### AT: GOP Rollback

#### Dems will keep the Senate – momentum is growing and they’re advantaged in key races

Pindell 2/16 [(James, Political Reporter at The Boston Globe, MS in Journalism from Columbia University) “Why Democrats might keep the majority in the Senate next year after all,” Boston Globe, 2/16/2022] JL

However, in the one place where mathematically it would be the easiest for Republicans to see a significant pickup, the US Senate, there are growing signs that Democrats might be able to hold on to the slimmest of all margins and keep control of the chamber.

To be clear: this is not to suggest that Democrats are likely to hold the Senate. But an analysis of key states shows it is unclear whether Republicans will be able to flip the single Senate seat needed to give themselves the majority.

The stakes are high. While a lot of Biden’s domestic agenda is stalled on Capitol Hill anyway, keeping the Senate in Democratic control would mean, at the very least, that Biden wouldn’t have to veto Republican bills, and that nominees for the Cabinet and federal judiciary would likely get a vote for at least another two years.

Most campaign experts and big political donations are going to Senate contests in nine states this year, which essentially make up the Senate battleground. Republicans need to take over one seat currently held by a Democrat to gain the majority. Democrats, because of the tie-breaking vote held by Vice President Kamala Harris, need to keep the status quo.

So, indeed, the entire question of Senate control can come down to one particular state’s contest.

Here is where things get interesting. Among the nine seats, four are held by Democratic incumbents. The other five are held by Republicans, and three of them are open seats, meaning the incumbent is not running. The bottom line: Democrats are defending fewer seats, and they’re doing so with incumbents.

Specifically, in the four Democratic seats of Arizona, Georgia, Nevada, and New Hampshire, the Democratic incumbents are far outpacing their less-than-top-shelf Republican opponents.

In New Hampshire, Republican Governor Chris Sununu passed on a run against first-term Democratic Senator Maggie Hassan. Two establishment Republicans, largely unknown outside of political circles, jumped into the contest last month and now must contend in an expensive primary against each other.

In Georgia, Democratic incumbent Senator Raphael Warnock is raising more money than any other Senate candidate in the country, while his main Republican challenger, Herschel Walker, has largely not been publicly campaigning and many of the headlines in local media have been about domestic violence accusations he has admitted were true.

In Nevada, Republicans recruited the candidate they wanted, Adam Laxalt, but he has yet to shake a primary challenge before he can start to take on Democratic freshman Senator Catherine Cortez Masto. The latest poll showed Cortez Masto leading Laxalt by 9 points.

And in Arizona, Democratic Senator Mark Kelly has huge fund-raising and name identification advantages over his Republican opponents. Republicans, it should be noted, appear unsatisfied with the field and are still trying to convince Governor Doug Ducey to run for the seat even though President Trump often attacks him.

Meanwhile, in the five competitive races where Republicans need to hang on to their seats (Wisconsin, Pennsylvania, North Carolina, Florida, and Ohio) it isn’t obvious that they will, though polling suggests Republican victories are currently more likely than not.

#### Red states are on board – financial benefits

Parsi 21 [(Trita, executive vice president of the Quincy Institute for Responsible Statecraft) “How a U.S.-Iran Deal Helps Red States,” Foreign Policy, 3/26/2021] JL

At the same time, the financial benefits of enlarging the JCPOA by lifting primary sanctions have the potential to break Republicans’ opposition to the deal by bringing economic trade benefits with Iran to Republican states and districts.

Few in Washington appreciate how costly sanctions on Iran have been for U.S. firms. A study my colleagues and I conducted in 2016 revealed that between 1995 and 2014, the United States sacrificed at least $203 billion and as much as $272 billion in potential export revenue to Iran. Much of that trade would have benefitted red states.

Consider, for instance, some of Iran’s imports. Corn is Iran’s main agricultural import, and it imported $2.11 billion-worth of corn in 2018. Although the United States is the largest producer of corn in the world, it doesn’t sell a single bushel of corn to Iran. The country’s corn is primarily produced in Republican-controlled states—Nebraska, Indiana, Kansas, and South Dakota. And though the United States’ top producer of corn, Illinois, is majority Democrat, its corn production takes place in its Republican districts. The corn industry accounts for 54 percent of Illinois’ total agricultural production and employs nearly 1 million people in the state.

Iran’s second largest agricultural import is rice, another one of the United States’ leading agricultural exports. Again, the primary producers of rice in the country are, with the exception of California, the Republican states of Arkansas, Louisiana, Mississippi, Missouri, and Texas.

Furthermore, if Trump hadn’t abandoned the JCPOA, Boeing would have sold 80 civilian aircraft to Iran in a deal worth more than $20 billion that would have supported nearly 100,000 jobs in the U.S. manufacturing sector. One of Boeing’s main commercial aircraft manufacturing plants is located in North Charleston, South Carolina—a district represented by a Republican congresswoman.

The list goes on. According to Iranian economist Bijan Khajehpour, the potential of the Iranian market for U.S. businesses is greater than that of Turkey. “U.S. exports to Turkey were $14.2 billion in 2019, so if one adds the potential of the petroleum sector, without sanctions, the U.S. could export more than $15 billion of goods and services to Iran,” he said. This would make Iran a top 20 export market for the United States—a bigger consumer of U.S. exports than, for instance, Israel, Spain, and Ireland.

#### SDGs fail and cause unsustainable resource exploitation

Hickel 20 [(Jason, Anthropologist, author, and a fellow of the Royal Society of Arts) “The World’s Sustainable Development Goals Aren’t Sustainable”, Foreign Policy, 9/30/2020]This isn’t just a matter of a few odd results. Data published by scientists at the University of Leeds shows that all of the top-ranked countries in the SDG Index have significantly overshot their fair share of planetary boundaries, in consumption-based terms—not only when it comes to resource use and emissions but also in terms of land use and chemical flows like nitrogen and phosphorous. It is physically impossible for all nations to consume and pollute at the level of the SDG top performers without destroying our planet’s biosphere.

In other words, the SDG Index is, from the perspective of ecology, incoherent. It creates the illusion that rich countries have high levels of sustainability when in fact they do not.

So what’s going on here? Well, the SDG Index is directly linked to the Sustainable Development Goals. There are 17 goals, each of which include a number of targets. The SDG Index takes indicators for each of these targets (where data is available), indexes them, and then averages them together to arrive at a score for each goal. Then the 17 goals are averaged together in turn to come up with the final figure. All of this seems reasonable enough, on the face of it. But taking this approach means introducing a number of analytical problems.

First, there is a weighting problem. The SDGs include three different kinds of indicators: Some focus on ecological impact (like deforestation and biodiversity loss), some focus on social development (like education and hunger), and some focus on infrastructure development (like transportation and electricity). Most of the SDGs contain a mix of these, but the ecological indicators are almost always swamped, as it were, by the development indicators. For example, the SDG Index has four indicators for Goal 11 (on “sustainable cities and communities”); three of them are development indicators, while only one of them has to do with ecological impact. This means that if a country performs well on the development indicators, its score for that goal will look good even if it fails in terms of sustainability.

This issue is compounded by a second problem, namely, that only four of the 17 SDGs deal mostly or wholly with ecological sustainability (Goals 12 through 15). The other 13 are mostly focused on development. Once again, this means that good performance on the development goals outweighs poor performance on the sustainability goals, so countries like Sweden, Germany, and Finland can rise to the top of the index (with the United States ranking in the top 20 percent) even though they have highly unsustainable levels of ecological impact.

The final problem is that the vast majority of the ecological indicators are territorial metrics that do not account for impacts related to international trade. For instance, take the air pollution indicator in Goal 11. Rich countries come out looking clean—but this is largely because they have offshored most of their polluting industries to countries in the global south since the 1980s, thus shifting the problem abroad.

So too with the indicators on deforestation, overfishing, and so on: most of this damage happens in poorer countries, but it is disproportionately caused by overconsumption in richer countries, and quite often perpetrated by corporations or investors headquartered there. As a result, poorer countries get punished in the SDG Index for being harmed and polluted by richer countries. Of course, in many cases territorial metrics are appropriate; but there are a number of indicators in the SDG Index that should be reckoned as well in consumption-based terms and yet are not.

In effect, the SDG Index celebrates rich countries while turning a blind eye to the damage they are causing. Ecological economists have long warned against this approach. It violates the principle of “strong sustainability,” which holds that good performance on development indicators cannot legitimately substitute for destructive levels of ecological impact. The SDG Index team are aware of this problem. It’s even mentioned (briefly) in their methodological notes—but then it’s swept under the rug in favor of a final metric that has little grounding in ecological principles.

Ultimately, metrics of sustainable development need to be universalizable. In other words, the top performers on the index should represent a standard that all nations could aspire to achieve without this leading to a collapse of global ecosystems. That’s not the case with the SDG Index, where rich countries are held up as models when in reality, as the Leeds research shows, they are a big part of the problem.

The United Nations needs to redesign the index to correct these issues. This can be done by rendering the ecological indicators in consumption-based terms wherever relevant and possible, to take account of international trade, and by indexing the ecological indicators separately from the development indicators so that we can see clearly what’s happening on each front. This way we can celebrate what countries like Denmark and Germany have achieved in terms of development while also recognizing that they are major drivers of ecological breakdown and need urgently to change course, with rapid reductions in emissions and resource use.

Until then, we should avoid using the SDG Index as a metric of progress in sustainable development, because it’s not. Given the stakes of the crisis we face, we need to tell more honest, accurate stories about what’s happening to our planet and who is responsible for it.

#### Warming doesn’t trigger extinction

* peer-reviewed journal shows IPCC exaggeration
* history proves resilience
* no extinction- warming under Paris goals
* rock breaking strategy could offset warming

IBD 18 [Investors Business Daily, Citing Study from Peer reviewed journal by Lewis and Curry, “Here's One Global Warming Study Nobody Wants You To See”, 4/25/18, https://www.investors.com/politics/editorials/global-warming-computer-models-co2-emissions/]

Settled Science: A new study published in a peer-reviewed journal finds that climate models exaggerate the global warming from CO2 emissions by as much as 45%. If these findings hold true, it's huge news. No wonder the mainstream press is ignoring it.

In the study, authors Nic Lewis and Judith Curry looked at actual temperature records and compared them with climate change computer models. What they found is that the planet has shown itself to be far less sensitive to increases in CO2 than the climate models say. As a result, they say, the planet will warm less than the models predict, even if we continue pumping CO2 into the atmosphere.

As Lewis explains: "Our results imply that, for any future emissions scenario, future warming is likely to be substantially lower than the central computer model-simulated level projected by the (United Nations Intergovernmental Panel on Climate Change), and highly unlikely to exceed that level.

How much lower? Lewis and Curry say that their findings show temperature increases will be 30%-45% lower than the climate models say. If they are right, then there's little to worry about, even if we don't drastically reduce CO2 emissions.

The planet will warm from human activity, but not nearly enough to cause the sort of end-of-the-world calamities we keep hearing about. In fact, the resulting warming would be below the target set at the Paris agreement.

This would be tremendously good news.

The fact that the Lewis and Curry study appears in the peer-reviewed American Meteorological Society's Journal of Climate lends credibility to their findings. This is the same journal, after all, that recently published widely covered studies saying the Sahara has been growing and the climate boundary in central U.S. has shifted 140 miles to the east because of global warming.

The Lewis and Curry findings come after another study, published in the prestigious journal Nature, that found the long-held view that a doubling of CO2 would boost global temperatures as much as 4.5 degrees Celsius was wrong**.** The most temperatures would likely climb is 3.4 degrees.

It also follows a study published in Science, which found that rocks contain vast amounts of nitrogen that plants could use to grow and absorb more CO2, potentially offsetting at least some of the effects of CO2 emissions and reducing future temperature increases.

## 1NC – T

#### Interpretation: “appropriation” denotes permanence

Gorove 69 [(Stephen, former professor of space law and director of space studies and policy at the University of Mississippi) “Interpreting Article II of the Outer Space Treaty,” Fordham Law Review, 1969] JL

With respect to the concept of appropriation the basic question is what constitutes "appropriation," as used in the Treaty, especially in contradistinction to casual or temporary use. The term "appropriation" is used most frequently to denote the taking of property for one's own or exclusive use with a sense of permanence. Under such interpretation the establishment of a permanent settlement or the carrying out of commercial activities by nationals of a country on a celestial body may constitute national appropriation if the activities take place under the supreme authority (sovereignty) of the state. Short of this, if the state wields no exclusive authority or jurisdiction in relation to the area in question, the answer would seem to be in the negative, unless, the nationals also use their individual appropriations as cover-ups for their state's activities.5 In this connection, it should be emphasized that the word "appropriation" indicates a taking which involves something more than just a casual use. Thus a temporary occupation of a landing site or other area, just like the temporary or nonexclusive use of property, would not constitute appropriation. By the same token, any use involving consumption or taking with intention of keeping for one's own exclusive use would amount to appropriation.

#### Permanence means stationary occupation over time

Gorove 84 [(Stephen, former professor of space law and director of space studies and policy at the University of Mississippi) “Major Legal Issues Arising from the Use of the Geostationary Orbit,” Michigan Journal of International Law, 1984] JL

The question then becomes whether the continued exclusive occupation by a geostationary satellite of the same physical area is a violation of the ban on national appropriation. While a state may certainly exercise exclusive control over a traditional object, such as a ship, or an aircraft, or a part of airspace, it is not clear that a satellite in geostationary orbit would be able to maintain its exact position and occupy the same area over a period of time. 13 Even if a position could be accurately maintained, and thus possibly constitute an "appropriation" within the meaning of article II, the satellite would have to be kept in that orbit with a "sense of permanence" and not on a temporary basis.

#### Violations:

#### Space stations aren’t stationary

Martin 9/13 [(Taylor, covers automotive history for MotorBiscuit) “Did You Know the International Space Station Can Move?” MotorBiscuit, 9/13/2021] JL

Technically speaking, the International Space Station is moving all the time. Not only is it in orbit, moving at 17,000 mph, but there are onboard gyroscopes constantly positioning it. Otherwise, the space station would spin around recklessly and, eventually, fall back to earth.

But when the space station needs to be moved, it’s primarily powered by Russian-built rocket thrusters. The main thrusters of the ISS are located on the Zvezda module, which was attached to the ISS in 2000. Not only was it the first large module attached to the station, but it was the first fully Russian contribution.

The Zvezda module is used primarily for service, able to support six crew members at a time, with two sleeping quarters, a toilet, a treadmill, and a bicycle for exercise. However, when the station needs a boost, the Zvezda’s rockets kick in.

With 16 small thrusters and two large thrusters, the Zvezda’s modules can boost the space station’s orbit when need be. But there are other Russian modules that dock with the space station every so often. They’re called the Progress spacecrafts, and can both propel and refuel the ISS as needed.

Entirely unmanned, these Russian cargo capsules carry 3,836 lbs of fuel, whereas the Zvezda module can only hold 1,895 lbs. Provided, but the time the Progress gets to the station, it only has about 400 or 500 lbs of fuel left. Once the module is finished at the station, it’s filled with trash and waste, undocked, and then burns up upon reentry.

So the International Space Station has means of propelling itself, but those rockets are only fired when they have to be.

For starters, while careful calculations are made to make sure docking vessels intercept the space station, they aren’t always perfect. Thrusters are used to raise the space station’s orbit to meet with oncoming ships. This is rather common, and the time it takes to burn isn’t typically long. But orbital boosts aren’t the only times the space station needs to move around.

#### They’re not permanent – that’s the entirety of the 1AC

#### Vote neg:

#### Limits – their interp makes any temporary use of space topical, from mining to satellites to photography – limits explosion privileges the aff by stretching pre-tournament neg prep too thin and precludes nuanced testing

#### Topic ed – they distract from the core topic controversies of property rights and the ethicality of private colonization by centering debates around the desirability of tiny actions in space – outweighs because it lasts two months

#### No plan text in a vacuum – kills 1NC strategy and makes extra T a no risk issue

#### Competing interps – reasonability invites arbitrary ji and a race to the bottom

#### No RVIs – litmus test for substance and incentivizes abuse to win prepped-out counterinterps

## 1NC – CP

#### CP: Private entities outside of the United States should not appropriate outer space via commercial space stations that replace the International Space Station.

#### Private entities in the United States should submit an environmental impact assessment of commercial space stations that replace the International Space Station to the UN Office of Outer Space Affairs for public comment, modification, and approval, then implement the approved version of the submitted proposal.

**Counterplan competes and creates the least environmentally damaging version of the aff.**

William R. **Kramer**, PhD Polisci/Futures Studies @ U of H Manoa, Currently HDR Inc. Extraterrestrial Environmental Analyst, **’14**, “Extraterrestrial environmental impact assessments A foreseeable prerequisite for wise decisions regarding outer space exploration, research and development” Space Policy 30 (2014) 215-222

To be most effective, all spacefaring nations and enterprises would voluntarily participate in assessing their extraterrestrial environmental impacts prior to undertaking actions in space. A hypothetical chronology of such a process might include: (1) Impact assessments are prepared by the action proponent and submitted to an impartial international panel or board; (2) The panel determines the assessment's sufficiency; (3) The assessment is published in an electronic or other format accessible to the public followed by a comment period; (4) The action proponent addresses comments and submits responses to the panel; (5) The panel publishes its approval or concerns; (6) The action proceeds, is **modified or is abandoned**; and (7) should the action proceed, periodic reports of the action's progress and impacts are filed for future reference in a digital format to allow broad access. The process would support the spirit of both **NEPA** to “fulfill the responsibilities of each generation as trustee of the environment for succeeding generations” (42 USC x4331(b)(1)) and Article 4(1) of the Moon Agreement's directive that “due regard shall be paid to the interests of present and future generations.” Given the likelihood that all states would appreciate the need for maintaining extraterrestrial environments and landscapes for both future research and exploitation, pressure from peer states and space industries may be sufficient to **encourage a trend of compliance**.

Such a review and approval system (perhaps similar to NEPA's relationship with the Council on Environmental Quality and its oversight function) could be attempted within the structure of the UN, such as within the **UN Office of Outer Space Affairs**. The spirit of an extraterrestrial environmental assessment program would be likely to fit within the mandate of the organization. However, amending the Outer Space Treaty or otherwise developing an administrative UN capacity to achieve the goals proposed in this paper would require a level of international commitment and cooperation that may be both lengthy and difficult to achieve. Spacefaring nations and international organizations are already invited to submit annual reports on their space activities and research to the UN Committee on the Peaceful Uses of Space, **so a precedent for reporting exists.** **Presently, however, reports tend to document positive actions and research, not details of extraterrestrial environmental impacts**.

**Extinction. EIA is key to preserve space resources, stop resource wars, and extra-terrestrial environmental damage.**

William R. **Kramer**, Hawaii Research Center for Futures Studies @ University of Hawaii, **'17**, In dreams begin responsibilities – environmental impact assessment and outer space development, ENVIRONMENTAL PRACTICE, VOL. 19, NO. 3, 128–138

**Benefits of extraterrestrial environmental impact assessment** Most publications regarding outer space resources maintain that those resources are nearly limitless, and many business models for exploitation do not imagine that resources on Mars, for example, will ever be exhausted (Lewis, 1996; Zubrin, 1996; Renstrom, 2016). Ever is a long time. While the statement may be figuratively true for some mineral ores that may last through an individual company’s project timeline, it is not necessarily true for long-term planning. **There will likely be competition for the rarest (most valuable) minerals**. Without some form of planning and regulation, they may be extracted in an inefficient and environmentally damaging manner and be **quickly depleted** (as exemplified by hydraulic mining for gold on Earth, which wasted much of the resource and resulted in extensive environmental damage) (Merchant, 1998).

How might resources be put to their highest and best use unless regulated? Both the Moon and Mars have water ice which will be **crucial for human survival**, but water also has lucrative industrial uses; it is potentially the raw material for manufacturing both rocket fuel and oxygen. **Conflicts over resource allocation** may be better addressed during an **assessment process** that seeks to balance highest and best use with discovery and first use. Who gains access to specific areas for mining becomes more problematic in that the Outer Space Treaty does not allow “ownership” of extraterrestrial territory; there is no guarantee that companies such as those listed previously will gain access to the most productive sites. The China National Space Administration is planning to place a crew on the Moon by 2024, so **competition for the best sites will be intense** (Kramer, 2015b; China Digital Times, 2012).

Space industries generally are not considering that their proposed actions may preclude alternative uses such as scientific research and human settlement. There will be a stream of not yet imagined uses that could be adversely affected or foreclosed. Many of the same conflicts between land use and human habitation experienced on Earth may emerge on extraterrestrial sites. On the Moon, for example, there are preferable sites for collecting solar energy. These “peaks of eternal light” are areas nearly always or constantly exposed to sunlight at the poles. They are very limited in both distribution and size (Elvis, Milligan, and Krolikowski, 2016). If a mining operation were to determine such areas suitable for their operations, or if mining created a constant plume of dust that would diminish the effectiveness of solar panels, how might such a situation be resolved?

Should potentially dangerous industries such as fuel manufacturing or storage be located near living areas? Would hydraulic fluid pipelines be closely monitored for leaks that may affect subsurface ice deposits mined for drinking water? How might vibrations from detonations affect unrelated structures or scientific instrumentation, such as telescopes? And how might a search for life, whether extinct or still living, be affected by human presence and our trail of bacteria and organic wastes? Humans’ biological pollution of Mars, for example, may greatly affect the results of any search for extraterrestrial life there (Kramer, 2009; McKay, 2009). Peter Doran of the Planetary Protection Subcommittee of the NASA Advisory Council offered, “The big issue with all missions to Mars is we don’t want to create a situation where we are impacting future life-detection science. Picture humans … walking around shedding microbes everywhere we go. Space suits as we know them do not take care of this problem (Mack, 2016).”

#### Should means certain and immediate

Summers 94 (Justice – Oklahoma Supreme Court, “Kelsey v. Dollarsaver Food Warehouse of Durant”, 1994 OK 123, 11-8, http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=20287#marker3fn13)

¶4 The legal question to be resolved by the court is whether the word "should"13 in the May 18 order connotes futurity or may be deemed a ruling in praesenti.14 The answer to this query is not to be divined from rules of grammar;15 it must be governed by the age-old practice culture of legal professionals and its immemorial language usage. To determine if the omission (from the critical May 18 entry) of the turgid phrase, "and the same hereby is", (1) makes it an in futuro ruling - i.e., an expression of what the judge will or would do at a later stage - or (2) constitutes an in in praesenti resolution of a disputed law issue, the trial judge's intent must be garnered from the four corners of the entire record.16 [CONTINUES – TO FOOTNOTE] 13 "*Should*" not only is used as a "present indicative" synonymous with *ought* but also is the past tense of "shall" with various shades of meaning not always easy to analyze. See 57 C.J. Shall § 9, Judgments § 121 (1932). O. JESPERSEN, GROWTH AND STRUCTURE OF THE ENGLISH LANGUAGE (1984); St. Louis & S.F.R. Co. v. Brown, 45 Okl. 143, 144 P. 1075, 1080-81 (1914). For a more detailed explanation, see the Partridge quotation infra note 15. Certain contexts mandate a construction of the term "should" as more than merely indicating preference or desirability. Brown, supra at 1080-81 (jury instructions stating that jurors "should" reduce the amount of damages in proportion to the amount of contributory negligence of the plaintiff was held to imply an *obligation* *and to be more than advisory*); Carrigan v. California Horse Racing Board, 60 Wash. App. 79, 802 P.2d 813 (1990) (one of the Rules of Appellate Procedure requiring that a party "should devote a section of the brief to the request for the fee or expenses" was interpreted to mean that a party is under an *obligation* to include the requested segment); State v. Rack, 318 S.W.2d 211, 215 (Mo. 1958) ("should" would mean the same as "shall" or "must" when used in an instruction to the jury which tells the triers they "should disregard false testimony"). 14 In praesenti means literally "at the present time." BLACK'S LAW DICTIONARY 792 (6th Ed. 1990). In legal parlance the phrase denotes that which in law is presently or immediately effective, as opposed to something that will or would become effective in the future *[in futurol*]. See Van Wyck v. Knevals, 106 U.S. 360, 365, 1 S.Ct. 336, 337, 27 L.Ed. 201 (1882).

#### Condo’s good:

#### Neg flex – tests the aff from multiple perspectives – otuweighs because the aff has infinite prep and the neg is reactive

#### Info processing – teaches thinking fast and dealing with overwhelming amounts of info – most real world and prepares students to cope

## 1NC – DA

#### Commercial space stations are the future of tourism and commerce – 1AC Davenport says they’re far away, but not impossible

Frey 1-6 (, T., 2022. Private Space Stations: The Future Portals for Private Space Commerce and Tourism. [online] Futurist Speaker. Available at: <https://futuristspeaker.com/future-trends/private-space-stations-the-future-portals-for-private-space-commerce-and-tourism/> [Accessed 30 January 2022].)-rahulpenu

Private Space Stations: The Future Portals for Private Space Commerce and Tourism

The future of space research and development is tied to private enterprise – specifically private space stations. Now that government-funded programs have proven basic concepts about getting to and living/working in space, NASA and agencies from other countries will continue to turn many aspects of space station work over to private companies.

The International Space Station (ISS) will be unusable by the end of this decade and at that point NASA and other countries will resort to renting space on privately owned, earth orbiting stations.

NASA is hedging its bets and providing grants to several private companies in hopes of jump starting and accelerating their development of private space stations. No doubt any of these companies will be honored to have NASA as a primary tenant, but they’re setting their sights even higher – literally.

Space Flight Tourism Has Begun

We’ve already broken the public-private barrier with tourist excursions for low-earth, brief or multi-day orbital flights. The Russians have been making their Soyuz vehicle available for ferrying private citizens to the ISS for more than a decade.

Now, in addition to ferrying crews to the ISS for NASA, SpaceX also is using its equipment to provide multi-day orbital flights for private citizens. Late last year, SpaceX hosted four space tourists for a three-day orbiting tour.

Space Destination Tourism

Axiom Space, one of the companies supported by NASA, is planning to rent out the SpaceX vehicle from Elon Musk’s team to transport company clients to an eight-day literal “around the world” orbital flight cruise aboard the ISS. This represents the second phase of the space tourism industry – to deliver space tourists to orbiting modules and stations. We’re there already of course, but these programs are in their infancy.

When the ISS goes out of commission, we’ll see private space stations take up the slack – both for NASA’s important work and for wealthy space tourists’ once-in-a-lifetime experiences. Axiom has a leg up on this venture, as it’s planning to attach a module to the ISS for several years before detaching it to form the basis of its own private space station.

Orbital Vacations

Over time, space station tourists won’t be content to live even for a few days in a lab-like environment – the kind we’re used to seeing on videos from the ISS.

Private, orbiting space stations will be upgraded. They won’t be luxurious at first, but they’ll have slightly upgraded sleeping pods and small common areas for lounging instead of working.

NASA will still have its labs and astronaut quarters on board. The tourists will need to stay in their own area, although some will want to do more than look out the window for days at a time and will volunteer to participate in research after receiving some on-the-ground training before liftoff.

The Next Frontier

The next step in the space tourism progression is to break beyond the Earth orbit and place space facilities in other locations – orbiting the Earth’s moon or on the moon itself.

We’ll also see space vacations and research destinations in non-planet orbiting space.

Supporting Space Commerce

Down the road even further, space workers for commercial ventures will become another category of private citizen astronauts. These workers will be hopping from one private space station to the next as space station entrepreneurs place facilities at ever-more distant waypoints in space. Tasks like asteroid mining will be done by robots, of course, but in some cases, human intervention at the mining location may be needed to keep things progressing. These private space stations will serve as staging areas, regional offices, and warehouses.

Space Highways

It’s not too hard to imagine that eventually, along well-established routes to commercial areas in space and to other planets, we’ll see the emergence of additional space structures – hardly space “stations” anymore – with specific functions. Passing vehicles will dock to resupply, make deliveries, make repairs, refresh crews and passengers, and provide almost the same variety of services you’d expect to see along a U.S. interstate highway.

Even further into the future, we’ll see scheduled flights from earth to the larger space communities and then between those locations, similar to the familiar hub and spoke arrangements used by the world’s airlines today. As we scale these operations, space recreation and tourism will be open to far more of Earth’s citizens.

These flights will be even more necessary when people (originally workers on those remote outposts) choose to remain in space-based facilities indefinitely, purchasing or renting accommodations – maybe as retirement destinations.

Will Space Remain International?

At this time, the U.S., China, India, Russia, the UK, Japan, the UAE and maybe a few other nations have or conceivably could develop the capability to push into space for tourism or commerce.

But who owns space? Will we see any borders or territorial claims? Back in 1960, the United Nations determined that space was truly wide open. No country could lay claim to any areas or create any borders.

Will today and tomorrow’s nations abide by that? This neutrality principle might be tested as structures emerge on the moon and Mars and as we’re able to easily reach areas of space with valuable resource-laden asteroids. We may also come across some entities that come from other parts of the universe who would beg to differ about that jurisdiction of the UN!

Baby Steps So Far Are an Exciting Promise of What’s to Come

With these kinds of futuristic images in mind, it’s easy to see that what’s happened in the past decade and what will take place in the next few years are important steps, but they’re still just baby steps.

What needs to and will happen, though, is that as more and more tourist space flights occur on private vehicles and more and more private residents spend a few days at a time on the ISS and later the private space stations, people and investors will be convinced that futuristic, recreational space travel and residency is no longer science fiction but a legitimate, future personal and business opportunity. The Jetsons won’t seem as far fetched as they did 60 years ago.

In 2022, we’ll see a remarkable surge in this direction with more visitors going to space and to the ISS, along with breakthroughs in how to build and integrate structures in space. As long as we don’t see any major catastrophes (unfortunately, they’re almost inevitable and it’s important we keep them in perspective and learn from them when they happen), we’ll see growing confidence in the viability of recreational space travel.

Ten years from now, even if you’re not ready to book a hotel stay near Mars, you should buy a ticket for an Earth orbit trip or make reservations for a once-in-a-lifetime space station vacation. That’s where you’re going to see the greatest shows off Earth.

#### Tourism makes low-gravity research accessible which results in critical physiological science innovation.

Caplan and Lindsay 17 Nick Caplan and Kirsty Lindsay 7-29-2017 "Space Tourism Could Help Boost Science and Health Research — Here's How" <https://www.space.com/37503-space-tourism-could-help-boost-science-health-research.html> (Nick graduated from the University of Birmingham with a PhD in Biomechanics)//Elmer

Perhaps one day we will see research teams launching groups of participants to spend a few weeks or months aboard a space hotel in order to study medical interventions that would slow the ageing process on Earth, and to help the human species colonise the Moon or even Mars. Research dating back to the early years of the space race has led to technologies that benefit us all. Many scientific discoveries have come since the arrival of inhabitable space stations that act as orbital laboratories. NASA’s first space station Skylab helped understand the effects on the human body of spending months in space and paved the way for the International Space Station. A huge number of research studies have been completed on the ISS since the year 2000 in the areas of human physiology, biology, biotechnology, physical science and earth and space science. These studies have led to discoveries such as enhanced protein crystal growth for drug development, efficient combustion of fuel droplets, and an understanding of the effects of long duration exposure to microgravity on the human body, revealing that spaceflight has effects similar to ageing on Earth. Despite much human physiological research being carried out in space, it has one major limitation – there are simply not enough humans currently going to space to act as research participants, leading to difficulties in research design. In fact, only 550 or so humans have ever been into space since Russian cosmonaut Yuri Gagarin first orbited the Earth in 1961. Human physiological experiments in space tend to have very small participant numbers (for example, the NASA twins study) or they have to take place over many years. Could the boom in commercial human spaceflight accelerate the speed of human physiological discoveries in space? We certainly think so.

#### Physiology key to manage new Diseases.

APS 20 5-21-2020 "How Physiologists Are Helping Patients Recover from COVID-19" <https://ispyphysiology.com/2020/05/21/how-physiologists-are-helping-patients-recover-from-covid-19/> (American Physiology Society)//Elmer

Understanding Physiology Is Critical to Fighting COVID-19 For each of the new treatments and devices created to combat COVID-19, it is critical to make sure they are safe to use in people. This is where understanding of human physiology is very important. For instance, treatment with remdesivir can reduce the amount of the virus in your body and has helped people who are severely ill with COVID-19 recover faster. But the drug is known to damage the liver and the immune system, so it is very important to know how well a patient’s liver and immune system are functioning before using it as a treatment. Even as I write this, there are new findings that COVID-19 directly affects not only the lungs but also the brain, kidneys, blood vessels and blood cells. This makes treatment of COVID-19 very difficult. Scientists and bioengineers need to take into consideration how the different organs of the body coordinate to keep you alive and healthy—the knowledge of how all the organs, tissues and cell work together in health and disease is the basis of physiological study. The trouble with finding the best treatment for COVID-19 is that the symptoms are so different from one person to the next. Children seem to be less vulnerable to COVID-19, older people are more vulnerable and some young adults are dying from strokes caused by the coronavirus rather than respiratory issues. As we find out more about how COVID-19 affects the body, it is clear that there will be more than one best way to fight it. In my eyes, the COVID-19 pandemic has highlighted the value of scientific research, especially research that helps us understand human physiology. In a few short months, scientists have sequenced the genome of the virus, discovered how SARS-CoV-2 infects cells by attaching its “spikes” to a protein on cells and developed new potential treatments. It will be the research physiologist’s job to study and understand how to best use these medicines and devices to treat COVID-19 patients.

#### Extinction – defense is wrong

Piers Millett 17, Consultant for the World Health Organization, PhD in International Relations and Affairs, University of Bradford, Andrew Snyder-Beattie, “Existential Risk and Cost-Effective Biosecurity”, Health Security, Vol 15(4), http://online.liebertpub.com/doi/pdfplus/10.1089/hs.2017.0028

Historically, disease events have been responsible for the greatest death tolls on humanity. The 1918 flu was responsible for more than 50 million deaths,1 while smallpox killed perhaps 10 times that many in the 20th century alone.2 The Black Death was responsible for killing over 25% of the European population,3 while other pandemics, such as the plague of Justinian, are thought to have killed 25 million in the 6th century—constituting over 10% of the world’s population at the time.4 It is an open question whether a future pandemic could result in outright human extinction or the irreversible collapse of civilization.

A skeptic would have many good reasons to think that existential risk from disease is unlikely. Such a disease would need to spread worldwide to remote populations, overcome rare genetic resistances, and evade detection, cures, and countermeasures. Even evolution itself may work in humanity’s favor: Virulence and transmission is often a trade-off, and so evolutionary pressures could push against maximally lethal wild-type pathogens.5,6

While these arguments point to a very small risk of human extinction, they do not rule the possibility out entirely. Although rare, there are recorded instances of species going extinct due to disease—primarily in amphibians, but also in 1 mammalian species of rat on Christmas Island.7,8 There are also historical examples of large human populations being almost entirely wiped out by disease, especially when multiple diseases were simultaneously introduced into a population without immunity. The most striking examples of total population collapse include native American tribes exposed to European diseases, such as the Massachusett (86% loss of population), Quiripi-Unquachog (95% loss of population), and theWestern Abenaki (which suffered a staggering 98% loss of population).

In the modern context, no single disease currently exists that combines the worst-case levels of transmissibility, lethality, resistance to countermeasures, and global reach. But many diseases are proof of principle that each worst-case attribute can be realized independently. For example, some diseases exhibit nearly a 100% case fatality ratio in the absence of treatment, such as rabies or septicemic plague. Other diseases have a track record of spreading to virtually every human community worldwide, such as the 1918 flu,10 and seroprevalence studies indicate that other pathogens, such as chickenpox and HSV-1, can successfully reach over 95% of a population.11,12 Under optimal virulence theory, natural evolution would be an unlikely source for pathogens with the highest possible levels of transmissibility, virulence, and global reach. But advances in biotechnology might allow the creation of diseases that combine such traits. Recent controversy has already emerged over a number of scientific experiments that resulted in viruses with enhanced transmissibility, lethality, and/or the ability to overcome therapeutics.13-17 Other experiments demonstrated that mousepox could be modified to have a 100% case fatality rate and render a vaccine ineffective.18 In addition to transmissibility and lethality, studies have shown that other disease traits, such as incubation time, environmental survival, and available vectors, could be modified as well.19-2

## 1NC – DA

#### CP: States should not agree to the JCPOA.

#### JCPOA passes now, but it’s tentative and the window is closing

Norman 3/15 [(Laurence, deputy bureau chief at Dow Jones Newswires and The Wall Street Journal based in London) “Russia Softens Iran Demands, Re-Opening Way for Nuclear Deal,” The Wall Street Journal, 3/15/2022] JL

Russia walked back recently made demands on Washington related to the Iran nuclear deal, clearing the way for Tehran and Washington to revive the 2015 agreement, senior western diplomats said.

On Tuesday, after Russia’s Foreign Minister Sergei Lavrov met in Moscow with his Iranian counterpart, both Mr. Lavrov and Hossein Amir-Abdollahian said Russia wasn’t standing in the way of the accord.

Russia earlier this month had demanded guarantees from Washington that its economic ties with Iran wouldn’t be affected by the Western sanctions imposed on Moscow over Ukraine. The last-minute move was the driving factor that prevented a deal to revive the 2015 nuclear agreement over the past 10 days, western diplomats have said.

The European Union, which coordinates the talks, announced a break in the negotiations on Friday, blaming “external factors” for preventing a deal that is “essentially ready.”

A senior Western diplomat said Tuesday evening that Russia’s chief negotiator at the talks, Mikhail Ulyanov, had informed the EU that Russia would accept narrower guarantees ensuring that Russia could carry out the nuclear work it is mandated to do under the 2015 nuclear deal. That includes a uranium swap with Iran, the redesign of the Fordow nuclear facility and the provision of nuclear fuel to Iranian reactors.

“Russia says happy with guarantees on nuclear projects and not asking for anything else,” said the diplomat, who asked to remain unidentified because of the sensitive nature of the talks. “So we can go ahead with negotiations that are now exclusively US-Iran.”

State Department spokesman Ned Price said Tuesday evening that “we are not going to sanction Russia for undertaking, for participating in nuclear projects that are part of the” nuclear deal.

The negotiations, which have taken place for almost a year now, aim to reach agreement on the steps Washington and Tehran will take to return into compliance with the 2015 agreement, which lifted most international sanctions on Tehran in exchange for tight but temporary restrictions on Iran’s nuclear work.

After the Trump administration took the U.S. out of the accord and reimposed sweeping sanctions on Iran, saying the accord was too weak, Tehran expanded its nuclear work and has now gathered almost enough nuclear high-grade enriched uranium for a nuclear weapon, according to the United Nations nuclear agency.

Iran says its nuclear program is purely peaceful and U.S. officials have said there is no evidence Iran has decided to build a nuclear weapon.

Over the weekend, a senior U.S. official told The Wall Street Journal that only “a handful of issues left” remained between the U.S. and Iran to reach an accord, mainly on the issue of the scope of sanctions relief Iran would receive from Washington. The official said the U.S. side felt the resolution of these issues was “within reach.”

The U.S. official and senior European diplomats said they wouldn’t negotiate broad carve-outs from Western sanctions over Russia’s invasion of Ukraine with Moscow to save the nuclear deal. They warned that if Russia didn’t back off its demands, they would seek to complete an agreement with Iran, bypassing Russia.

Mr. Ulyanov said Tuesday evening on Twitter it was a lie that Russia had stood in the way of the accord with its demands for guarantees. He added that “some demands were accepted.” Iran, which has friendly ties with Moscow, has also continued to blame Washington for not completing the deal.

Negotiations between the U.S. and Iran could resume without negotiators returning to Vienna, where the talks have been held since April 2021, the senior western diplomat said. Iran so far has refused to talk directly with the Americans and instead have negotiated through the European powers at the talks. With so few issues still to be resolved, negotiators could work from capitals to resolve the remaining differences.

Time is pressing. U.S. and European officials say that Iran’s nuclear work has expanded close to a point that the deal’s main benefit to the West—keeping Iran months away from amassing enough nuclear fuel for a nuclear weapon—would be impossible.

European diplomats in particular have warned that with the war in Ukraine becoming ever-deadlier, the diplomatic window for concluding the deal is closing.

#### Space diplomacy directly trades off with nonproliferation agreements – finite manpower, money, and political will within the AVC

Johnson-Freeze 16 [(Joan, Professor and former Chair of National Security Affairs at the US Naval War College, Newport, Rhode Island) “Space Warfare in the 21st Century: Arming the Heavens,” Cass Military Studies, 11/8/2016] JL

 \*The plan is legislated in the AVC (same bureau of the State Department that’s concerned with the JCPOA)

Proactive policymaking takes commitment, manpower, and money. A quick look at the money and manpower devoted to diplomacy in the US State and Defense departments compared to the resources available for the hardwareproducing military–industrial complex efforts described in Chapter 5 is enlightening. The Assistant Secretary of State for Arms Control, Verification, and Compliance (AVC) leads space-related diplomacy in the State Department. The AVC Bureau is responsible for “all matters related to the implementation of certain international arms control, nonproliferation, and disarmament agreements and commitments; this includes staffing and managing treaty implementation commissions.”34 The AVC arms control portfolio includes nuclear, biological, and chemical weapons and all related issues. The AVC section charged with space issues is the Office of Emerging Security Challenges; this office also handles missile defense issues and the promotion of transparency, cooperation, and building confidence regarding cybersecurity. As of financial year 2013, AVC had a budget of $31.2 million and 141 employees35 to be active participants and leaders in all of these issues.

By way of comparison, the Space Security and Defense Program, a joint program of the DoD and the Office of the Director of National Intelligence (ODNI) was programmed for a similar budget amount in financial year 2015: $32.3 million. That program is described as a “center of excellence for options and strategies (materiel, non-materiel, cross-Title, cross-domain) leading to a more resilient and enduring National Security Space (NSS) Enterprise.”36 A majority of SSDP funding is allocated to the development of offensive space control strategies. So basically, the same budget is allocated for all US global space diplomacy efforts as for an in-house Pentagon think tank to devise counterspace strategies.

Within the Pentagon, the Deputy Assistant Secretary of Defense for Space Policy is charged with all issues related to space policy, including diplomacy. The responsibilities of the Space Policy office are to:

• Develop policy and strategy for a domain that is increasingly congested, competitive, and contested

• Implement across DoD — plans, programs, doctrine, operations — and with the IC and other agencies

• Engage with allies and other space-faring countries in establishing norms and augmenting our capabilities.37

The breadth of those responsibilities, which includes reviewing space acquisitions, means that there may be only a handful of individuals actually engaged in multilateral diplomatic efforts, acting, for example, as advisors to diplomatic discussions such as those through the United Nations. Additionally, the expanse of the Pentagon results in a chain of command that makes organizational competition for attention to subject matter challenging at best. The Deputy Assistant Secretary of Defense for Space Policy reports to the Assistant Secretary of Defense for Homeland Defense, who then reports to the Principle Deputy Secretary of Defense for Homeland Defense and Global Security, who then reports to the Under Secretary of Defense for Defense Policy. There are also a multitude of space players in other governmental organizations to coordinate and contend with, particularly within the Air Force and intelligence communities. Personnel are spread thin.

US government-wide space diplomacy needs a mandate, manpower, and a supporting budget. Diplomacy, especially multilateral diplomacy, can be timeconsuming, manpower-intensive, and frustrating; and patience is not a strong American virtue. The recent experience in the UN LTS Working Group is emblematic of everything that causes the United States to shun multilateralism. Under the auspices of this group, countries had worked in good faith over the past five years to develop technical guidelines as reciprocal constraints, as insisted upon by the developing countries when they rejected the ICOC. Yet group success appeared thwarted at the February 2016 meeting of the LTS Working Group by one country, Russia.

#### The JCPOA returns Iran to global oil markets – increased supply and perception solve market volatility

Shokri 3/3 [(Omid, visiting research scholar at the School of Policy and Government at George Mason University and is an analyst at Gulf State Analytics (GSA) who specializes in energy security, author of US Energy Diplomacy in the Caspian Sea Basin: Changing Trends Since 2001) “Can Iranian oil stabilize a volatile market?” Atlantic Council, 3/3/2022] JL

As fuel prices skyrocket following the Russian invasion of Ukraine, another major supplier of oil and natural gas is poised to play an important role.

Before Donald Trump‘s withdrawal from the 2015 nuclear deal and the imposition of sanctions on Iran’s oil exports, Iran produced 3.8 million barrels of oil per day. Afterwards, this dropped as low as 1.9 million barrels and currently it is about 2.4 million barrels. It will take time for the country’s production to return to pre-sanction levels due to this significant drop as well as low levels of investment in recent years. However, Iran’s oil and gas condensate reserves in tankers, as well as onshore oil storage facilities, will help Iran accelerate its exports which currently total more than 1 million barrels per day.  Some sources predict that with the lifting of the sanctions, Iran could ship an additional 500,000 barrels of oil per day to international markets from April to May, and by the end of this year this figure could reach an additional 1.3 million barrels per day.

All of this assumes that current talks in Vienna on reviving the Joint Comprehensive Plan of Action (JCPOA) are successful. Without sanctions relief, any new disruptions in US supplies could boost oil prices beyond $100 a barrel to as high as $150. As reported by GasBuddy**,** the United States is already struggling to cope with its highest level of inflation in four decades. The price of gasoline has risen about $4 a gallon in many parts of the country since the Ukraine crisis began.

Iran has said that it is ready to increase its oil exports significantly if sanctions imposed by the Trump administration are lifted, but it will take time to restore relationships with customers in Europe and Asia. In February, officials from the National Iranian Oil Company (NIOC) traveled to Seoul, the capital of South Korea, to hold talks with several refineries on the prospects for resuming oil deliveries.

The International Energy Agency (IEA) has increased its forecast for demand growth in 2022, stating that global demand for oil will increase by 3.2 million barrels per day this year to a record 100.6 million barrels per day. These forecasts show that there is a market for more oil and that this is an opportunity for producers to increase oil sales and export revenues.

Iran will clearly be a major beneficiary of this increase if it can resolve its problems with the United States over a return to the JCPOA.  Iran is asking the US government to remain committed to the deal in the event of a change of administration in Washington. But this is something that President Joe Biden, or any other US leader, cannot promise. Tehran must decide whether it is worthwhile to reach an agreement that could last only three years.

After the JCPOA went into implementation in 2016, Iran increased its oil production much faster than expected. Most analysts had predicted that Iran would increase its production by 500,000 barrels per day within a year after the lifting of sanctions, but in fact Iran reached this figure in less than four months, and by the end of the year had increased production by nearly one million barrels.

After sanctions were reimposed following the US withdrawal from the JCPOA in 2018, Iran stored oil in tankers. It is estimated that Iran has stored more than 85 million barrels of oil and gas condensate at sea. These supplies can be exported rapidly if sanctions are lifted.

The elimination of important oil exporting countries from the market has major ripple effects. Other producers often raise prices and pursue their own interests. Even if Iran returns to the market, not all problems of oil and gas will be solved, but an Iranian return can have a major psychological impact in helping the oil market move towards equilibrium. There is also the possibility that Iran can play a role in replacing Russian gas exports to Europe.

#### High oil prices and volatility cause nuclear war

King 8 [(Neil King, Global Economics Editor for the WSJ), Peak Oil: A Survey of Security Concerns, Center for a New American Security, September, http://www.cnas.org/files/documents/publications/CNAS\_Working%20Paper\_PeakOil\_King\_Sept2008.pdf] TDI

Many commentators in the United States and abroad have begun to wrestle with the question of whether soaring oil prices and market volatility could spark an outright oil war between major powers—possibly ignited not by China or Russia, but by the United States. In a particularly pointed speech on the topic in May, James Russell of the Naval Postgraduate School in California addressed what he called the increasing militarization of international energy security. “Energy security is now deemed so central to ‘national security’ that threats to the former are liable to be reflexively interpreted as threats to the latter,” he told a gathering at the James A. Baker Institute for Public Policy at Houston’s Rice University.6 The possibility that a large-scale war could break out over access to dwindling energy resources, he wrote, “is one of the most alarming prospects facing the current world system.”7 Mr. Russell figures among a growing pool of analysts who worry in particular about the psychological readiness of the United States to deal rationally with a sustained oil shock. Particularly troubling is the increasing perception within Congress that the financial side of the oil markets no longer functions rationally. It has either been taken over by speculators or is being manipulated, on the supply side, by producers who are holding back on pumping more oil in order to drive up the price. A breakdown in trust for the oil markets, these analysts fear, could spur calls for government action—even military intervention. “The perceptive chasm in the United States between new [oil] market realities and their impact on the global distribution of power will one day close,” Mr. Russell said. “And when it does, look out.”8 The World at Peak: Taking the Dim View For years, skeptics scoffed at predictions that the United States would hit its own domestic oil production peak by sometime in the late 1960s. With its oil fields pumping full out, the U.S. in 1969 was providing an astonishing 25 percent of the world’s oil supply—a role no other country has ever come close to matching. U.S. production then peaked in December 1970, and has fallen steadily ever since, a shift that has dramatically altered America’s own sense of vulnerability and reordered its military priorities. During World War II, when its allies found their own oil supplies cut off by the war, the United States stepped in and made up the difference. Today it is able to meet less than a third of its own needs. A similar peak in worldwide production would have far more sweeping consequences. It would, for one, spell the end of the world’s unparalleled economic boom over the last century. It would also dramatically reorder the wobbly balance of power between nations as energy-challenged industrialized countries turn their sights on the oil-rich nations of the Middle East and Africa. In a peak oil future, the small, flattened, globalized world that has awed recent commentators would become decidedly round an d very vast again. Oceans will reemerge as a hindrance to trade, instead of the conduit they have been for so long. An energy-born jolt to the world economy would leave no corner of the globe untouched. Unable to pay their own fuel bills, the tiny Marshall Islands this summer faced the possibility of going entirely without power. That is a reality that could sweep across many of the smallest and poorest countries in Africa, Asia, and Latin America, reversing many of the tentative gains in those regions and stirring deep social unrest. Large patches of the world rely almost entirely on diesel-powered generators for what skimpy electricity they now have. Those generators are the first to run empty as prices soar. A British parliamentary report released in June on “The Impact of Peak Oil on International Development” concluded that “the deepening energy crisis has the potential to make poverty a permanent state for a growing number of people, undoing the development efforts of a generation.”9 We are seeing some of the consequences already in Pakistan – a country of huge strategic importance, with its own stash of nuclear weapons – that is now in the grips of a severe energy crisis. By crippling the country’s economy, battering the stock market, and spurring mass protests, Pakistan’s power shortages could end up giving the country’s Islamic parties the leverage they have long needed to take power. It’s not hard to imagine similar scenarios playing out in dozens of other developing countries. Deepening economic unrest will put an enormous strain on the United Nations and other international aid agencies. Anyone who has ever visited a major UN relief hub knows that their fleets of Land Rovers, jumbo jets and prop planes have a military size thirst for fuel. Aid agency budgets will come under unprecedented pressure just as the need for international aid skyrockets and donor countries themselves feel pressed for cash. A peaking of oil supplies could also hasten the impact of global climate change by dramatically driving up the use of coal for power generation in much of the world. A weakened world economy would also put in jeopardy the massively expensive projects, such as carbon capture and storage, that many experts look to for a reduction in industrial emissions. So on top of the strains caused by scarce fossil fuels, the world may also have to grapple with the destabilizing effects of more rapid desertification, dwindling fisheries, and strained food supplies. An oil-constricted world will also stir perilous frictions between haves and have-nots. The vast majority of all the world’s known oil reserves is now in the hands of national oil companies, largely in countries with corrupt and autocratic governments. Many of these governments—Iran and Venezuela top the list—are now seen as antagonists of the United States. Tightened oil supplies will substantially boost these countries’ political leverage, but that enhanced power will carry its own peril. Playing the oil card when nations are scrambling for every barrel will be a far more serious matter that at any time in the past. The European continent could also undergo a profound shift as its needs—and sources of energy—diverge all the more from those of the United States. A conservation-oriented Europe (oil demand is on the decline in almost every EU country) will look all the more askance at what it sees as the gluttonous habits of the United States. At the same time, Europe’s governments may have little choice but to shy from any political confrontations with its principal energy supplier, Russia. An energy-restricted future will greatly enhance Russia’s clout within settings like the UN Security Council but also in its dealings with both Europe and China. Abundant oil and gas have fueled Russia’s return to power over the last decade, giving it renewed standing within the UN and increasing sway over European capitals. The peak oil threat is already sending shivers through the big developing countries of China and India, whose propulsive growth (and own internal stability) requires massive doses of energy. For Beijing, running low on fuel spells economic chaos and internal strife, which in turn spawns images of insurrection and a breaking up of the continent sized country. Slumping oil supplies will automatically pit the two largest energy consumers—the United States and China—against one another in competition over supplies in South America, West Africa, the Middle East, and Central Asia. China is already taking this competition very seriously. It doesn’t require much of a leap to imagine a Cold War-style scramble between Washington and Beijing—not for like-minded allies this time but simply for reliable and tested suppliers of oil. One region that offers promise and peril in almost equal measure is the Artic, which many in the oil industry consider the last big basin of untapped hydrocarbon riches. But the Artic remains an ungoverned ocean whose legal status couldn’t be less clear, especially so long as the United States continues to remain outside the international Law of the Sea Treaty. As the ices there recede, the risk increases that a scramble for assets in the Artic could turn nasty.

#### The plan definitely entails government action – if they contest the link, this becomes a voting issue:

#### ‘Resolved’ preceding a colon indicates a legislative forum.

Blanche Ellsworth 81, English professor at SFSU and M.A. in English from UC Berkeley, 1/1/1981, *English Simplified*, 4th Edition, cc

A colon is also used to separate 3. THE SALUTATION OF A BUSINESS LETTER FROM THE BODY, Dear Sir Dear Ms. Weiner NOTE: In an informal letter, a comma follows the salutation: Dear Mary, Dear Uncle Jack 4. PARTS OF TITLES, REFERENCES, AND NUMERALS. TITLE: Principles of Mathematics: An Introduction REFERENCE: Luke 3:4—13 NUMERALS: 8:15 PM 5. PLACE OF PUBLICATION FROM PUBLISHER Indianapolis: Bobbs-Merrill 6. THE WORD RESOLVED FROM THE STATEMENT OF THE RESOLUTION. Resolved: That this committee go on record as favoring new legislation.

#### Justice is a policy question

Merriam Webster ND [(Mesrriam Webster) “Justice” https://www.merriam-webster.com/dictionary/justice] BC

Essential Meaning of justice

1: the process or result of using laws to fairly judge and punish crimes and criminals

#### Vote neg for ground and topic ed – their interpretation justifies infinite non-inherent, private actor fiat affs, which zero politics and process debates – key check against new affs that specify forms of appropriation – outweighs because 1NC construction is the locus of clash – AND implementation is the core question of real-world multilateral agreements – c/a paradigms

## 1NC – Case

Yes 1ar theory but reasonability and drop the arg – disincentives going all in on theory too early which kills topic ed and checks 2ar judge psychology – 2ar collapse solves time tradeoff and competing interps allows the 1ar to blow up tiny, arbitrary shells – you should need to beat defense

### 1NC – Solvency

#### Presumption – private companies will circumvent the plan by saying that their space stations aren’t direct ISS replacements – especially if they don’t fiat government action, there’s zero enforcement mechanism

#### P3 fails – 1AC Smith says P3 has been in place for decades and done zero to defuse space tensions – inserted in yellow

. The successful model of public-private partnerships that has been used to transport both cargo and crew to the International Space station via the commercial purchase of launch services should be extended throughout cis-lunar space

#### No reason civilian P3 like space stations spills over into military domains – ask yourself why SpaceX-Nasa contracts to build Moon Landers haven’t radically transformed unrelated US military capabilities

#### No reason P3 reinvigorates multilat – 1AC Smith doesn’t say anything about bringing new governments to the table

#### Status quo solves P3 – NASA stays involved in private stations – inserted in yellow

Heilwell 12/03 [Rebecca, reporter for Open Sourced, covering emerging technologies, artificial intelligence, and logistics, “NASA gave Jeff Bezos money to build his office park in space”, Updated 12-03-2021 (I couldn’t find the original publishing date – this is the only one that showed up on the website – if you can please lmk), Vox Recode, https://www.vox.com/recode/2021/10/27/22747509/blue-origin-orbital-reef-office-park-bezos]//pranav

After more than two decades in orbit, NASA is preparing to retire the International Space Station. The habitable satellite only has permission to operate until 2024, and while it’s likely that the space station’s funding could be extended until 2028, NASA plans to decommission the ISS and find a replacement by the end of the decade. Cue Jeff Bezos. The billionaire’s spaceflight company, Blue Origin, has proposed a new commercial space station called Orbital Reef, which would provide a “mixed use business park” in space. This concept now has the support of NASA. The agency announced on Thursday that it would award Blue Origin and its partner companies $130 million to develop the space station, which NASA hopes will launch before 2030. With the help of several other companies, including Sierra Space and Boeing, Blue Origin plans to build a satellite that’s slightly smaller than the ISS and houses up to 10 people. The design includes desk space, computers, laboratories, a garden, and 3D printers. The goal, the company says, is to lease out office space to interested parties, including government agencies, researchers, tourism companies, and even movie production crews. Blue Origin’s plan is predicated on the idea that the end is coming for the ISS, which NASA is still figuring out how exactly to remove from orbit. While space stations have been helpful for space exploration, Blue Origin senior vice president Brent Sherwood argued in an October op-ed that private companies now have the capabilities to take over much of the burgeoning economy in low-Earth orbit, or LEO. Blue Origin is even building a space tug, a transport vehicle that moves cargo between different orbits, that could reportedly be used to salvage parts from the ISS and incorporate them into Orbital Reef’s systems. NASA doesn’t mind the corporate takeover of low-Earth orbit. The agency’s first space station, SkyLab, was only in orbit for a few months before NASA let the vehicle descend and decompose into the atmosphere. The space agency has been weighing defunding the ISS, which is full of aging hardware, for several years, and NASA’s investment in Orbital Reef is part of more than $400 million in funding that the agency has set aside to develop new, privately built and operated space stations through its Commercial LEO Destinations program. Eventually, NASA hopes that it can send its astronauts to these stations instead of paying to maintain the ISS.

### 1NC – Space Wars

#### 1NC Mason makes it clear that the aff is woefully inadequate – your internal link says states need large-scale, comprehensive arms control, not the aff’s one-shot agreement that doesn’t touch military technology – inserted in yellow

Could space be demilitarised? Not a chance, say the experts, who point out that – in contrast to the space exploration of the popular imagination, where it is still seen as a benign, trans-national endeavour – the entire history of space technology, from the Nazi V2 rocket to the recent Russian anti-satellite strike, has been driven by the military. Yet military activity in space could be made more orderly and transparent. The two most authoritative annual reports on military space capabilities are both reliant on open-source information and acknowledge that there are huge gaps in what even the experts know. We know how many satellites are up there: we do not know much about what weapons they might carry. This stands in contrast to the way the rival superpowers have managed both nuclear and conventional deterrence since the onset of the Cold War, with a series of treaties signed by Russia and the West to minimise or regulate aggression – for example, limiting the possession of nuclear weapons or the deployment of armoured vehicles. But there is almost no such framework for regulating the space arms race, or for achieving basic transparency about who’s doing what, still less for avoiding conflict. US and Russian space commanders convened in Vienna last July, agreeing to “enhance communications between the two countries about space-related operational issues in order to reduce the risks of misunderstanding, help prevent or manage space-related incidents, and prevent inadvertent escalation”. This did not stop Russia’s surprise launch of an anti-satellite missile on 15 November, nor did it avert the war of words that followed it. In truth the US-Russia space dialogue, a hangover from the Cold War, is a long way from the multilateral and comprehensive framework needed to bring China, India, Israel and Iran around the table. Lacking any formal international treaty beyond the anti-nuclear one, space has, in effect, become a demonstration zone for geopolitical realism. Those who have real power on Earth have untrammelled power in space. They will zap their own satellites at will, buzz the satellites of others, launch “projectiles” from existing satellites – as Russia allegedly did last year – and unleash spoofing attacks to disorient civilian shipping, all without acknowledgement or explanation. The emerging field of space war looks, in other words, exactly like terrestrial conflict would if there were no treaties and deployment patterns, or journalists and NGOs to observe them. This year the UK launched its own space command, with military chiefs acknowledging space as a domain of conflict co-equal with air, land, sea and cyber. Britain is late to the space war game and, after years of offshoring and outsourcing, lacks the expertise and resources to compete with the big four space powers: it doesn’t figure in either of the monitoring reports on space militarisation documenting significant offensive capabilities. As a medium-sized power, self-excluded from large parts of the EU’s space programmes, it is in Britain’s interest to promote order, multilateralism and transparency in space, and to resist its further militarisation. And, to an extent, haltingly, it has done so, promoting the first real debate at the UN over a new space treaty.

#### Space weapon deployment doesn’t cause an arms race or increase chance of war

Lopez 12 [LAURA DELGADO LO´ PEZ, Institute for Global Environmental Strategies, Arlington, Virginia. Astropolitics. "Predicting an Arms Race in Space: Problematic Assumptions for Space Arms Control." https://www.tandfonline.com/doi/full/10.1080/14777622.2012.647391]

The previous discussion demonstrates that although a globalized space arms race could follow U.S. deployment of space weapons, it is also plausible and more likely that it may not happen at all. As Mueller states: ‘‘In the end, most of the inevitability arguments are weak.’’62 The assumptions discussed here break the argument into a series of debatable maxims that other scholars have also considered. Hays, for instance, counters the inevitability argument by pointing out that previous ASAT tests did not have this purported destabilizing effect, to which we can add that even after the Chinese ASAT test, neither Russia nor the United States, who would be both capable and more politically likely to launch space weapons, moved forward in that direction.63 Although some may draw attention to the recent wake-up calls in order to underline a sense of urgency, one should also recall that when it seemed truly inevitable before, it did not happen either. In his detailed account of military space developments from 1945 to 1984, Paul Stares described how superpowers’ assessment of the value of space weapons shifted, with a ‘‘hiatus in testing’’ reflecting the attractiveness of satellites as military targets.64 In this changed landscape, Stares also assumed the inevitability argument, claiming that ‘‘the chances of space remaining a ‘sanctuary’ [absence of weapons] into the 21st century appear today to be remote.’’65 Perhaps the conditions are more conducive now, but the important point to be reiterated is that the outcome is not inevitable, and that any such prediction must be undertaken with caution. One of the most prominent theorists to propose an alternate picture and pair it with an aggressive pro-space weapons stance is Everett Dolman. In his Astropolitik theory, Dolman summarizes the steps that the United States must take to assume control of space, particularly through withdrawal from the current space regime.66 This move, he argues, would benefit not only the United States, but also the rest of the world, since having a democracy controlling space is a catalyst for peace.67 Elsewhere, he writes: ‘‘Only a liberal world hegemon would be able to practice the restraint necessary to maintain its preponderant balance of hegemonic power without resorting to an attempt at empire.’’68 Accordingly, he believes that this strategy would be ‘‘perceived correctly as an attempt at continuing U.S. hegemony,’’69 but that other countries, correctly assessing U.S. leadership in space, would not seek to deploy their own systems. Having the ability to prevent the stationing of foreign weapons systems in space, he writes, ‘‘makes the possibility of large-scale space war and a military space race less likely, not more.’’70 In fact, he says, ‘‘to suggest that the inevitable result is a space arms competition is the worst kind of mirror-imaging.’’71 Dolman argues that the weaponization of space by the United States would ‘‘decrease the likelihood of an arms race by shifting spending away from conventional weapons systems,’’ which would reduce U.S. capabilities in territorial occupation and would thus be perceived as less threatening to other countries.72

1. **No space war – insurmountable barriers and everyone has an interest in keeping space peaceful**

**Dobos 19** [(Bohumil Doboš, scholar at the Institute of Political Studies, Faculty of Social Sciences, Charles University in Prague, Czech Republic, and a coordinator of the Geopolitical Studies Research Centre) “Geopolitics of the Outer Space, Chapter 3: Outer Space as a Military-Diplomatic Field,” Pgs. 48-49] TDI

Despite the theorized potential for the achievement of the terrestrial dominance throughout the utilization of the ultimate high ground and the ease of destruction of space-based assets by the potential space weaponry, the utilization of space weapons is with current technology and no effective means to protect them far from fulfilling this potential (Steinberg 2012, p. 255). In current global international political and technological setting, the utility of space weapons is very limited, even if we accept that the ultimate high ground presents the potential to get a decisive tangible military advantage (which is unclear). This stands among the reasons for the lack of their utilization so far. Last but not the least, it must be pointed out that the states also develop passive defense systems designed to protect the satellites on orbit or critical capabilities they provide. These further decrease the utility of space weapons. These systems include larger maneuvering capacities, launching of decoys, preparation of spare satellites that are ready for launch in case of ASAT attack on its twin on orbit, or attempts to decrease the visibility of satellites using paint or materials less visible from radars (Moltz 2014, p. 31). Finally, we must look at the main obstacles of connection of the outer space and warfare. The first set of barriers is comprised of physical obstructions. As has been presented in the previous chapter, the outer space is very challenging domain to operate in. Environmental factors still present the largest threat to any space military capabilities if compared to any man-made threats (Rendleman 2013, p. 79). A following issue that hinders military operations in the outer space is the predictability of orbital movement. If the reconnaissance satellite's orbit is known, the terrestrial actor might attempt to hide some critical capabilities-an option that is countered by new surveillance techniques (spectrometers, etc.) (Norris 2010, p. 196)-but the hide-and-seek game is on. This same principle is, however, in place for any other space asset-any nation with basic tracking capabilities may quickly detect whether the military asset or weapon is located above its territory or on the other side of the planet and thus mitigate the possible strategic impact of space weapons not aiming at mass destruction. Another possibility is to attempt to destroy the weapon in orbit. Given the level of development for the ASAT technology, it seems that they will prevail over any possible weapon system for the time to come. Next issue, directly connected to the first one, is the utilization of weak physical protection of space objects that need to be as light as possible to reach the orbit and to be able to withstand harsh conditions of the domain. This means that their protection against ASAT weapons is very limited, and, whereas some avoidance techniques are being discussed, they are of limited use in case of ASAT attack. We can thus add to the issue of predictability also the issue of easy destructibility of space weapons and other military hardware (Dolman 2005, p. 40; Anantatmula 2013, p. 137; Steinberg 2012, p. 255). Even if the high ground was effectively achieved and other nations could not attack the space assets directly, there is still a need for communication with those assets from Earth. There are also ground facilities that support and control such weapons located on the surface. Electromagnetic communication with satellites might be jammed or hacked and the ground facilities infiltrated or destroyed thus rendering the possible space weapons useless (Klein 2006, p. 105; Rendleman 2013, p. 81). This issue might be overcome by the establishment of a base controlling these assets outside the Earth-on Moon or lunar orbit, at lunar L-points, etc.-but this perspective remains, for now, unrealistic. Furthermore, no contemporary actor will risk full space weaponization in the face of possible competition and the possibility of rendering the outer space useless. No actor is dominant enough to prevent others to challenge any possible attempts to dominate the domain by military means. To quote 2016 Stratfor analysis, "(a) war in space would be devastating to all, and preventing it, rather than finding ways to fight it, will likely remain the goal" (Larnrani 20 16). This stands true unless some space actor finds a utility in disrupting the arena for others.

#### MAD checks space escalation – nuclear response and debris

Bowen 18 [Bleddyn Bowen, Lecturer in International Relations at the University of Leicester. The Art of Space Deterrence. February 20, 2018. https://www.europeanleadershipnetwork.org/commentary/the-art-of-space-deterrence/]

Fourth, the ubiquity of space infrastructure and the fragility of the space environment may create a degree of existential deterrence. As space is so useful to modern economies and military forces, a large-scale disruption of space infrastructure may be so intuitively escalatory to decision-makers that there may be a natural caution against a wholesale assault on a state’s entire space capabilities because the consequences of doing so approach the mentalities of total war, or nuclear responses if a society begins tearing itself apart because of the collapse of optimised energy grids and just-in-time supply chains. In addition, the problem of space debris and the political-legal hurdles to conducting debris clean-up operations mean that even a handful of explosive events in space can render a region of Earth orbit unusable for everyone. This could caution a country like China from excessive kinetic intercept missions because its own military and economy is increasingly reliant on outer space, but perhaps not a country like North Korea which does not rely on space. The usefulness, sensitivity, and fragility of space may have some existential deterrent effect. China’s catastrophic anti-satellite weapons test in 2007 is a valuable lesson for all on the potentially devastating effect of kinetic warfare in orbit.

#### Zero risk of escalation from ASATs

**Pavur and Martinovic 19** [James Pavur and Ivan Martinovic, May 2019, "The Cyber-ASAT: On the Impact of Cyber Weapons in Outer Space," ResearchGate, 11th International Conference on Cyber Conflict: Silent Battle [https://www.researchgate.net/publication/334422193\_The\_Cyber-ASAT\_On\_the\_Impact\_of\_Cyber\_Weapons\_in\_Outer\_Space accessed 12/10/21](https://www.researchgate.net/publication/334422193_The_Cyber-ASAT_On_the_Impact_of_Cyber_Weapons_in_Outer_Space%20accessed%2012/10/21)]Adam

A. Limited Accessibility

Space is difficult. Over 60 years have passed since the first Sputnik launch and only nine countries (ten including the EU) have orbital launch capabilities. Moreover, a launch programme alone does not guarantee the resources and precision required to operate a meaningful ASAT capability. Given this, one possible reason why space wars have not broken out is simply because only the US has ever had the ability to fight one [21, p. 402], [22, pp. 419–420].

Although launch technology may become cheaper and easier, it is unclear to what extent these advances will be distributed among presently non-spacefaring nations. Limited access to orbit necessarily reduces the scenarios which could plausibly escalate to ASAT usage. Only major conflicts between the handful of states with ‘space club’ membership could be considered possible flashpoints. Even then, the fragility of an attacker’s own space assets creates de-escalatory pressures due to the deterrent effect of retaliation. Since the earliest days of the space race, dominant powers have recognized this dynamic and demonstrated an inclination towards de-escalatory space strategies [23].

B. Attributable Norms

There also exists a long-standing normative framework favouring the peaceful use of space. The effectiveness of this regime, centred around the Outer Space Treaty (OST), is highly contentious and many have pointed out its serious legal and political shortcomings [24]–[26]. Nevertheless, this status quo framework has somehow supported over six decades of relative peace in orbit.

Over these six decades, norms have become deeply ingrained into the way states describe and perceive space weaponization. This de facto codification was dramatically demonstrated in 2005 when the US found itself on the short end of a 160-1 UN vote after opposing a non-binding resolution on space weaponization. Although states have occasionally pushed the boundaries of these norms, this has typically occurred through incremental legal re-interpretation rather than outright opposition [27]. Even the most notable incidents, such as the 2007-2008 US and Chinese ASAT demonstrations, were couched in rhetoric from both the norm violators and defenders, depicting space as a peaceful global commons [27, p. 56]. Altogether, this suggests that states perceive real costs to breaking this normative tradition and may even moderate their behaviours accordingly.

One further factor supporting this norms regime is the high degree of attributability surrounding ASAT weapons. For kinetic ASAT technology, plausible deniability and stealth are essentially impossible. The literally explosive act of launching a rocket cannot evade detection and, if used offensively, retaliation. This imposes high diplomatic costs on ASAT usage and testing, particularly during peacetime.

C. Environmental Interdependence

A third stabilizing force relates to the orbital debris consequences of ASATs. China’s 2007 ASAT demonstration was the largest debris-generating event in history, as the targeted satellite dissipated into thousands of dangerous debris particles [28, p. 4]. Since debris particles are indiscriminate and unpredictable, they often threaten the attacker’s own space assets [22, p. 420]. This is compounded by Kessler syndrome, a phenomenon whereby orbital debris ‘breeds’ as large pieces of debris collide and disintegrate. As space debris remains in orbit for hundreds of years, the cascade effect of an ASAT attack can constrain the attacker’s long-term use of space [29, pp. 295– 296]. Any state with kinetic ASAT capabilities will likely also operate satellites of its own, and they are necessarily exposed to this collateral damage threat. Space debris thus acts as a strong strategic deterrent to ASAT usage.

#### “Bringing revisionist powers to the table” is useless – no one cares about international norms

Guzman 14 (Andrew, Assistant Professor of Law, Boalt Hall School of Law, University of California at Berkeley, “A COMPLIANCE BASED THEORY OF INTERNATIONAL LAW”)

All else equal, it is reasonable to expect that the compliance pull of international law will be the weakest when the stakes at issue are large. This is so because reputational effects have limited power. The likelihood that reputational effects are sufficient to ensure compliance grows smaller as the stakes grow larger. For example, the decision to use military force against another state is a serious one for any nation. Both the costs and benefits from such an action are typically very large. Because the stakes are so high, a country is unlikely to take an action that is otherwise contrary to its interests in order to preserve its reputation. The value of a reputation for compliance with international commitments is rarely large enough to affect the outcome when decisions are of such great magnitude.

Imagine, for example, that a country must decide whether or not to invade a neighbor’s territory in violation of international law. Invading promises to provide benefits in the form of greater territory, resources, and a reduction in the strategic threat from that neighbor. Label these benefits B. The cost of entering into the war includes loss of life, economic costs, social costs, and so on. Label these costs C. In addition, a decision to go to war would bring about a reputational loss in the international community. Label this cost R. The reputational consequences of going to war will only affect the decision if 0<B-C<R. That is, reputation is enough to prevent a war only if the country would otherwise have gone to war, but the decision to do so was sufficiently close that the reputational cost tips the balance in favor of peace. When the costs and benefits of a particular action are small, there is a good chance that the reputational consequences will tip the balance in favor of compliance with international law. Where the costs and benefits other than reputation are relatively large, however, it is less likely that reputational costs will be enough to alter the outcome.

The above discussion implicitly assumes that the reputational cost of violating an international obligation is fixed. Under this assumption, international law has less effect as the magnitudes at stake increase. Although convenient to demonstrate the point that the most important issues are less likely to be affected by international law, the assumption of a constant reputational cost for violations of such law is unrealistic. That being said, it remains true that reputation plays a more important role when the costs and benefits of a particular action are small. This is so for at least two reasons. First, there is an upper bound to the reputational cost that a country can suffer as a result of a decision. Even a complete loss of reputation has a limited cost for a country, and the reputation can be rebuilt over time. Furthermore, a single decision to violate international law is unlikely to cause a complete loss of reputational capital. Faced with a matter of great importance to a country, therefore, even the most severe reputational sanction is unlikely to affect national behavior.

Second, although the reputational cost of a violation of international law can vary based on the circumstances, it does not necessarily increase with the importance of the issue. For example, a country’s decision to violate an arms control agreement may impose reputational costs only in the area of arms control. Other states may recognize that military and national security issues are central to a country’s identity, and that treaties in that area are not particularly reliable. As a result, the violation of this sort of treaty may not call into question the willingness of the state to honor a treaty in another area, such as economic matters. Remember that violations of international law impose a reputational cost because they have a negative impact on other countries’ perception of a state’s willingness to accept short term costs in order to protect long term relationships and trust. When compliance with international law would impose extreme losses on a country, violation of that law may not have much impact on reputation. Such a violation sheds little light on the willingness of a state to violate agreements when the costs of compliance are smaller. That international law cannot easily impact outcomes in high stakes explains why analysis of international law during the Cold War leads to a pessimistic set of conclusions – many issues were perceived to involve high stakes.

These implications are significant for the study of international law. Most obviously, the theory predicts that international law will have the smallest impact in those areas of greatest importance to countries. This observation suggests that many of the most central topics in traditional international law scholarship are the most resistant to influence. Thus, for example, the laws of war, territorial limits (including territorial seas), neutrality, arms agreements, and military alliances are among the areas least likely to be affected by international law. Although agreements with large stakes can be stable, this will rarely be the result of the obligations imposed by international law. Adherence to such agreements is more likely to be the result of a game in which international law plays a small part, if any. The existence of an international legal obligation may be consistent with the outcome, but it is unlikely to alter behavior.