Space Mining (2:34)

~3:03

Public and private entities aim to extract resources from near-earth asteroids.

Thakur 21, Vishal Thankur, "How Asteroid Mining Can Mint the First Trillionaire," Science ABC, 13 Nov 2021

<https://www.scienceabc.com/nature/universe/will-asteroid-mining-mint-the-first-trillionaire.html> // AKRG

Current and Future initiative to Mine Asteroids The latest in the news of satellites reaching asteroids was Hayabusa2, a mission by JAXA (The Japan Aerospace Exploration Agency), which successfully landed their target satellite in 2018. The mission aims to return with samples from the asteroid. There are multiple ongoing and future missions by NASA to land on and return with samples from asteroids. This includes the OSIRIS-Rex, which was launched in 2016, and the VIPER rover, which is planned to be deployed in 2022 for locating possible resources on the Moon. Planet Resources, a company founded by Peter Diamandis and Eric Anderson, aims to 'expand Earth's natural resource base'. They plan to do this by developing the necessary technology for asteroid mining and have already developed satellites to probe the skies for potential asteroids. Planetoid Mines, a private company, has been developing equipment for space tugging and processing minerals acquired from these asteroids

These groups also desire to mine the moon- some as soon as 2025

Jamasmie 19, Cecilia Jamasmie, "Mining the Moon Ready to Lift Off by 2025," Mining Dot Com, 1 March 2019,

<https://www.mining.com/mining-moon-ready-lift-off-2025/> // AKRG

Cecilia has covered mining for more than a decade. She is particularly interested in Corporate Social Responsibility (CSR), Diamonds and Latin America. Cecilia has been interviewed by BBC News and CBC among others and has been a guest speaker at mining conventions, including MINExpo 2016 and the World's Copper Conference 2018. She is also member of the expert panel on Social License to Operate (SLO) at the European project MIREU (Mining and Metallurgic Regions EU). She holds a Master of Journalism from the University of British Columbia, and is based in Nova Scotia. (Mining.com)

European scientists have announced plans to start mining the moon as early as 2025, though what they'll be extracting is neither gold nor diamonds, but waste-free nuclear energy thought to be worth trillions of dollars. The goal is to place a lander on the lunar surface to mine and process regolith for water, oxygen, metals and an isotope called helium-3, which may prove useful for fueling future fusion reactors.

Regolith, Universe Today reported, is a dust-like material that covers the lunar surface and is the result of billions of years of meteor and comet impacts. If anyone ever lives on the moon, they could use the regolith to build habitats for a

base. EUROPE ISN'T THE ONLY ONE GETTING ON BOARD OF THE LUNAR MINING TRAIN. BOTH INDIA AND CHINA HAVE FLOATED IDEAS ABOUT EXTRACTING HELIUM-3 FROM THE EARTH'S NATURAL SATELLITE. **The mission will be in charge of the European Space Agency in partnership with ArianeGroup,** Popular Mechanics reported. **It will also count with the participation of** Part-Time Scientists, **a German group** and former Google Lunar XPrize contestant. Europe isn't the only one getting on board of the lunar mining train. **Both India and China have floated ideas about extracting Helium-3 from the Earth's natural satellite. Beijing has already landed on the moon twice in the 21st century, with more missions to follow. There are an estimated one million tonnes of helium-3 in the moon, though only 25% of that could be brought to Earth,** Gerald Kulcinski, director of the Fusion Technology Institute at the University of Wisconsin-Madison and a former member of the NASA Advisory Council told Bloomberg last year. But **that's enough to meet the world's current energy demands for at least two, and maybe as many as five, centuries,** said the expert said, who estimates that helium-3 is worth **almost \$5 billion a tonne.** No longer science fiction After being considered mostly a science-fiction tale, **governments are now rushing to implement programs and legislation that allow them to join the race for mining in space.** In 2015, former US President Barack Obama signed a law that grants US citizens rights to own resources mined in space. The ground-breaking rule was touted as a major boost to asteroid mining because it encourages the commercial exploration and utilization of resources from asteroids obtained by US firms. GEOLOGISTS BELIEVE ASTEROIDS ARE PACKED WITH IRON ORE, NICKEL AND PRECIOUS METALS AT MUCH HIGHER CONCENTRATIONS THAN THOSE FOUND ON EARTH, MAKING UP A MARKET VALUED IN THE TRILLIONS OF DOLLARS. Shortly after, **Luxembourg launched an official initiative to promote the mining of asteroids for minerals.** The tiny European country, which has been studying possible involvement in the sector since 2013, aims to become Europe's centre for space mining. Canada is also eying the moon. **Last year, Northern Ontario-based Deltion Innovations partnered with Moon Express, the first American private space exploration firm to have been granted government permission to travel beyond Earth's orbit, on future opportunities in outer space. Some of the space ventures in the works include plans to mine asteroids,** track space debris, build the first human settlement in Mars, and billionaire Elon Musk's own plan for an unmanned mission to the red planet. Geologists as well as emerging companies, such as US-based Planetary Resources, a firm pioneering the space mining industry, believe asteroids are packed with iron ore, nickel and precious metals at much higher concentrations than those found on Earth, making up a market valued in the trillions of dollars.

Privatized space mining will generate trillions of dollars, resulting in a new generation of economic elites.

Shaer 16, Matthew Shaer, "*The Asteroid Miner's Guide to the Galaxy*," Foreign Policy, 28 April 2016, <https://foreignpolicy.com/2016/04/28/the-asteroid-miners-guide-to-the-galaxy-space-race-mining-asteroids-planetary-research-deep-space-industries/> // AKRG

Matthew Shaer is a writer for the New York Times Magazine, an Emerson Fellow at New America, and a co-founder of the podcast studio Campside, which specializes in episodic nonfiction. His long-form reporting appears regularly in publications like The Atlantic, New York, Harper's, and Wired. <http://www.matthewshaer.com/about>

The tech firm **Deep Space Industries (DSI)** is headquartered on the second story of an aging office building at the edge of NASA's Ames Research Center, not far from the town of Mountain View, California. Established in 1939 as a laboratory **for** the National Advisory Committee for Aeronautics, a predecessor to NASA, Ames is now part government research site, part industrial park, and part open-air museum — visitors pass rows of decommissioned rockets and the hulking skeleton of Hangar One, where the Navy once parked its experimental blimps in the 1930s. Shimmering nearby in the Pacific coast sun lies the sprawling aerospace facility owned by Google's Sergey Brin and Larry Page. "The first time I came to Ames, I had the feeling I was standing between the history of spaceflight and its future," Sagi Kfir, an aviation attorney, told me when I visited earlier this year. "You've got NASA labs here, but at the same time you're in Silicon Valley," he said. "Hard to think of a more exciting place to be." Kfir is 43, with a high forehead, tawny hair he wears tied in a bun, and the kind of leanness that comes from hours of yoga practice. (His wife, Britta, is an instructor.) Since 2012, he has served as DSI's chief lawyer, a job that encompasses both legal-counsel duties — liaising with legislators, vetting contracts — and the full-time proselytization of his company's mission: **laying the foundation for an**

asteroid mining industry that one day will lead to a sprawling and profitable space economy. To evangelists of asteroid mining, the heavens are not just a frontier but a vast and resource-rich place teeming with opportunity. According to NASA, there are potentially 100,000 near-Earth objects — including asteroids and comets — in the neighborhood of our planet. Some of these NEOs, as they're called, are small. Others are substantial and potentially packed full of water and various important minerals, such as nickel, cobalt, and iron. One day, advocates believe, those objects will be tapped by variations on the equipment used in the coal mines of

Kentucky or in the diamond mines of Africa. And **for immense gain:** According to industry experts, **the contents of a single asteroid could be worth trillions of dollars.** Kfir pitched me on the long-term plan. First, a fleet of satellites will be dispatched to outer space, fitted with probes that can measure the quality and quantity of water and minerals in nearby asteroids and comets. Later, armed with that information, mining companies like DSI will send out vessels to mechanically remove and refine the material extracted. In some cases, the take will be returned to Earth. But most of the time, it will be processed in space — for instance, to produce rocket fuel — and stored in container vessels that will serve as the equivalent of gas stations for outbound spacecraft. This possibility isn't so unrealistic, Kfir said. Consider the recent and seismic growth of the space industry, he

suggested, as we climbed the stairs to DSI's second-floor suite. **Every year, the private spaceflight sector grows larger, and every year the goals become grander.** Jeff Bezos, founder of Amazon and the space exploration company Blue Origin, has spoken of the day "when millions of people are living and working in space"; Elon Musk's SpaceX

is expected to reveal a Mars colonization plan this year. "But how are they going to sustain this new space economy?" Kfir asked rhetorically. He nudged open DSI's office door. "Easy: by mining asteroids." Bezos, Musk, and the other billionaires who plan to be cruising around space in the near future won't be able to do so without celestial pit stops. In his book, *Asteroid Mining 101: Wealth for the New Space Economy*, John S. Lewis, professor emeritus of Cosmochemistry and Planetary Atmospheres at the University of Arizona's Lunar and Planetary Laboratory and DSI's chief scientist, envisions a future where "ever more remote and ever more massive reservoirs of resources" take astronauts farther and farther from our planet. "First to the Near Earth Asteroids and the moons of Mars, then to the asteroid belt, then to...[the] Trojan asteroids and the outer moons of Jupiter, then to the Saturn system and the Centaurs," and so on, to infinity. Copies of Lewis's book lined two shelves in DSI's headquarters, where the vibe was more nerd lair than sleek startup. A poster for the new *Star Wars* movie hung on a wall; a chunk of real meteorite, found over a century ago in Namibia, stood on display; and cans of Coke cluttered the snack table. Working inside what appeared to be an old utility closet, chief engineer Grant Bonin hunched over a desktop computer, designing the code that will help power the first asteroid probes that DSI plans to launch in 2017. Behind him, an electrical panel spouted a bouquet of colorful wires. Kfir pointed me in the direction of his office. A resident of San Diego, Kfir commutes once a week to Ames, 1,000 miles round trip, but if the constant travel was wearing on him, it didn't show — his eyes were bright, his skin SoCal bronze. He wore slacks and a button-down, with cactus-patterned socks. "You get used to the pace," he said, taking a pull from a large coffee mug marked "Kiss my Asteroid." "It's the life of a startup. You go, go, go seven days a week. Because you believe." For now, belief — and a fervid sense of enthusiasm — represent the core of the DSI business model. After all, the company, and its only major competitor in the asteroid mining arena, Washington-based Planetary Resources, are dealing in hypotheticals: equipment that remains largely in the planning phase, a market that won't fully emerge for years, if not decades, and a science that has yet to be tested in any meaningful way. Perhaps it's not surprising, then, that some critics have suggested Planetary Resources, which is backed by millions in venture capital — including cash from Eric Schmidt of Google — and the scrappier, less-moneyed DSI, are nothing more than vanity projects. Writing on the Discovery News website in April 2012, the month Planetary Resources co-founder Peter Diamandis unveiled his company's mission, space journalist Ian O'Neill dismissed the venture as "deliberately vague (who knows how many technological iterative steps are needed before a sustainable mining operation can begin anyway?)." He also argued it was wholly unrealistic: "In short, the only thing that seems unique about today's announcement is that a group of very well-respected and smart entrepreneurs and billionaires have clubbed together and thought asteroid mining seemed cool." For O'Neill and other skeptics, asteroid mining is, for the time being, a glitzy but far-fetched venture that will distract both attention and dollars from eminently more achievable — and perhaps more scientifically vital — missions, such as continuing the exploration of Mars. For the 12-person team at DSI, and the 50-person team at Planetary Resources, however, asteroid mining isn't just a dream. It's the future — one in which all those deep-pocketed private spaceflight companies (to say nothing of NASA) will be eager to pay by the bucket load for access to space's riches. DSI and Planetary Resources, both of which are determined to profit from a 21st-century extraterrestrial gold rush, might be the equivalent of the mining barons of yore. But first, they have to get to the rocks.

The impact is plutocracy

The advent of new trillionaire space-barons exacerbates plutocratic trends and gives way to authoritarian governments.

(Sunny 21) Ronald G. Suny, "Autocracy, Democracy, Plutocracy" Agos, 24 July 2021, <http://www.agos.com.tr/en/article/25827/autocracy-democracy-plutocracy> // AKRG

Ronald Grigor Suny is the William H. Sewell Jr. Distinguished University Professor of History and Professor of Political Science at the University of Michigan and Emeritus Professor of Political Science and History at the University of Chicago. The grandson of the composer and ethnomusicologist Grikor Mirzaian Suni and a graduate of Swarthmore College and Columbia University, he taught at Oberlin College (1968-1981), as visiting professor of history at the University of California, Irvine (1987), and Stanford University (1995-1996). He also served as Senior Researcher at the National Research University, Higher School of Economics, Saint Petersburg (2014-2016). He was the first holder of the Alex Manoogian Chair in Modern Armenian History at the University of Michigan (1981-1995), where he founded and directed the Armenian Studies Program. <https://lsa.umich.edu/history/people/faculty/rgsuny.html>

Is there a way out? The struggle is clearly more difficult in authoritarian countries, and it must take the path of increasing democratic possibilities. After the fall of Soviet-style "socialist" states in 1991, there was euphoria in the West among scholars, journalists, and politicians that the World was experiencing an inexorable transition to democracy. Within a decade and a half, however, roughly in the mid- and late-2000s, that triumphalist effervescence was dampened by an observable shift toward more authoritarian regimes. In Russia, Poland, Hungary, Turkey, India, and elsewhere, the

promise of reformers to establish more participatory, egalitarian, and inclusive democratic states gave way to populist and nationalist leaders who manipulated constitutions and painted opponents as traitors and terrorists. All across the globe from Modi's India through Erdoğan's Turkey to Trump's United States, illiberal leaders, using populist and nationalist rhetoric, shifted power toward strong executives. With the triumph of Trump in the United States, many American Cassandras, prophets

of a dark future, predicted a turn toward tyranny and the collapse of democracy altogether. As a consequence of the retreat of democracy, scholarly and journalistic interest in the phenomenal rise of authoritarianism exploded. As the transitologists (those who made their careers outlining how dictatorships transformed into democracies) appeared to be less relevant to current trends, political scientists began seriously exploring the nature, evolution, and durability of what they termed autocracy. Explanations for the rise of the new

authoritarianism [were] abundant. The greater control of the economy by finance and globalizing of capitalism, the weakening of labor unions, the erosion of social welfare protections and the increase of privatization of public services have increased the risks to lower and middle class people and led [people] them to seek solutions in populist parties that identify their grievances with foreigners, immigrants, and liberal elites. The neoliberal faith that free markets can solve all

economic problems has in fact led to a growing gap between the very rich and everyone else. Deregulation in favor of business has added to the global climate crisis and forced vulnerable people to choose between their jobs and their health. The limits and fragilities of liberal democracy have led to political stagnation and an erosion of belief in democratic politics to solve serious problems. Populists stoke fears that the benefits that citizens enjoyed earlier are being eroded by elites and shared with those – people of a different ethnicity or skin color or country of origin -- who do not deserve them. Anxiety about status and future, along with resentment toward alien others, has led many voters to turn to charismatic

demagogic populist and nationalist leaders. The erosion of democracy and the rise of autocracies is real, and ordinary people all over the world – from Belarus to Hong Kong, Vladivostok, Myanmar, Saint Louis, and Delhi – have marched in the streets to oppose anti-democratic repression. People want competent government responsive to the popular will; they desire some degree of participation in decision-making through elected representatives; and they are prepared to fight for rights and protections from their government. But **the powerful forces of the state in many countries have ruthlessly crushed the mobilized opposition.** Yet there is another trend besides the autocratic threat to democracy that also needs to be recognized. And that trend, often closely related to autocracy but present in democracies as well, is **plutocracy -- the rule of the very rich**, which also **erodes** the possibilities of true **democratic choices and** the **possibilities of** real **social and political equality.** In the **United States economic polarization has reached the point that the top 0.01 percent of the population owns roughly the same share of national wealth as the bottom 85 percent combined. Money in America is considered free speech, and unlimited amounts of cash flow from millionaires and billionaires into political campaigns, favored candidates, and lobbies to influence legislation. Low taxes (or often no taxes) for wealthy people with sophisticated accountants means that they can not only influence elections but through their charitable foundations or private philanthropy [and] shape policy in areas like health care, education, or social welfare without democratic oversight.** Americans in general do not resent the rich. They all hope to become millionaires or better. Their anti-elitism is directed at intellectuals, journalists, and politicians. They believe in the good billionaire, though they wish he (or she) would pay their fair share of the tax burden. However, many voters did not seem bothered by presidential candidate Donald Trump's remarks, when accused of not paying any federal income tax, he quickly retorted: "That makes me smart." Recently, the trend toward autocracy and authoritarianism has slowed down or even been stopped. Trump lost his bid for reelection last year, whether he knows it or not. Victor Orban in Hungary and Janez Janša in Slovenia have lost popularity and are facing a resurgent public looking for change. The party in power in Turkey is held responsible for the devastating economic decline and the erosion of the lira. Thousands of peasants march in India against Modi. But **the power of the plutocrats has only increased, and the vulnerability of the poor and middle classes – the precariat -- remains. Is there a way out? The struggle is clearly more difficult in authoritarian countries, and it must take the path of increasing democratic possibilities.** Elections where they are still possible can weaken or eliminate autocrats, but they do not affect the influence of the plutocrats, who benefit both from the corruption and nepotism endemic to autocracies and the free-for-all politics of liberal democracies. In democratic countries voters can choose representatives who are prepared to tax wealth and the wealthy, promote environmental protection, and increase social welfare and protection of the most-needy. We live in difficult but interesting times. Most people, particularly the young, are seeking alternatives to an intolerable present. They are less likely to succumb to the siren calls of populists who trade in hatred of the other, and appeal to imagined anti-Semitic, anti-Armenian, or anti-immigrant threats. Even without clear answers as to how to achieve what might seem to be utopian goals of greater freedom, it is essential not to despair, to remain optimistic and hopeful, and to use the tools at hand to move step-by-small-step toward empowerment of ordinary people. All power to the people is still a powerful slogan, but it also means that we need a new people. We need people with vision and courage.

uv) Uber-Rich Plutocrats borne from the privatized space economy will be able to manipulate democracy and intensify trends such as democratic stagnation and the rise of authoritarian governments.

The shift to authoritarianism causes extinction, multiple warrants-

Kendall-Taylor 16 [Andrea; Deputy national intelligence officer for Russia and Eurasia at the National Intelligence Council, Senior associate in the Human Rights Initiative at the Center for Strategic and International Studies in Washington; "How Democracy's Decline Would Undermine the International Order," CSIS; 7/15/16;

<https://www.csis.org/analysis/how-democracy%E2%80%99s-decline-would-undermine-international-order/>] Justin

It is rare that policymakers, analysts, and academics agree. But there is an emerging consensus in the world of foreign policy: **threats to the stability of the current international order are rising**. The norms, values, laws, and institutions that have undergirded the international system and governed relationships between nations **are being gradually dismantled**. The most discussed sources of this pressure are the ascent of China and other non-Western countries, Russia's assertive foreign policy, and the diffusion of power from traditional nation-states to nonstate actors, such as nongovernmental organizations, multinational corporations, and technology-empowered individuals. Largely missing from these discussions, however, is the **specter of widespread democratic decline**. **Rising challenges to democratic governance across the globe are a major strain on the international system, but they receive far less attention in discussions** of the shifting world order.

In the 70 years since the end of World War II, the **United States** has **fostered** a global **order dominated by states that are liberal, capitalist, and democratic**. The United States has promoted the spread of democracy to strengthen global norms and rules that constitute the foundation of our current international system. However, despite the steady rise of democracy since the end of the Cold War, over the last 10 years **we have seen dramatic reversals in respect for democratic principles** across the globe. A 2015 Freedom House report stated that the “**acceptance of democracy as the world’s dominant form of government—and of an international system built on democratic ideals—is under greater threat than at any point in the last 25 years**.”

Although the number of democracies in the world is at an all-time high, there are a number of key trends that are working to undermine democracy. The **rollback of democracy** in a few influential states or even in a number of less consequential ones would almost certainly accelerate meaningful changes in today's global order.

Democratic decline would **weaken U.S. partnerships and erode an important foundation for U.S. cooperation** abroad. Research demonstrates that domestic politics are a key determinant of the international behavior of states. In particular, **democracies are more likely to form alliances and cooperate** more fully with other **democracies than with autocracies**. Similarly, **authoritarian countries** have established mechanisms for cooperation and sharing of “worst practices.” An increase in authoritarian countries, then, would provide a **broadier platform** for coordination that could enable these countries to overcome their divergent histories, values, and interests—factors that are frequently cited as obstacles to the **formation of a cohesive challenge to the U.S.-led international system**.

Recent examples support the empirical data. **Democratic backsliding in Hungary and** the hardening of **Egypt’s autocracy** under Abdel Fattah el-Sisi **have led to enhanced relations** between these countries and **Russia**. Likewise, **democratic decline in Bangladesh has led** Sheikh Hasina Wazed and her ruling Awami League **to seek closer relations with China and Russia**, in part to mitigate Western pressure and bolster the regime’s domestic standing.

Although none of these burgeoning relationships has developed into a highly unified partnership, democratic backsliding in these countries has provided a basis for cooperation where it did not previously exist. And while the United States certainly finds common cause with authoritarian partners on specific issues, **the depth and reliability of such cooperation is limited**. **Consequently, further democratic decline could seriously compromise the United States’ ability to**

form the kinds of deep partnerships that will be required to confront today's increasingly complex challenges. Global issues such as climate change, migration, and violent extremism demand the coordination and cooperation that democratic backsliding would put in peril. Put simply, the United States is a less effective and influential actor if it loses its ability to rely on its partnerships with other democratic nations.

A slide toward authoritarianism could also challenge the current global order by diluting U.S. influence in critical international institutions, including the United Nations, the World Bank, and the International Monetary Fund (IMF). Democratic decline would weaken Western efforts within these institutions to advance issues such as Internet freedom and the responsibility to protect. In the case of Internet governance, for example, Western democracies support an open, largely private, global Internet. Autocracies, in contrast, promote state control over the Internet, including laws and other mechanisms that facilitate their ability to censor and persecute dissidents. Already many autocracies, including Belarus, China, Iran, and Zimbabwe, have coalesced in the “Likeminded Group of Developing Countries” within the United Nations to advocate their interests. , the rising influence of autocracies could enable these countries to bypass the IMF and World Bank all together. For example, the Chinese-created Asian Infrastructure and Investment Bank and the BRICS Bank—which includes Russia, China, and an increasingly authoritarian South Africa—provide countries with the potential to bypass existing global financial institutions when it suits their interests. Authoritarian-led alternatives pose the risk that global economic governance will become fragmented and less effective.

Violence and instability would also likely increase if more democracies give way to autocracy. International relations literature tells us that democracies are less likely to fight wars against other democracies, suggesting that interstate wars would rise as the number of democracies declines. Moreover, within countries that are already autocratic, additional movement away from democracy, or an “authoritarian hardening,” would increase global instability. Highly repressive autocracies are the most likely to experience state failure, as was the case in the Central African Republic, Libya, Somalia, Syria, and Yemen. In this way, democratic decline would significantly strain the international order because rising levels of instability would exceed the West's ability to respond to the tremendous costs of peacekeeping, humanitarian assistance, and refugee flows.

Finally, widespread democratic decline would contribute to rising anti-U.S. sentiment that could fuel a global order that is increasingly antagonistic to the United States and its values. Most autocracies are highly suspicious of U.S. intentions and view the creation of an external enemy as an effective means for boosting their own public support. Russian president Vladimir Putin, Venezuelan president Nicolas Maduro, and Bolivian president Evo Morales regularly accuse the United States of fomenting instability and supporting regime change. This vilification of the United States is a convenient way of distracting their publics from regime shortcomings and fostering public support for strongman tactics.

Since 9/11, and particularly in the wake of the Arab Spring, Western enthusiasm for democracy support has waned. Rising levels of instability, including in Ukraine and the Middle East, fragile governance in Afghanistan and Iraq, and sustained threats from terrorist groups such as ISIL have increased Western focus on security and stability. u.s.

preoccupation with intelligence sharing, basing and overflight rights, along with the perception that autocracy equates with stability, are trumping democracy and human rights considerations.

While rising levels of global instability explain part of Washington's shift from an historical commitment to democracy, the nature of the policy process itself is a less appreciated factor. Policy discussions tend to occur on a country-by-country basis—leading to choices that weigh the costs and benefits of democracy support within the confines of a single country.

From this perspective, the benefits of counterterrorism cooperation or access to natural resources are regularly judged to outweigh the perceived costs of supporting human rights. A serious problem arises, however, when this process is replicated across countries. The bilateral focus rarely incorporates the risks to the U.S.-led global order that arise from widespread democratic decline across multiple countries.

Many of the threats to the current global order, such as China's rise or the diffusion of power, are driven by factors that the United States and West more generally have little leverage to influence or control. Democracy, however, is an area where Western actions can

affect outcomes. Factoring in the risks that arise from a global democratic decline into policy discussions is a vital step to building a comprehensive approach to democracy support. Bringing this perspective to the table may not lead to dramatic shifts in foreign policy, but it would ensure that we are having the right conversation.

The confluence of multiple unstable, undemocratic trigger-happy factions are the perfect recipe for global conflagration and extinction.

Underview

AT: Debris Collision/Kessler:

1] Time frame – Kessler effect 200 years away

Stubbe 17 [(Peter, PhD in law @ Johann Wolfgang Goethe University Frankfurt) “State Accountability for Space Debris: A Legal Study of Responsibility for Polluting the Space Environment and Liability for Damage Caused by Space Debris,” Koninklijke Brill Publishing, ISBN 978-90-04-31407-8, p. 27-31] TDI

The prediction of possible scenarios of the future evolution of the debris population involves many uncertainties. Long-term forecasting means the prediction of the evolution of the future debris environment in time periods of decades or even centuries. Predictions are based on models⁸⁴ that work with certain assumptions, and altering these parameters significantly influences the outcomes of the predictions. Assumptions on the future space traffic and on the initial object environment are particularly critical to the results of modeling efforts.⁸⁵ A well-known pattern for the evolution of the debris population is the so-called Kessler effect, which assumes that there is a certain collision probability among space objects because many satellites operate in similar orbital regions. These collisions create fragments, and thus additional objects in the respective orbits, which in turn enhances the risk of further collisions. Consequently, the number of objects and collisions increases exponentially and eventually results in the formation of a self-sustaining debris belt around the Earth. While it has long been assumed that such a process of collisional cascading is likely to occur only in a very long-term perspective (meaning a time span of several hundred years),⁸⁷ a consensus has evolved in recent years that an uncontrolled growth of the debris population in certain altitudes could become reality much sooner.⁸⁸ In fact, a recent cooperative study undertaken by various space agencies in the scope of i a d c shows that the current debris population is unstable, even if current mitigation measures are applied. The study concludes: Even with a 90% implementation of the commonly-adopted mitigation measures [...] the debris population is expected to increase by an average of 30% in the next 200 years. The population growth is primarily driven by catastrophic collisions between 700 and 1000 km altitudes and such collisions are likely to occur every 5 to 9 years.

2] No risk of a debris impact---

Stuff blows up in space all the time, and almost none of it involves objects we care about---robust modeling found a .001% chance of collisions---that's Wein

Probability – 0.1% chance of a collision.

Salter 15 – Assistant Professor of Economics & Comparative Economics Research Fellow at Texas Tech University

Alexander W. Salter, Space Debris: A Law and Economics Analysis of the Orbital Commons, Mercatus Working Paper, Mercatus Center at George Mason University, 19 STAN. TECH. L. REV. 221 (2016), https://law.stanford.edu/wp-content/uploads/2017/11/19-2-2-salter-final_0.pdf

*numbers replaced with English words

The probability of a collision is currently low. Bradley and Wein estimate that the maximum probability in LEO of a collision over the lifetime of a spacecraft remains below one in one thousand, conditional on continued compliance with NASA's deorbiting guidelines.³ However, the possibility of a future "snowballing" effect, whereby debris collides with other objects, further congesting orbit space, remains a significant concern.⁴ Levin and Carroll estimate the average immediate destruction of wealth created by a collision to be approximately \$30 million, with an additional \$200 million in damages to all currently existing space assets from the debris created by the initial collision.⁵ The expected value of destroyed wealth because of collisions, currently small because of the low probability of a collision, can quickly become significant if future collisions result in runaway debris growth.

3] Space is huge---nothing will collide

Albrecht 16 – Chairman of the board of USSpace LLC & fmr. head of the National Space Council

Mark Albrecht, chairman of the board of USSpace LLC, head of the White House National Space Council from 1989 to 1992, and Paul Graziani, CEO and founder of Analytical Graphics, a company that develops software and provides mission assurance through the Commercial Space Operations Center (ComSpOC), Congested space is a serious problem solved by hard work, not hysteria, 2016, <https://spacenews.com/op-ed-congested-space-is-a-serious-problem-solved-by-hard-work-not-hysteria/>

There are over a half million pieces of human-made material in orbit around our planet. Some are the size of school buses, some the size of BB gun pellets. They all had a function at some point, but now most are simply space debris littered from 100 to 22,000 miles above the Earth. Yet, all behave perfectly according to the laws of physics. Many in the space community have called the collision hazard caused by space debris a crisis. Popular culture has embraced the risks of collisions in space in films like Gravity. Some participants have dramatized the issue by producing graphics of Earth and its satellites, which make our planet look like a fuzzy marble, almost obscured by a dense cloud of white pellets meant to conceptualize space congestion. Unfortunately, for the sake of a good visual, satellites are depicted as if they were hundreds of miles wide, like the state of Pennsylvania (for the record, there are no space objects the size of Pennsylvania in orbit). Unfortunately, this is the rule, not the exception, and almost all of these articles, movies, graphics, and simulations are exaggerated and misleading. Space debris and collision risk is real, but it certainly is not a crisis. So what are the facts? On the positive side, space is empty and it is vast. At the altitude of the International Space Station, one half a degree of Earth longitude is almost 40 miles long. That same one half a degree at geostationary orbit, some 22,000 miles up is over 230 miles long. Generally, we don't intentionally put satellites closer together than one-half degree.

4] Tracking debris exists now and solves collisions.

Mosher '19 [Dave; September 3rd; Journalist with more than a decade of experience reporting and writing stories about space, science, and technology; Business Insider, "Satellite collisions may trigger a space-junk disaster that could end human access to orbit. Here's How," https://www.usafa.edu/app/uploads/Space_and_Defense_2_3.pdf; GR]

The **Kessler syndrome** plays center-stage in the movie "Gravity," in which **an accidental space collision** endangers a crew aboard a large space station. But Gossner said **that type of a runaway space-junk catastrophe is unlikely**. "Right now I **don't think we're close to that**," he said. "I'm not saying we couldn't get there, and I'm not saying we don't need to be smart and manage the problem. But **I don't see it ever becoming, anytime soon, an unmanageable problem**." There is no current system to remove old satellites or sweep up bits of debris in order to prevent a Kessler event. Instead, **space debris is monitored from Earth**, and new rules require satellites in low-Earth orbit be deorbited after 25 years so they don't wind up adding more space junk. "Our current plan is to manage the problem and not let it get that far," Gossner said. "I don't think that we're even close to needing to **actively remove stuff**." There's lots of research being done on that, and maybe some day that will happen, but I think that — **at this point**, and in my humble opinion — **an unnecessary expense**." A major part of the effort to prevent a Kessler event is the **Space Surveillance Network (SSN)**. The project, **led by the US military, uses 30 different systems around the world to identify, track, and share information about objects in space**. Many **objects are tracked day and night via a network of radar observatories around the globe**. Optical telescopes on the ground also keep an eye out, but they aren't always run by the government. "The commercial sector is actually putting up lots and lots of telescopes," Gossner said. The government pays for their debris-tracking services. Gossner said **one major debris-tracking company is called Exoanalytic**. It **uses about 150 small telescopes set up around the globe to detect, track, and report space debris to the SSN**. Telescopes in space track debris, too. **Far less is known about them because they're likely top-secret military satellites**. **Objects detected by the government and companies get added to a catalog of space debris and checked against the orbits of other known bits of space junk**. **New orbits are calculated with supercomputers to see if there's a chance of any collisions**. Diana McKissock, a flight lead with the US Air Force's 18th Space Control Squadron, helps track space debris for the SSN. She said the surveillance network issues warnings to NASA, satellite companies, and other groups with spacecraft, based on two levels of emergency: basic and advanced. **The SSN issues a basic emergency report to the public three days ahead of a 1-in-10,000 chance of a collision**. **It then provides multiple updates per day until the risk of a collision passes**. To qualify for such reporting, a rogue object must come within a certain distance of another object. In low-Earth orbit, that distance must be less than 1 kilometer (0.62 mile); farther out in deep space, where the precision of orbits is less reliable, the distance is less than 5 kilometers (3.1 miles). **Advanced emergency reports help satellite providers see possible collisions much more than three days ahead**. **In 2017, we provided data for 308,984 events, of which only 655 were emergency-reportable**," McKissock told Business Insider in an email. Of those, 579 events were in low-Earth orbit (where it's relatively crowded with satellites).