## 1NC

### 1NC---OFF

#### [States] ought to submit a proposal regarding the appropriation of low earth orbits by private mega constellations to the National Aeronautics and Space Administration for a National Environmental Policy Act Environmental Impact Assessment providing necessary resources, staffing and otherwise, for prioritization of this Assessment. States ought to implement the least environmentally damaging alternative identified in the Environmental Impact Statement.

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

**Haroun et al 21** [Fawaz Haroun, Shalom Ajibade, Philip Oladimeji, and John Kennedy Igbozurike, authors are all faculty of law for the University of Lagos in Nigeria. 03-19-2021, "Toward the Sustainability of Outer Space: Addressing the Issue of Space Debris," New Space, [https://www.liebertpub.com/doi/full/10.1089/space.2020.0047 accessed 2/16/22](https://www.liebertpub.com/doi/full/10.1089/space.2020.0047%20accessed%202/16/22)] Adam

The need for environmental impact assessment

The requirement of environmental impact assessment is contained in Principle 17 of the Rio Declaration. The principle provides:

Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

Before any activity is carried out that is likely to affect the environment, an assessment is to be carried out to know the exact nature of the effect it would have on the environment. The assessment allows the proper consideration of the environment while decisions are being made.[39](https://www.liebertpub.com/doi/full/10.1089/space.2020.0047#B39) EC Directive 85/337/EEC[40](https://www.liebertpub.com/doi/full/10.1089/space.2020.0047#B40) was the first international instrument to grant the principle recognition.

In the space context, any activity that is to be undertaken should necessarily require an environmental impact assessment, to know the exact effects of such an activity on outer space. After such assessments have been made, decisions should then be made in line with the assessments. In the case of the launching of spacecrafts into outer space, the trajectory of the spacecraft and the possible effects must be well considered. In addition, in a bid to prevent the increase of space debris, a disposal regime must be created for the spacecraft. Such a disposal regime shall allow the removal of the craft from outer space after it has served its purpose, or at least to have it moved to a safer part of outer space, to prevent the vicious increase of space debris.

#### Nasa uses existing NEPA guidelines in outer space – the counter plan extends that to private entities

**Nasa No Date** [Nasa and the National Environmental Policy Act, No Date, "NASA," Nasa, [https://www.nasa.gov/green/nepa/itm\_NEPAProgram.html accessed 2/16/22](https://www.nasa.gov/green/nepa/itm_NEPAProgram.html%20accessed%202/16/22)] Adam

NASA AND THE NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act (NEPA) requires all Federal agencies to integrate environmental values into their decision making processes by considering the environmental impacts of their proposed actions and the reasonable alternatives to those actions. NASA follows the NEPA regulations promulgated by the Council on Environmental Quality (CEQ) and has developed agency-specific NEPA policies and regulations to ensure compliance with the NEPA statute, implementing regulations, and related Executive Orders.

NASA’s NEPA Program is managed by the Environmental Management Division, NASA Headquarters, and NASA NEPA Managers who oversee its implementation at the NASA Centers and component facilities. The program ensures that NASA is proactive in meeting its Federal stewardship responsibilities while ensuring mission success and lowering environmental liability. Early implementation of NEPA in the planning stages of NASA programs and projects can be critical to lowering the risk to mission schedules and costs, as well as risks to the environment.

The Agency stands behind its NEPA Program, ensuring that missions are implemented with the least possible impact to the environment. NASA knows that every mission, even exploration of other planets, starts with protecting our home, planet Earth.

**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).”

#### The CP’s binding and substantive mandate reverses the Trump era reforms that circumvent the obligations of the NEPA --- the plan would exacerbate the legitimacy crisis

**Murphy 20** (Jim Murphy, Senior Counsel and Director of Legal Advocacy with the National Wildlife Federation, JD from Boston College Law School, “Undercutting Environmental Law’s Magna Carta,” Natural Resources & Environment, Vol. 35, Issue 1, Summer 2020, pp. 50-52)

Passed in 1969, the National Environmental Policy Act, or NEPA, is considered the Magna Carta of environmental laws. On its face, NEPA only sensibly requires that for "major Federal actions significantly affecting the quality of the human environment, a detailed statement" be prepared that, among other things, consider the environmental impact of the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, and alternatives to the proposed action. 42 U.S.C 4332. Other than this "hard look" at the environmental impacts of major federal actions, NEPA demands little. The agency need not choose the least environmentally damaging alternative, abandon, or change the project as a result of its "hard look." Yet, the statute has been revolutionary in its vision and impact. After decades of relatively unchecked pollution, its purpose was "[t]o declare a national policy which will encourage productive and enjoyable harmony between man and his environment to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man." 42 U.S.C. 4321. NEPA represented a fundamental value shift; under NEPA, the costs and impacts of our actions on the environment no longer would be ignored in decision-making processes. Early on, courts made clear that the requirements of NEPA must be carried out "to the fullest extent possible" (see, e.g., Calvert Cliffs' Coordinating Comm., Inc. v. U. S. Atomic Energy Commission, 449 F.2d 1109, 1114 (D.C. Cir. 1971)), and that Congress was concerned with "all potential environmental effects that affect the quality of the human environment" (Hiram Clarke Civic Club v. Lynn, 476 F.2d 421, 427 (5th Cir. 1973)), including cumulative effects (Hanley v. Kleindienst, 471 F.2d 823, 831 (2d Cir. 1972), cert denied, 412 U.S. 908 (1973)), and indirect effects. Minn. Public Interest Research Group v. Butz, 498 F.2d 1314, 1322 (8th Cir. 1974). Since 1978, the mandates of NEPA have been implemented through Council of Environmental Quality (CEQ) regulations and a substantial body of federal case law that preceded and has evolved along with those regulations, as well as agency specific rules and guidance. During this time, NEPA has worked to help move federal projects in a direction that has resulted in environmental benefits and wiser use of taxpayer dollars. Now, the Trump administration has proposed sweeping changes, claiming that "the outdated regulations have slowed and impeded the development of needed infrastructure in communities across the nation." Fact Sheet: CEQ's Proposal to Modernize its NEPA Implementing Regulations. These changes would turn this paradigm shifting statute into a mere check-the-box exercise, **effectively gutting it.** The existing CEQ NEPA regulations require all agencies to perform an environmental assessment for major federal action where the agency must determine whether to perform an environmental impact statement (EIS) or issue a finding of no significant impact (FONSI). 40 C.F.R. parts 1500-08. These regulations, inter alia, require that the agency broadly consider the direct, indirect, and cumulative impacts, as well as all reasonable alternatives of a major federal action. They also ensure meaningful opportunities to engage the public and other federal, state, tribal and local agencies in the NEPA process. The regulations further allow for many actions to escape individual review altogether through the use of categorical exclusions. The environmental benefits of these regulations have played out in the following three water resources projects: (1) preparation of a supplemental environmental impact statement led the U.S. Army Corps of Engineers (Corps) to save more than 4,300 acres of wetlands that would have been destroyed had the Corps followed its original plan for raising levees along the Mississippi River; (2) environmental review of the proposed Bolinas Lagoon dredging project in California demonstrated that the Corps' proposal would cause extensive harm to one of the most pristine tidal lagoons in California and was not necessary, saving taxpayers $133 million; and (3) the environmental review process exposed the devastating environmental impacts of the Yazoo Backwater Pumping Plant project in Mississippi, prompting the George W Bush administration to veto the project. This saved taxpayers more than $220 million and protected 200,000 acres of wetlands-an area the size of all five boroughs of New York City. And the regulations have had similar beneficial effects in other projects including highways, pipelines, airports, and other federal actions. Contrary to CEQ's claim that the existing regulations pose a roadblock to economic growth, the vast majority of NEPA reviews are carried out in a very short time frame, in large part because of the flexible structure of the current rules. According to the Government Accounting Office, approximately 95 percent of all projects subject to NEPA are carried out through the categorical exclusion process, another four percent of projects are reviewed through environmental assessments, and less than one percent of projects are reviewed using the more comprehensive EIS. Government Accountability Office, National Environmental Policy Act: Little Information Exists on NEPA Analyses, GAO-14-370 (Apr. 2014) at 8. The Congressional Research Service thus has concluded that "there is little data available to demonstrate that NEPA currently plays a significant role in delaying federal actions." Congressional Research Service, The National Environmental Policy Act (NEPA): Background and Implementation, RL33152 (Jan. 10, 2011) at 26. Despite this, the Trump administration has proposed a rule that would **severely hobble NEPA.** Described below are some of the most significant ways in which the proposed rule would weaken NEPA. Eliminate NEPA review for many projects. The proposed rule excludes many projects from NEPA review. It changes the definition of "major federal action" to allow for projects with significant impacts to escape review under certain circumstances. It also allows agencies to exempt a project from NEPA review by determining that an analysis under a different statute could serve the same purpose, even if that analysis is not as searching or the agency lacks environmental expertise. Ignore many impacts. The proposed rule severely limits the types of impacts examined when a NEPA review is carried out. It boldly states that analysis of cumulative effects "is not required" (Proposed 40 C.F. R. 1508.1(g)(2), 85 Fed. Reg. 1684, 1729 (Jan. 10, 2020)), thus likely eliminating review of a project's role in exacerbating climate change and many other types of harm to the environment, public safety and health. Agencies also could ignore many types of severe impacts based on the proposed rule's elimination of all references to "indirect" effects, and its directive to review only impacts with a "reasonably close causal relationship" to the proposed action. These changes would **encourage agencies to ignore long-term impacts** such as toxic pollution from gold or copper mines, the risks of new levees diverting floodwaters onto other communities, and the loss of wetlands caused by reservoir management practices that starve a river of the water flows needed to sustain those wetlands. Significantly weaken review of alternatives. The proposed rule significantly weakens the assessment of alternatives during a NEPA review, **dramatically undermining NEPAs** fundamental **purpose** of exploring less environmentally harmful approaches to achieving the project purpose. The proposed rule eliminates the requirements to "rigorously explore and objectively evaluate all reasonable alternatives" and to consider reasonable alternatives not within the jurisdiction of the lead agency. It instead directs a much less extensive review, requiring only that agencies "evaluate reasonable alternatives to the proposed action." Proposed 40 C.F.R. 1502.14, 85 Fed. Reg. at 1721. These changes, along with the proposed changes to the "purpose and need statement" which gives undue weight to the applicants said purpose, virtually guarantee that many cost-saving, reasonable alternatives with fewer adverse environmental impacts will not be considered. Allow agencies to ignore critical public input. The proposed rule would let agencies **ignore public comments** that they deem are not "specific" enough or do not include references to data sources or scientific methodologies. It improperly places the burden on the public to list any and all possible impacts of a proposed project, to provide specific language changes, and to "explain why an issue raised is significant" to the consideration of impacts to the environment, the economy, employment and potential alternatives. Proposed 40 C.F.R. 1503.3(a), 85 Fed. Reg. at 1722. Comments most likely to be ignored as a result of this change include those from the general public, those from frontline communities without resources to fund technical reviews, and those that rely on traditional knowledge rather than technical data. Eliminates conflict of interest safeguards. The proposed rule eliminates longstanding safeguards designed to protect the independence and **integrity of environmental reviews.** Under the current regulations, federal agencies prepare NEPA reviews, and agencies can only hire consultants to assist in a NEPA review after obtaining disclosures of any conflicts of interest or financial stakes the reviewing consultant may have in the project. The proposed rule, however, lets companies proposing a project prepare their own NEPA reviews - despite their clear interest in obtaining project approval. Agencies also could hire contractors without obtaining a conflict of interest disclosure. These extensive changes would **transform NEPA**'s action-forcing mechanisms **into** little more than **a paperwork "check-the-box" exercise** that **ignores major impacts** and **stymies public input.** Today, as we face unprecedented challenges of a global public health crisis and the impacts of climate change on our daily lives, the need to incorporate thoughtful consideration of how proposed projects impact our environment is more important than ever. We should be strengthening the NEPA decision-making process to better ensure that the full costs of our actions on the environment are known, not seeking to hide these costs. If we ignore these costs, one way or another, they will come due.

#### Adherence to NEPA solves global ecological sustainability

**Caldwell 98** (Lynton K. Caldwell, Professor Emeritus of Political Science & Public and Environmental Affairs at Indiana University, MA in History and Government from Harvard University, PhD in Political Science from the University of Chicago, “Beyond NEPA: Future Significance of the National Environmental Policy Act,” 22 Harv. Envtl. L. Rev. 203, Lexis)

\*\*\*note --- edited for gendered language & grammar, marked in brackets

A distinguishing feature of any society is its prevailing assumptions about its relationship to the Earth. The history of cultures--especially of religions--reveals a great number of cosmologies, the perceived relationships of people to their planetary environment. Today the **survival** of living species may depend first, upon the degree to which [hu]mankind's concept of its environmental situation corresponds to biophysical realities and second, upon what humans value, and how these values are expressed in relation to these realities. Archeology has recorded the failure of societies that have misconceived the requirements for environmental sustainability. During the earlier centuries of human history the impact of society on its environment was relatively light and local. If an environment, for whatever reason, became unsustainable, people could often move on to new lands, often displacing or destroying the original inhabitants. When degradation of the environment was slow or scarcely perceptible, the consequences of its decline often were not felt until they were irreversible. Where human numbers were small relative to space, migration permitted impaired environments to recover, at least partially. But many areas of the Earth have never recovered from the degradation of centuries-long misuse, and still more are headed toward impoverishment. In a world filled with people and settlements, the option of migration is increasingly unavailable. Recognition of narrowing environmental options has led in recent decades to conservation practices assisted by the growth of science, to the comparative measurement of environmental change, and to forecasts of the probable consequences of present trends. The conservation of natural resources movement has had a paradoxical effect upon human perceptions of environmental realities. While the conservation movement contributed both to the emergence of applied ecology and public environmental concern, many conservationists rejected environmentalism (often called preservationism) as uneconomical, unrealistic and anti-social. Economy and efficiency in the wise use of resources has been the essence of "conservation," which sees the environment as infinitely manageable--capable of sustained productivity under the guidance of experts knowledgeable of science. In this respect, conservationism [\*236] is fundamentally consistent with the Western worldview, especially that which prevailed during the era of U.S. Progressivism in the late nineteenth and early twentieth centuries. n82 Environmentalism emerged in the latter half of the twentieth century from a convergence of changing perceptions of the human condition in fields as diverse as ecology, public health, demography, climatology, cosmology, and ethics. When its true dimensions, assumptions, and expectations are understood, environmentalism is, as Robert Nisbet observed, revolutionary. n83 Its effect upon human society is comparable to the changed views of reality inherent in the Copernican cosmic revolution in the seventeenth century and the Darwinian evolution revolution in the nineteenth century. To some, this conclusion may seem to be an exaggerated estimate of the influence of environmentalism and its future prospects. Following initial successes of environmental protection efforts, there has been in many countries (including the United States) an anti-government reaction that has sometimes been violent. n84 It is doubtful that in the long run the "green backlash" will prevail. Its angry proponents are chiefly natural resources industries, land developers and speculators, libertarians, and their allies in public office. Still the counter-intuitive behavior of social systems makes any forecast of the future uncertain. Nevertheless there are ascertainable, measurable trends in today's world that strongly suggest the impending negative impact of powerful coercive environmental events upon human society in the twenty-first century. Adherence to principles like those expressed in NEPA may become more a matter of necessity than of voluntary choice. The way in which people and their governments respond to the prospect of these coercions will **shape the future of the world.** The timing of effective response is equally important. The longer the delay, the more [\*237] difficult the task and the greater the possibility of irremediable damage. Because the future of the world in the twenty-first century cannot be foreseen, we can only conjecture the true location of NEPA on the trajectory of history. I offer the following assessment of the significance of NEPA, fully realizing that, at least in the short run, the world is capable of unpredictable turns. NEPA is most fully understood as a national policy for henceforward into the future. "Environment" may be understood as a surrogate term for a concept more comprehensive than is usually appreciated. Our language tends to lag behind new insights. Among our most persistent and pervasive misconceptions is the artificial dichotomy of economy/ecology. Their true relationship might be suggested by the time-space concept in physics. The concepts of ecology and economy are not the same--they are distinguishable, but, paradoxically, also inseparable.n85 In mundane reality there are obvious conflicts within and between the "domains" of economy and the environment. Yet both these aspects of our world are in actuality inextricable--separable by cultural convention and for analytic purposes. In reality they should have a common inclusive name. Achievement of a national policy for the environment requires awareness of the ecology/economy interrelationship, of the direction toward which the world appears to be moving, and a growth of consensus on the kind of future that is desirable and sustainable. A national policy for the future of the environment cannot be achieved in isolation from other major societal issues. Issues of population, material growth, property rights and obligations, and basic social equities involve choices which many people would prefer not to make. But the world today is not a "new age of Aquarius," free from ultimate accountability to nature, if not to humanity. Regardless of what we may deny or resist, our society will in one way or another be compelled to accommodate its behaviors [\*238] to the inexorable workings of the world. But **apocalypse** need not be a preordained outcome for a society that marshals and moves its moral, material, intellectual, and organizational capabilities toward attainment of a preferred and sustainable future. IX. AN AGENDA FOR THE FUTURE The National Environmental Policy Act may be seen as a charter and agenda to guide this nation toward rational strategies for coping with the critical environmental problems that are present and growing. The United States has the material and intellectual capabilities for setting a[n] non-hegemonic **example for the world.** Whether it can generate a collective moral purpose to do so remains uncertain. As individuals, there is little that people can do to reverse destructive socio-ecological trends. Voluntary local initiatives may help where there is a sense of community purpose. But our fundamental environmental problems transcend manmade boundaries and require solutions commensurate with the problems, which are increasingly seen to be transnational, even global. The 1968 Biosphere Conference and the 1972 and 1992 U.N. conferences on the environment testify to an international recognition of [hu]mankind's environmental predicament. Yet in a world governed by nations, national action is necessary, not only for each nation, but for **international cooperation.** Action on any major social issue requires a **credible** collective purpose, catalytic **leadership,** and popular receptivity. There is strong evidence that the last of these--public support for environmental action--already exists. A goal-directed agenda is necessary to focus and activate social effort, for without such a codification of purpose, there can be no concerted action. Translation of social purpose into action is a function of leadership. To cope with the environmental predicament of [hu]mankind, leadership must be national and participatory, involving all sectors of society, but with an indispensable responsibility in government which is the affirming and coordinative institution for nationwide and international effort. For the United States, NEPA provides a comprehensive agenda for the environmental future. NEPA creates a foundation for a **unifying national effort** and **legitimizes** its goals and principles as [\*239] national policy. Beyond NEPA, specific, targeted action programs are needed to achieve its intent. NEPA may be regarded, in effect, as a constitution for the environment--principles to guide the nation toward an enhanced quality of life and an enduring environmental future.

#### Reject 1AR theory-

#### A] 7-6 time skew means it’s endlessly aff biased

#### B] I don’t have a 3nr which allows for endless extrapolation

#### C] 1AR theory is skewed to the aff because they have a 2ar judge psychology warrant.

#### Infinite abuse claims are wrong-

#### A] Spikes solve-you can just preempt paradigms in the 1AC

#### B] Functional limits- 1nc is only 7 minutes long

#### No new 1ar theory paradigm issues

#### 1] New 1ar paradigms moot 1NC offense

#### 2] Introducing them in the aff allows for rigorous testing and in depth clash

#### Condo is good proving a CP is bad doesn’t prove the plan is good, a logical policy maker can always choose not to act.

#### Logic outweighs – it’s the basis of all rational arguments.

## Case

### 1NC---AT: Debris

#### 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.

#### Interdependence checks space war.

**Hall 15** [Luke Penn-Hall 15, Analyst at The Cipher Brief, M.A. from the Johns Hopkins School for Advanced International Studies, B.A. in International Relations and Religious Studies from Claremont McKenna College, “5 Reasons “Space War” Isn’t As Scary As It Sounds”, The Cipher Brief, 8/18/2015, <https://www.thecipherbrief.com/article/5-reasons-%E2%80%9Cspace-war%E2%80%9D-isn%E2%80%99t-scary-it-sounds>] recut Adam

* If you are also reading the Pavur evidence then unhighlight the debris stuff

The U.S. depends heavily on military and commercial satellites. If a less satellite-dependent opponent launched an anti-satellite (ASAT) attack, it would have far greater impact on the U.S. than the attacker. However, it’s not as simple as that – for the following reasons:

1. An ASAT attack would likely be part of a larger, terrestrial attack. An attack on space assets would be no different than an attack on territory or other assets on earth. This means that no space war would stay limited to space. An ASAT campaign would be part of a larger conventional military conflict that would play out on earth.

2. Every country with ASAT capabilities also needs satellites. While the United States is the most dependent on military satellites, most other countries need satellites to participate in the global economy. All countries that have the technical ability to play in this space – the U.S., Russia, China and India - also have a vested interest in preventing the militarization of space and protecting their own satellites. If any of those countries were to attack U.S. satellites, it would likely hurt them far more than it would hurt the United States.

3. Destruction of satellites could create a damaging chain reaction. Scientists warn that the violent destruction of satellites could result in an effect called an ablation cascade. High-velocity debris from a destroyed satellite could crash into other satellites and create more high-velocity debris. If an ablation cascade were to occur, it could render certain orbital levels completely unusable for centuries.

4. Any country that threatened access to space would threaten the global economy. Even if a full-blown ablation cascade didn’t occur, an ASAT campaign would cause debris, making operating in space more hazardous. The global economy relies on satellites and any disruption of operations would be met with worldwide disapproval and severe economic ramifications.

5. International Prohibits the Use of ASAT Weapons. Several international treaties expressly prohibit signatory nations from attacking other countries’ space assets. It is generally accepted that space should be treated as a global common area, rather than a military domain.

While it remains necessary for military planners to create contingency plans for a, space war it is a highly unlikely scenario. All involved parties are incentivized against attacking. However, if a space war did occur, it would be part of a larger conflict on Earth. Those concerned about the potential for war in space should be more concerned about the potential for war, period.

#### Deterrence solves.

**Evanoff 19** [Kyle Evanoff, Kyle is a research associate in international economics and U.S. foreign policy at the Council on Foreign Relations “Big Bangs, Red Herrings, and the Dilemmas of Space Security”, Council on Foreign Relations, 6/27/2019, <https://www.cfr.org/blog/big-bangs-red-herrings-and-dilemmas-space-security> accessed 12/11/21] Adam

More important, U.S. policymakers should avoid making decisions on the basis of a possible, though highly improbable, space Pearl Harbor. They should recognize that latent counterspace capabilities—as exemplified in 2008’s Operation Burnt Frost, which saw the United States repurpose a ballistic missile interceptor to destroy a satellite—are more than sufficient to deter adversaries from launching a major surprise attack in almost all scenarios, especially in light of the aforementioned deep interdependence in the space domain. Adding to the deterrence effect are uncertain offensive cyber capabilities. The United States continues to launch incursions into geopolitical competitors’ critical systems, such as the Russian power grid, and has demonstrated a willingness to employ cyberattacks in the wake of offline incidents, as it did after Iran shot down a U.S. drone last week. Unlike in the nuclear arena, where anything short of the prospect of nuclear retaliation holds limited dissuasive power, space deterrence can stem from military capabilities in various domains. For this reason, an attack on a U.S. satellite could elicit any number of responses. The potential for cross-domain retaliation, combined with the high strategic value of space assets, means that any adversary risks extreme escalation in launching a major assault on American space architectures. Again, well-conceived diplomatic efforts are useful in averting such scenarios altogether.

#### Space systems are distributed and resilient---the U.S. knows that and won’t jump straight to the nuclear rung of the escalation ladder

Zack Cooper 18, Senior Fellow for Asian Security at the Center for Strategic and International Studies, and Thomas G. Roberts, Research Assistant and Program Coordinator for the Aerospace Security Project at CSIS, “DETERRENCE IN THE LAST SANCTUARY”, War on the Rocks, 1/2/2018, https://warontherocks.com/2018/01/deterrence-last-sanctuary/

Until recently, resilience in space was largely an afterthought. It was assumed that a conflict in space would likely lead to or precede a major nuclear exchange. Therefore, the focus was on cost-effective architectures that maximized satellite capabilities, often at the cost of resilience. Recently, however, some have hoped that new architectures could enhance resilience and prevent critical military operations from being significantly impeded in an attack. Although resilience can be expensive, American investments in smaller satellites and more distributed space architectures could minimize adversary incentives to carry out first strikes in space.

In the late 20th century, minor escalations against space systems were treated as major events, since they typically threatened the superpowers’ nuclear architectures. Today, the proliferation of counter-space capabilities and the wide array of possible types of attacks means that most attacks against U.S. space systems are unlikely to warrant a nuclear response. It is critical that policymakers understand the likely break points in any conflict involving space systems. Strategists should explore whether the characteristics of different types of attacks against space systems create different thresholds, paying particular attention to attribution, reversibility, the defender’s awareness of an attack, the attacker’s ability to assess an attack’s effectiveness, and the risks of collateral damage (e.g., orbital debris). Competitors may attempt to use non-kinetic weapons and reversible actions to stay below the threshold that would trigger a strong U.S. response. The 2017 National Security Strategy warns:

Any harmful interference with or an attack upon critical components of our space architecture that directly affects this vital U.S. interest will be met with a deliberate response at a time, place, manner, and domain of our choosing.

In order to fulfill this promise, the United States will want to ensure that it has capabilities to respond both above and below various thresholds to ensure a full-spectrum of deterrence options for the full range of potential actors.

### 1NC---Telehealth Bad

#### Concede the Plan saves Tele-Health Satellites – that’s Bad:

#### First, Defense:

#### 1] 1AC Krishnamurthy isn’t grounded in ANY data for solvency – it asserts here’s what it could do but never says those things actually work. Hold the line to 1AR extrapolation since the card isn’t conclusive AND no new 1AR cards for 1AC arguments since it incentivizes infinite sand-bagging and deters all-in 1NC choices for substantive vertical debates since we make those choices on the 1AC, not the 1AR.

#### 2] Telemedicine is worse for care - overstretches doctors, causes misdiagnoses, and doctor miscommunications increase

Dragovic 17, (Telemedicine: Virtual Doctors Pose Real Medical Malpractice Risks, member of Sommers Schwartz's Personal Injury and Medical Malpractice Groups, https://www.sommerspc.com/blog/2017/01/telemedicine-virtual-doctors-pose-real-medical-malpractice-risks/)

But there are risks too. There is a doctor shortage in this country that is only expected to get much worse in the next decade. If busy doctors become too dependent on technology to help them work through their jam-packed schedules, the standard of care may be compromised.In some cases, there’s no substitute for physical interaction between patient and physician. If an orthopedist doesn’t touch a patient’s swollen ankle before diagnosing a sprain, he might miss a subtle fracture he would have felt during an in-person visit. Without the rapport that comes with face-to-face contact, a doctor might not be able to detect a patient’s spiraling depression. Because telemedicine is dependent upon the use of technology, it also comes with the added risk of equipment malfunction. If a doctor can’t accurately see a patient’s skin tone via his videoconferencing equipment, for example, he might miss an important diagnostic clue for detecting jaundice or some other serious condition. An even more frightening scenario could occur if a remote heart rate or blood sugar monitor is not accurately transmitting a patient’s data to his doctor. Practicing medicine remotely could also lead to increased miscommunication among the treating physicians. For example, there has already been at least one reported case in which a radiologist was sent an X-ray for a remote patient, but failed to review it in a timely manner because it wasn’t made clear that the case was an emergency.

#### Studies prove Mis-diagnoses likely – takes out their Predictions and Vaccinations warrants since they’re unable to actually make them correct.

Addady 16 Michal Addady is a reporter for Fortune Magazine, May 16, 2016 A New Study of Telemedicine Services Finds Bad Diagnoses, <http://fortune.com/2016/05/16/telemedicine-services/>

A study recently published in JAMA Dermatology looked into telemedicine companies, and the Wall Street Journal reports that researchers found many physicians failed to ask important questions, and subsequently misdiagnosed and mistreated certain conditions. The study covered 16 companies—nine of which were specific to dermatology while the remaining seven were general medicine websites—totaling in 62 visits. According to the American Telemedicine Association (ATA), there are 200 networks and 3,500 service sites in the U.S., and the group is expecting more than 1 million online consultations this year. Researchers created six scenarios, including detailed medical histories, and used stock photos to pose as patients. Of 62 visits, 48 patients were diagnosed and 31 were prescribed medication. Only 10 were warned about potential risks and side effects, 13 were asked about their primary care physician, and six were offered to have records of the consultation sent to their doctor, according to the study. Diagnoses tended to be correct when a condition was identifiable based on photos alone. Clinicians were less successful when it was a more complex condition that required additional information. “The services failed to ask simple, relevant questions of patients about their symptoms, leading them to repeatedly miss important diagnoses,” dermatologist and lead author Jack Resneck told the Journal. The study admitted it couldn’t say whether visits would have been more successful had patients seen a doctor in person, though Resneck said, “The usual give-and-take that occurs between a physician and a patient wasn’t happening.”

#### 3] Randomized control trials prove there’s no benefit

Fraiche et al 17, (From the a Department of Medicine, Duke University Medical Center, Durham, North Carolina; and the b Duke-Margolis Center for Health Policy, Durham, North Carolina. Dr. Eapen consults and serves on the advisory boards for Novartis, Amgen, Cytokinetics, Janssen, Medtronic, Myokardia, SHL Telemedicine, and Equity–Pattern Health Technologies. Dr. McClellan is a board member for Johnson & Johnson; and serves on the advisory board for American Well, Moving Beyond the Walls of the Clinic Opportunities and Challenges to the Future of Telehealth in Heart Failure, <https://www.biofourmis.com/wp-content/uploads/Moving-Beyond-the-Walls-of-the-Clinic.pdf>)

HF=Heart Failure

In contrast to this meta-analysis, larger, highquality randomized clinical trials have recently shown no benefit to noninvasive approaches to telehealth in HF. The Tele-HF (Telemonitoring to Improve Heart Failure Outcomes) trial randomized 1,653 recently hospitalized patients with HF to a telephone-based interactive voice-response system that collected daily information about symptoms and weight that was reviewed by the patients’ clinicians (6). There was no significant difference between the intervention and usual-care groups with respect to readmission for any reason or death of any cause within 180 days after enrollment. Of note, adherence to daily calls to the interactive voice-response system had dropped to 55.1% by the end of the study.

#### 4] Telehealth is useless during pandemics – three warrants

Louissaint 17, (Ph.D - Interim Executive Director of Healthcare Ready, Telehealth's Applications for Preparedness and Response, https://www.healthcareready.org/system/cms/files/1578/files/original/HCR\_Telehealth\_White\_Paper\_SCREEN.pdf)

Challenges In addition to the challenges and barriers summarized earlier, applying and integrating telehealth into public health emergency and disease outbreak response efforts faces a distinct set of challenges. Primary challenges include: Adapting Technology: Healthcare and public health experts point out that state and local agencies are likely to invest in systems that will be used in normal operations over systems more oriented for response. Therefore, in order for telehealth to be incorporated into preparedness and response it will likely have to be done by engaging systems already in place and possibly not designed with response efforts in mind. System Flexibility: Demands on telehealth systems are likely to surge during an outbreak or public health emergency. Systems must be adaptable and able to scale up for emergencies and built with an all hazards approach in mind. For example, RPM systems may be engaged and relied upon much more heavily during an outbreak and systems must be able to accommodate this surge in data transfer. Privacy and Security: The 2009 report by ASPR in response to PAHPA points out that privacy laws regarding personally identifiable health information differ by state and could impact data sharing through telehealth in a multi-state event. As it applies to mhealth, health departments have also expressed uncertainty at the ability to use mHealth for messaging.64 Public health departments may face a unique set of challenges in implementing telehealth programs for preparedness and response, including Funding: Telehealth initiatives frequently require funding both for technology and program design, implementation, and evaluation. Public health programs are often funded by grants from both public and private organizations that are typically tied to a specific use. This can lead to difficulties in sustainably funding telehealth programs. Competing Priorities: Public health departments are often occupied dealing with “the disease or disaster of the day.” This can leave limited resources and staff available to identify and implement new programs such as telehealth initiatives.

#### Second, Offense:

#### 1] Turn – it causes waves of litigation

OP 15, (Oncology Practice - Medical News, Telemedicine poses novel legal risks for doctors, www.mdedge.com/oncologypractice/article/103362/health-policy/telemedicine-poses-novel-legal-risks-doctors/page/0/1)

Physicians who practice telemedicine have a lot to consider, including state laws, payment issues, and licensing regulations. But one overlooked area may pose the greatest risk of all: medical liability.As the practice of telemedicine continues to grow, so do the legal risks associated with virtual care, said Dr. Joseph P. McMenamin, an emergency physician and health law defense attorney based in Richmond, Va. “With good reason, there is a concern that as this form of care expands, claims against physicians will increase,” Dr. McMenamin said. “That’s almost inevitable, given how our society looks at litigation and how willing we are to sue our doctors. If you’re a plaintiffs’ attorney, you might be attracted to cases of this kind – partly because jurors may fear the unknown, and they may view [telemedicine] with some concern and suspicion.” Telemedicine can fuel a wide spectrum of legal dangers, including malpractice, product liability claims, data exposure, and credentialing risks. Making matters more complicated: No uniform standard of care exists for telemedicine when it comes to medical malpractice, said René Y. Quashie, a Washington health law attorney who specializes in telemedicine and e-health practices. “There are a lot of unanswered questions, including the prevailing standard of care,” Mr. Quashie explained. “Can we use the standard of care that we use for services provided in person for telehealth consults? Informed consent – does that process need to change? There are a lot of unanswered issues, which can only be resolved after a number of cases” are decided in the courts. Physicians who practice telemedicine should consider legal risks associated with patient and staff privacy, inaccuracies in self-reporting, and symptoms that are more accurately diagnosed in person, said Richard F. Cahill, vice president and associate general counsel for the Doctors Company, a national medical liability insurer. During 2007-2014, the Doctors Company had 11 claims that closed related to telemedicine, according to data provided by Mr. Cahill. The majority of claims resulted from the remote reading of x-rays and other films by health providers, usually from home, and the remote reading of fetal monitor strips by physicians when outside of the hospital. Two of the cases were associated with attempts to diagnose a patient via telemedicine. Of the claims, six were diagnosis related, two alleged delay in treatment, two were related to improper performance of treatment, and one was associated with failure to order medication. “The challenges of remote communications made it difficult to formulate the correct diagnosis due to limitations of radiology resolution, delayed readings of radiographs, or limits on fetal monitor strips,” said Darrell Ranum, vice president of patient safety and risk management for the Doctors Company. “Delays in treatment were closely related to delayed diagnosis. Radiologists did not receive a request for an interpretation, or they did not know that it was an emergency, so they did not provide a rapid turnaround report.” While telemedicine claims have been low so far, a rise in the number of patient contacts, regardless of modality, may increase the risk of adverse consequences, Mr. Cahill cautioned. “Because telemedicine is relatively new, and it takes 3-4 years for a claim to work its way through the system, we may see more cases in the future in which telemedicine is a factor,” he predicted. Other lawsuits could arise from claims that physicians had access to telemedicine but failed to use the technology to properly treat a patient, Mr. Quashie said. Product liability claims also pose a threat, added Dr. McMenamin, who is part of the Legal Resource Team at the Robert J. Waters Center for Telehealth & e-Health Law (CTeL). Such accusations stem from equipment that malfunctioned or failed to work as indicated.

#### Just the threat of privacy litigation causes insurers to spike premiums - turns access and cost

Brill 8 – Jack Brill, Candidate for Juris Doctor, Notre Dame Law School, “GIVING HIPAA ENFORCEMENT ROOM TO GROW: WHY THERE SHOULD NOT (YET) BE A

PRIVATE CAUSE OF ACTION”, Notre Dame Law Review, July, 83 Notre Dame L. Rev. 2105, Lexis

It is too early to determine the ultimate effect that Acosta and Sorensen will have on litigation involving HIPAA violations in state courts. Both decisions came from courts of appeals and thus not from a state's highest court. n140 As of April 2008, no other court had cited Acosta or Sorensen for the proposition that a violation of HIPAA may be used as the standard of negligence in a state law tort claim. Nevertheless, if other state courts adopt the notion that HIPAA can provide guidance as to the standard of care in negligence claims, then courts may see a dramatic increase in HIPAA-related litigation. The recent changes in the HIPAA legal framework are important to the question of whether Congress should confer a federal private cause of action. If HHS is capable of enforcing the Privacy and Security Rules, as the statistics seem to indicate, then there may be no need to bring HIPAA enforcement to the private sector. Moreover, if HIPAA litigation becomes prevalent in state courts, the costs of HIPAA compliance will surely increase. A federal cause of action would further increase these compliance costs and lead to more expensive health care. The debate over a private cause of action, discussed next, must take into account the effectiveness of HIPAA enforcement and the significant costs of HIPAA compliance. III. The Debate Surrounding a Private Cause of Action Perceived ineffectiveness in HIPAA enforcement and the lack of a remedy for aggrieved patients have led several commentators and organizations to argue that patients' privacy rights would be best protected by adding the deterrent of private litigation to the HIPAA legal framework. Although the arguments supporting a private cause of action may be compelling, ultimately it is not the best solution to any deficiencies in HIPAA compliance given practical, economic, and policy considerations. [\*2125] A. The Argument in Favor of a Private Cause of Action There are many reasons why it is important to keep one's personal health information private. For instance, if personal health information were accessible, employers might use the information to recruit the healthiest employees, and lenders might use personal health information in deciding whether to grant a loan. n141 One's personal health information could be even more lucrative to lenders and employers if it included information about genetic predispositions. Medical identity theft is also a huge concern that could jeopardize one's health and even lead to legitimate insurance claims being denied. n142 In addition to details pertaining to a person's health, medical records also contain other information, such as names, addresses, social security numbers, and billing information, all of which can be used to steal an identity. [\*2126] Given the strong interest that patients have in keeping their health information private, HHS is left with an extraordinary responsibility to police the standards set forth in the Privacy and Security Rules. Yet since the enforcement process is primarily complaint driven, n143 private citizens also play a crucial role in ensuring HIPAA compliance by filing complaints. The complementary roles that HHS and patients have in enforcing the Privacy and Security Rules begs the obvious question: would the goal of keeping personal health information private be more efficiently met by changing the enforcement process to confer a private cause of action for a violation? As of January 2008, HHS had yet to impose a civil fine on a covered entity for a HIPAA violation. n144 While hundreds of cases have been referred by HHS to the DOJ for criminal prosecution, n145 there have been only four criminal convictions for a HIPAA violation to date. n146 These sparse numbers have led many commentators to call for stricter enforcement of HIPAA's Privacy and Security Rules. n147 Others have criticized the complaint-driven enforcement process, [\*2127] lamenting HHS's failure to engage in independent audits pursuant to its statutory authority. n148 Critics of HIPAA enforcement, supported by several security breaches, argue that HHS is not doing enough to ensure the protection of personal health information. A privacy advocacy group, called the Health Privacy Project, keeps a list of post-HIPAA newspaper stories that involve personal health information being compromised. n149 For instance, in October 2006, a laptop containing the personal health information of 38,000 members was stolen from the health care organization Kaiser Permanente. n150 In November 2006, a thief stole two computers from the Family Health Center in Jeffersonville, Indiana. n151 These computers contained the names, addresses, billing and medical information, and social security numbers of over 7000 women who were being treated for breast or cervical cancer. n152 In September 2006, a computer containing the medical information of several former military men and women was stolen from a hospital in New York City. n153 These are just a few of many stories involving invasion into the privacy of personal health information. Concerns over the effectiveness of HHS enforcement led to a report released at a Senate hearing by the Government Accountability Office (GAO) in February 2007, which criticized the coordination of HHS in ensuring the privacy of medical information transmitted electronically. n154 The GAO noted that while HHS has initiated activities that were intended to address concerns related to PHI, n155 under the current system the goals of safeguarding personal health information will not be met. n156 The GAO recommended that HHS develop a plan [\*2128] containing specific goals and deadlines for ensuring the protection of PHI. n157 Disagreeing with the GAO's recommendation, HHS claimed that the implementation of the Privacy Rule and Security Rule were adequate foundations as safeguards of PHI. n158 But even if the Privacy and Security Rules provide an adequate foundation to safeguard personal health information, questions remain about whether the current system of enforcement serves as an effective deterrent. Moreover, there is also the important policy question of whether the current enforcement process properly protects the interests of patients whose medical information is compromised due to a HIPAA Privacy or Security Rule violation. Professors Hoffman and Podgurski argue that the current enforcement process fails both in terms of its deterrent effect and in its protection of aggrieved patients whose medical information is misappropriated. n159 Their solution is to amend the HIPAA enforcement procedure to include a private cause of action, which they contend would be the best way to effectively deter HIPAA violations while at the same time vindicating the rights of aggrieved patients. n160 Specifically, they propose that HIPAA be amended to include the following provision: (a) Any person aggrieved by any act of a covered entity in violation of this section may bring a civil action in a United States District Court. (b) The court may award - [sp'(b)'+n](1) actual damages, but not less than liquidated damages in the amount of $ 2500; [sp'(b)'+n](2) punitive damages upon proof of willful or reckless disregard of the law; [sp'(b)'+n](3) reasonable attorney's fees and other litigation costs reasonably incurred; and [sp'(b)'+n](4) such other preliminary and equitable relief as the court determines to be appropriate. n161 To justify this proposal, Hoffman and Podgurski point out that the underlying purpose of HIPAA privacy regulations is to protect patients. In their view, the current system undermines that purpose [\*2129] because it disregards the potential hardships that a privacy breach can cause. n162 Instead of exclusively relying on a government agency - which is susceptible to political influences and limited resources n163 - to monitor enforcement, Hoffman and Podgurski assert that conferring a private cause of action would be more effective because the threat of lawsuits would put both financial and reputational pressures on covered entities to make sure that they comply with the Privacy and Security Rules. n164 Under the current system, covered entities may discover that since the penalties of a HIPAA violation are not severe, it may be cheaper not to comply. n165 Hoffman and Podgurski also emphasize that published judicial opinions could prevent future violations because they might clarify vague or confusing language in the Privacy and Security Rules. n166 Many (if not most) of the Privacy and Security Rule violations do not result in actual money damages. n167 Hoffman and Podgurski, however, point to several other privacy laws that provide a right to recover attorney's fees and costs even if the plaintiff suffered only minimal damages. n168 In fact, Hoffman and Podgurski's proposed amendment to HIPAA is identical to a provision in the Driver's Privacy Protection Act of 1994, which affords a private cause of action when a person knowingly and illicitly obtains, uses, or discloses personal information from a motor vehicle record. n169 They also cite the Privacy Act of 1974, n170 the Video Privacy Protection Act of 1988, n171 the Electronic [\*2130] Communications Privacy Act, n172 and the Cable Communications Policy Act n173 in support of their argument that HIPAA should be brought in line with other privacy laws that allow private citizens to vindicate their rights in court. n174 Professors Hoffman and Podgurski make a compelling argument for a private cause of action - the threat of pricey and potentially embarrassing lawsuits would certainly deter noncompliance. Their argument also appeals to basic notions of fairness - intuitively, it seems only right for an entity that violates the law to compensate those who are harmed as a result. And certainly, given the numerous stories pertaining to privacy and security breaches, there is significant room for improvement of HIPAA compliance. Yet affording aggrieved persons a private cause of action only makes sense when the overall benefits outweigh the costs. It is not clear that a private cause of action would achieve that result. B. Why HIPAA Should Not Contain a Private Right of Action There are several practical, economic, and policy drawbacks to affording litigants a private cause of action for a Privacy or Security Rule violation. Recent enforcement figures suggest that the current enforcement process is continually improving its efficiency and effectiveness. The costs of HIPAA compliance may increase in the near future due to the possibility that other state courts might fall in line with Acosta and Sorensen. Conferring a federal private cause of action - especially one that includes liquidated damages - for a HIPAA violation would prove too costly to the health care system. The best course of action, at least for the time being, is simply to give [\*2131] HHS and covered entities more time to improve the current system before making any drastic changes. The most obvious problem with conferring a private cause of action for a HIPAA violation concerns the uncertainty as to whether judges and juries are best equipped to determine if a violation has even occurred. The Acosta and Sorensen cases are representative of the varying degrees of difficulty that courts will face if patients are allowed to sue after a HIPAA violation. If the liability for Faber in Acosta hinged merely on whether or not he violated HIPAA, then it would be a very easy case - obviously HIPAA's Security Rule prevents a doctor from granting an employee access to EPHI for no apparent reason. The Sorensen case is not as straightforward. The Privacy Rule does not mention ex parte communications with physicians, but it does provide that PHI may be disclosed pursuant to a discovery request or lawful process as long as reasonable efforts have been made by the requesting party to give the patient notice. n175 Courts have grappled with how to interpret HIPAA's effect on the legality of ex parte communications. Some courts have held that ex parte communications with treating physicians are lawful as long as the Privacy Rule's conditions for disclosure are met. n176 Other courts have reasoned that HIPAA disfavors ex parte communications, n177 and still others have held that since HIPAA does not specifically mention ex parte communications, only state law should determine the lawfulness of such activities. n178 The first interpretation is probably correct because the Privacy Rule regulates how PHI may be disclosed without patient authorization in a judicial proceeding, and it specifically articulates conditions that must be met before a disclosure of PHI is lawful without patient authorization. n179 Nevertheless, the discrepancies amongst various courts suggest that determining whether a HIPAA violation has occurred is not always a straightforward task. The Privacy and Security Rules, by design, provide covered entities with discretion. For instance, the Privacy Rule mandates that covered [\*2132] entities have "appropriate" safeguards that are "reasonably" designed to protect health information from illicit uses. n180 The Security Rule requires covered entities to continually renew and modify their security precautions so as to afford EPHI "reasonable and appropriate protection." n181 HHS, the entity which drafted the Privacy and Security Rules, is better situated than judges and juries to decide whether particular safeguards are reasonable and appropriate. There is no doubt that Privacy and Security Rules are complex, and certainly their complexity should not be an excuse for covered entities to violate them. At the same time, however, there are clear benefits to allowing HHS and covered entities to work together on solutions to potential problems, rather than allowing courts to promulgate standards of care when they may not be qualified to do so. n182 Over and above the practical difficulties that a private cause of action would entail, the most significant drawback to a private cause of action is its potential economic impact on the health care industry. The possibility of litigation for privacy and security violations would surely compel covered entities to incorporate more legal fees and judgment awards into their budgets - costs that would in turn be passed on to the patients themselves. These costs would add to the already very high costs of HIPAA privacy compliance.

#### 2] Causes Anti-Biotic over-usage - prescriptions are overused electronically AND fragments care

Roy Benaroch 16, pediatrician who blogs at the Pediatric Insider. He is also the author of A Guide to Getting the Best Health Care for Your Child and the creator of The Great Courses' Medical School for Everyone: Grand Rounds Cases. This post appeared on KevinMD.com., 12-27-2016, "Telemedicine: An Idea With Many Potential Pitfalls," Medpage Today, https://www.medpagetoday.com/Blogs/KevinMD/62261

What was needed was a risk assessment, not a prescription. Holly's story, to a pediatrician, makes no sense. It doesn't represent anything close to good or even reasonable medical care. A high fever means "call in a prescription"? That is completely and utterly wrong. So why is Aetna pushing Teladoc? It's cheap. Aetna's payout to the telemedicine company is far less than what they'd pay for an urgent care or emergency room visit. Insurance companies aren't eager to spend money for people to see doctors. Cheap is good for insurance companies, but is it good for your children? I couldn't find any studies in pediatric patients looking at the accuracy of this kind of service for making a diagnosis and prescribing medicine for acute problems over the phone. I emailed the Teladoc people, introducing myself as a physician whose patients might use their services. Do they track their accuracy or outcomes? Do they have any data showing that what they're doing is even close to good care? I got no response. Though there are zero pediatric studies, I found one good study in adults, reviewed here. Researchers contacted 16 different telemedicine companies specifically about rashes. They uploaded photos and basically "posed" as patients. The results were abysmal – there were all sorts of crazy misdiagnoses. Many of the telephone clinicians failed to ask even basic questions to help determine what was going on. Two sites linked to unlicensed overseas docs, and very few of the services even asked for contact info for a patient's primary care doc to send a copy of the record. I think I know why telemed companies don't bother to send records to primary care docs. I have gotten just two copies of telemedicine records in the last few years. They are, frankly, embarrassing. One was about an 8-year-old with a sore throat (who wasn't even asked about fever). It says the mom "looked at the throat and saw it was pink without exudate." (Let me mention here that throats are always pink. That's what's called the normal color of a throat.) Amoxicillin, in an incorrect dose, was called in for "possible strep throat." This is terrible medicine that contradicts every published guideline for evaluating sore throats in children. If this is the kind of Krappy Kare we've decided we want for our children, we ought to just make antibiotics over-the-counter and skip the pretending over the phone. The other telemedicine record I have was nearly identical, a 15-month-old also diagnosed with strep -- amoxicillin called in. (More Krap Kare for Kids.) There can be a role for telemedicine. I see it as a useful tool for follow-ups, especially for psychiatric or behavioral care where a detailed physical exam isn't needed. Telemedicine can also be an excellent way for physicians in isolated or rural areas to get help from a specialist for complex cases. And telemedicine technology is already being used successfully to allow expert-level interpretation of objective tests, like pediatric EKGs and echocardiograms. But current available technology -- like this Teladoc service -- doesn't allow a clinician to really examine a patient, look in their ears or even assess whether their vital signs are normal. They cannot help decide whether a child is genuinely ill or just a little sick -- and that is what parents need to know in the middle of the night. Calling in unnecessary antibiotics is cheap and easy. But it's no substitute for genuine medical care.

#### Mis-use causes AMR.

Kelland 15 Kate Kelland 11-17-2015 "Misunderstanding of Antibiotics Fuels Superbug Threat, WHO Says" <https://www.scientificamerican.com/article/misunderstanding-of-antibiotics-fuels-superbug-threat-who-says/> (Journalist at Scientific American)//Elmer

People across the world are alarmingly confused about the role of antibiotics and the right way to take them, and this ignorance is fuelling the rise of drug-resistant superbugs, the World Health Organization said on Monday. "The rise of antibiotic resistance is a global health crisis," WHO Director-General Margaret Chan told reporters in a telebriefing from the organization's Geneva headquarters. She said the problem was "reaching dangerously high levels" in all parts of the world and could lead to "the end of modern medicine as we know it". Antibiotic resistance happens when bacteria mutate and adapt to become invulnerable to the antibiotics used to treat the infections they cause. Over-use and misuse of antibiotics exacerbates the development of drug-resistant bacteria, often called superbugs. Publishing the results of a survey of public awareness, the United Nations health agency said 64 percent of those asked believed wrongly that penicillin-based drugs and other antibiotics can treat colds and flu, despite the fact such medicines have no impact on viruses.

#### AMR is an existential threat – it’s non-linear and has an invisible tipping point.

Silverman 16 Rachel Silverman 4-19-2016 “Confronting Antimicrobial Resistance: Can We Get to Collective Action?” <https://www.cgdev.org/blog/confronting-antimicrobial-resistance-can-we-get-collective-action> (MPhil with Distinction in Public Health @ the University of Cambridge, Senior Policy Analyst and Assistant Director of Global Health Policy @ the Center for Global Development, focusing on global health financing and incentive structures)//Elmer

Antimicrobial resistance is already causing huge harm – and the worst is yet to come. To open the panel, Dr. Chan issued a serious warning about the size and scope of the AMR threat: “everyone will be affected if we do not address this problem.” AMR is already responsible for an estimated 700,000 global deaths each year, 50,000 of which take place in the US and Europe. Extensively drug-resistant (XDR) tuberculosis—cases where the most effective first- and second-line drugs are rendered useless—infected an estimated 47,000 people worldwide in 2014, only one ‘last-line’ antimicrobial is available to reliably treat gonorrhea, and few new antimicrobial drugs are in the development pipeline. According to the latest review, AMR could cause 10 million deaths each year by 2050, with knock-on effects draining many trillions from the global economy. Summers suggested that AMR and potential pandemics, alongside climate change and nuclear proliferation, represent the top three existential threats to life on earth as we know it. And as Dr. Chan explained, the worst-case scenario implies the end of modern medicine as we know it. Even worse, Summers suggested that AMR seems like a “quintessential non-linear phenomenon, and therefore more dangerous.” Year by year the effects are small and mostly invisible. Butat some point in the future they could suddenly become catastrophic, like a “levee that doesn’t hold and unleashes a flood.” Dr. Chan concurred that “the tipping point is not predictable because…microbes are invisible. We don’t even know when they’re going to make the switch” to become resistant to existing drugs.

#### 3] Doctor trust is high.

Swanson and Murphy 21 Emily Swanson and Tom Murphy 8-10-2021 "High trust in doctors, nurses in US, AP-NORC poll finds" <https://apnews.com/article/joe-biden-business-health-coronavirus-pandemic-509835fc9b663bffc83f52d248e9ef4a> (Associated Editor at the Associated Press)//Elmer

WASHINGTON (AP) — Most Americans have high trust in doctors, nurses and pharmacists, a new poll finds. Researchers say that trust could become important in the push to increase COVID-19 vaccinations, as long as unvaccinated people have care providers they know and are open to hearing new information about the vaccines. At least 7 in 10 Americans trust doctors, nurses and pharmacists to do what’s right for them and their families either most or all of the time, according to the poll from the University of Chicago Harris School of Public Policy and The Associated Press-NORC Center for Public Affairs Research. The poll shows high levels of trust among both Democrats and Republicans; men and women; and white, Black and Hispanic Americans.

#### Telehealth devastates trust – independently causes patients to withhold information which undermines care and reverses telehealth deployment

Garg and Brewer 11, (Vaibhav Garg, M.S.1 and Jeffrey Brewer, M.S.2 1School of Informatics and Computing, Indiana University, Bloomington, Indiana 2Department of Computer and Information Technology, Purdue University, West Lafayette, Indiana, Telemedicine Security: A Systematic Review, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3192643/#)

Telemedicine, though promising in trial stages, has been less successful in real life.3,4 Reporting of research methodology used in the trials has been inadequate,5 which makes it difficult to analyze the gap between real life and trial stages.6 Security has also been identified as a determinant for successful telemedicine implementations.7 Thus, in this article, we look at the research done in the field of telemedicine security. In particular, we address the reporting of methodology in telemedicine security research. The articles reviewed include several different chronic diseases, including diabetes. The research does not break out diabetes separately, as the issues in security discovered apply across all studies. Telemedicine security includes problems such as authorization, authentication, and accounting8 that are common with other information technology applications such as banking and manufacturing support. There are, however, many new challenges as well. Telemedicine requires information security and privacy as well as physical safety. Physical safety, for example, detection of falls in older adults, has to be evaluated remotely. The patient should be able to trust the system and not feel that human contact in terms of an onsite caregiver is needed. Thus reliability is an important concern. Fischhoff and colleagues9 noted, “Acceptable risk for a new technology is defined as that level of safety associated with ongoing activities having similar benefits to society.” Thus telemedicine systems should also be evaluated for perceptions of both patients and caregivers since they may be perceived as intrusive and ineffective.10 According to Broens and associates,7 both patient physical safety and patient information security are crucial to support the trust relationship between health care providers and patients and for acceptance of telemedicine implementations. Savastano and coworkers10 note that lack of patient trust means that patients would not reveal accurate and complete information, which lowers the quality of care. This is a critical consideration because a big part of the treatment of diabetes patients is in the accurate self-reporting of blood glucose levels. Poor quality of care would further reduce the confidence of both providers and consumers of telemedicine services. Lack of confidence would make it less likely for these services to be deployed widely.Earlier research11 suggests that security is not the primary focus of the telemedicine research community. But this needs to change if telemedicine is to become widely acceptable.7 Several articles10,12 have suggested that poor security may lead to lesser quality of care and lack of confidence in the services for both providers and consumers and cause legal liability. These are unique challenges, separate from other forms of health-care-technology-related initiatives such as electronic medical record systems that need to be identified. Not addressing these issues in telemedicine services not only lowers the quality of care but may also have fatal consequences.13

#### Two Impacts:

#### a] Key to solve bioterror- research, response and treatment

**Jacobs, 5** – MD; Boston University professor of medicine [Alice, director of Cardiac Catheterization Laboratory and Interventional Cardiology, "Rebuilding an Enduring Trust in Medicine," Circulation, 2005, circ.ahajournals.org/content/111/25/3494.full#xref-ref-3-1, accessed 8-18-14]

To be sure, we will learn about the emerging science and clinical practice of cardiovascular disease over the next four days. But **there is an internal disease** of the heart **that confronts** us as **scientists**, as **physicians**, **and** as **healthcare professionals**. It is a threat to us all—insidious and pervasive—and one that we unknowingly may spread. **This threat is one of the most critical issues facing our profession** today. How we address this problem will shape the future of medical care.¶ **This issue is** **the** **erosion of trust.**¶ **Lack of trust is a barrier between our intellectual renewal and our ability to deliver** this new **knowledge to our research labs**, to our **offices**, to the bedside of our **patients, and** to **the public.** **Trust is** a **vital**, unseen, and essential **element in diagnosis, treatment, and healing**. So it is fundamental that we understand what it is, why it’s important in medicine, its recent decline, and what we can all do to rebuild trust in our profession. Trust is intrinsic to the relationship between citizens around the world and the institutions that serve their needs: government, education, business, religion, and, most certainly, medicine.¶ Albert Einstein recognized the importance of trust when he said, “Every kind of peaceful cooperation among men is primarily based on mutual trust.”1 In our time, trust has been broken, abused, misplaced, and violated. The media have been replete with commentaries, citing stories of negligence, corruption, and betrayal by individuals and groups in the public and private sectors, from governments to corporations, from educational institutions to the Olympic Organizing Committee. These all are front-page news. Perhaps the most extreme example is terrorism, in which strangers use acts of violence to shatter trust and splinter society in an ongoing assault on our shared reverence for human life.¶ Unfortunately, we are not immune in our own sphere of cardiovascular medicine. The physician-investigator conflicts of interest concerning enrollment of patients in clinical trials, the focus on medical and nursing errors, the high-profile medical malpractice cases, the mandate to control the cost of health care in ways that may not be aligned with the best interest of the patient—all of these undermine trust in our profession. At this time, when more and more public and private institutions have fallen in public esteem, restoring trust in the healthcare professions will require that we understand the importance of trust and the implications of its absence.¶ Trust is intuitive confidence and a sense of comfort that comes from the belief that we can rely on an individual or organization to perform competently, responsibly, and in a manner considerate of our interests.2 It is dynamic, it is fragile, and it is vulnerable. Trust can be damaged, but it can be repaired and restored. It is praised where it is evident and acknowledged in every profession. Yet it is very difficult to define and quantify.¶ Trust is easier to understand than to measure. For us, trust may be particularly difficult to embrace because it is not a science. Few instruments have been designed to allow us to evaluate it with any scientific rigor. Yet, **trust is inherent to our profession**, **precisely** because patients **turn to us in their most vulnerable moments, for knowledge about their** health and **disease**. **We know trust when** we experience it: when **we advise patients in need of highly technical procedures** that are **associated with increased risk** or when we return from being away to learn that our patient who became ill waited for us to make a decision and to discuss their concerns, despite being surrounded by competent colleagues acting on our behalf.¶ Many thought **leaders in the medical field understand the importance of trust**.3 **When asked whether the public health system could be overrun by public panic over** SARS and **bioterror**ism, **C**enters for **D**isease **C**ontrol and Prevention **Director** Julie **Gerberding replied, “You can manage people if they trust you. We’ve put a great deal of effort into** improving state and local communications and scaled up our own public affairs capacity…we’re **building credibility**, **competence and trust**.”4¶ Former **H**ealth and **H**uman **S**ervices **Secretary** Donna **Shalala** also **recognized the importance of trust when she said, “If we are to keep testing new med**icine**s and new approaches to curing disease, we cannot compromise the trust and willingness of patients to participate in clinical trials.**”5¶ These seemingly intuitive concepts of the importance of trust in 21st century medicine actually have little foundation in our medical heritage. In fact, a review of the early history of medicine is astonishingly devoid of medical ethics. Even the Codes and Principles of Ethics of the American Medical Association, founded in 1847, required patients to place total trust in their physician’s judgment, to obey promptly, and to “entertain a just and enduring sense of value of the services rendered.”6 Such a bold assertion of the authority of the physician and the gratitude of the patient seems unimaginable today.¶ It was not until the early 1920s that role models such as Boston’s Richard Cabot linked patient-centered medical ethics with the best that scientific medicine had to offer,6 and Frances Weld Peabody, the first Director of the Thorndike Memorial Laboratory at the Boston City Hospital, crystallized the ethical obligation of the physician to his patient in his essay “The Care of the Patient.”7 In one particularly insightful passage, Peabody captures the essence of the two elements of the physician’s ethical obligation: He must know his professional business and he must trouble to know the patient well enough to draw conclusions, jointly with the patient, as to what actions are indeed in the patient’s best interest. He states: “The treatment of a disease may be entirely impersonal: **The care of the patient must be completely personal**. **The** significance of the intimate personal **relationship between physician and patient cannot be too strongly emphasized, for in an extraordinarily large number of cases both diagnosis and treatment are directly dependent on it.”** Truly, as Peabody said, “The secret to the care of the patient…is in caring for the patient.”7¶ **This concept that links the quality of the physician-patient relationship to health outcomes has** indeed **stood the test of time**. **Trust has been shown to be important** in its own right. **It is essential to patients, in their willingness to seek care**, their **willingness to reveal sensitive info**rmation, **their willingness to submit to treatment, and their willingness to follow recommendations**. **They must be willing for us to be able.**

#### Bioterrorism causes Extinction – overcomes any conventional defense.

Walsh 19, Bryan. End Times: A Brief Guide to the End of the World. Hachette Books, 2019. (Future Correspondent for Axios, Editor of the Science and Technology Publication OneZero, Former Senior and International Editor at Time Magazine, BA from Princeton University)//Elmer

I’ve lived through disease outbreaks, and in the previous chapter I showed just how unprepared we are to face a widespread pandemic of flu or another new pathogen like SARS. But a deliberate outbreak caused by an engineered pathogen would be far worse. We would face the same agonizing decisions that must be made during a natural pandemic: whether to ban travel from affected regions, how to keep overburdened hospitals working as the rolls of the sick grew, how to accelerate the development and distribution of vaccines and drugs. To that dire list add the terror that would spread once it became clear that the death and disease in our midst was not the random work of nature, but a deliberate act of malice. We’re scared of disease outbreaks and we’re scared of terrorism—put them together and you have a formula for chaos. As deadly and as disruptive as a conventional bioterror incident would be, an attack that employed existing pathogens could only spread so far, limited by the same laws of evolution that circumscribe natural disease outbreaks. But a virus engineered in a lab to break those laws could spread faster and kill quicker than anything that would emerge out of nature. It can be designed to evade medical countermeasures, frustrating doctors’ attempts to diagnose cases and treat patients. If health officials manage to stamp out the outbreak, it could be reintroduced into the public again and again. It could, with the right mix of genetic traits, even wipe us off the planet, making engineered viruses a genuine existential threat. And such an attack may not even be that difficult to carry out. Thanks to advances in biotechnology that have rapidly reduced the skill level and funding needed to perform gene editing and engineering, what might have once required the work of an army of virologists employed by a nation-state could soon be done by a handful of talented and trained individuals. Or maybe just one. When Melinda Gates was asked at the South by Southwest conference in 2018 to identify what she saw as the biggest threat facing the world over the next decade, she didn’t hesitate: “A bioterrorism event. Definitely.”2 She’s far from alone. In 2016, President Obama’s director of national intelligence James Clapper identified CRISPR as a “weapon of mass destruction,” a category usually reserved for known nightmares like nuclear bombs and chemical weapons. A 2018 report from the National Academies of Sciences concluded that biotechnology had rewritten what was possible in creating new weapons, while also increasing the range of people capable of carrying out such attacks.3 That’s a fatal combination, one that plausibly threatens the future of humanity like nothing else. “The existential threat that would be most available for someone, if they felt like doing something, would be a bioweapon,” said Eric Klien, founder of the Lifeboat Foundation, a nonprofit dedicated to helping humanity survive existential risks. “It would not be hard for a small group of people, maybe even just two or three people, to kill a hundred million people using a bioweapon. There are probably a million people currently on the planet who would have the technical knowledge to pull this off. It’s actually surprising that it hasn’t happened yet.”

#### Bioterror Attacks coming now

Dass 21 Reuben Ananthan Santhana Dass March 2021 "Bioterrorism: Counter Terrorist Trends and Analyses" Jstor (Research Analyst with the International Centre for Political Violence and Terrorism Research)//Elmer

Threat Assessment Several experts, including terrorism scholar Andrew Silke, have warned that the current pandemic “may lead to a resurgence in interest among terrorists for using such weapons.”51 This is partly due to the devastating impact of COVID-19, which highlights the lethality and potentially farreaching consequences of a bioterror attack involving a novel biological agent. Terrorist groups such as AQ and IS continue to retain an interest in using biological weapons. In a recent pro-AQ magazine published in November 2020 titled ‘Wolves of Manhattan’, AQ had called on its “wolves of Islam” to hand out “poisoned masks” to unsuspecting individuals in streets or stations.52 IS too recently released a poster titled ‘The Biological Terror’, via an online blog, which called on supporters to carry out attacks by spreading poison in food and at gatherings.53 Terrorist cells in Indonesia have planned poison attacks previously. In 2011, a militant cell in Jakarta planned to kill policemen by poisoning their food in a canteen using ricin.54 Five years later, another attempt was made by a terrorist cell in Indonesia to deliver cyanide-laced food to police officers.55 At the other end of the ideological spectrum, far-right groups have actively called on their members to exploit the novel coronavirus as a bio-weapon, urging infected members to spread the virus amongst Jews and minorities by hugging, coughing and contaminating currency notes.56 However, there have been little indications thus far that these calls have been adhered to by far-right elements.

### 1NC---AT: Ozone

#### Rockets don’t effect:

#### 1] Percentage of Contribution is Low

Boyle 18 Alan Boyle 3-24-2018 "Do rockets blast away the ozone layer? It’s no biggie today … but watch the skies" <https://www.geekwire.com/2018/rockets-blast-away-ozone-layer-no-biggie-today-watch-skies/> (Alan Boyle is an award-winning science writer and space reporter and GeekWire contributing editor.)//Elmer

Thanks to Blue Origin, SpaceX and other space ventures, the skies could well be filled with rockets in years to come. But what will that do to the environment? The short answer is, not that much right now. But as experts look to the years ahead, the answer gets as hazy as the air after a Falcon Heavy launch. “Ten years ago, the amount of emissions was not great,” said Martin Ross, an engineer at the Aerospace Corp. whose research focuses on the effects of space systems on the stratosphere. “Today, the effect is still small, but it’s growing.” Over the 60 years of the Space Age, the year-by-year tally of orbital launches has gone up and down, with the most active years coming during the height of the U.S.-Soviet space race and the start of the space shuttle era. Now the rate is on a sharp upswing, and if all of the plans being hatched by launch providers come to fruition, 2018 could well be a record year. Ross focuses on ozone-depleting chemicals rather than climate change — even though most rocket emissions take the form of carbon dioxide and water vapor, two of the best-known greenhouse gases. “The carbon dioxide emitted by rockets is absolutely and completely insignificant compared with aviation,” Ross explained. And aircraft, in turn, are thought to account for less than 10 percent of the total greenhouse-gas emissions linked to the U.S. transportation sector. (That’s compared with more than 80 percent for cars and trucks.)

#### 2] No Pollution

NSS 21 7-23-2021 "Why Space Tourism?" <https://space.nss.org/why-space-tourism/> (National Space Society)//Elmer

Space Tourism Will Not Be a Pollution Disaster It is possible to accept all the benefits above, and still express concern about the potential that a really successful space tourism industry will pollute the air and contribute to global warming. Fortunately, Blue Origin’s New Shepard produces only water as an exhaust, so neither is going to be an issue even if there are 1,000s of flights per year. Some have claimed that space tourism will be more polluting per passenger mile since there are fewer passengers per vehicle at the current time, but (a) New Shepard has zero carbon/zero pollution, and (b) over time space tourism vehicles will grow in capacity, just like airliners did. The Virgin Galactic engine is more problematic, but will most likely be replaced by a more sustainable engine before flight volumes become large. Some might be more worried about SpaceX’s StarShip/SuperHeavy driving global warming when used for point-to-point travel on the Earth, and for space tourism. Elon Musk has declared his intention to produce the methane fuel it uses directly from the atmosphere using solar power, assuring that the fuel cycle is carbon-neutral. In terms of air pollution, StarShip in a point-to-point mode will to a large degree replace airplanes currently flying while using cleaner burning methane, potentially resulting in less pollution than is the case currently. In any case, trips to space will likely always remain a minor part of point-to-point travel on the Earth. Currently, in the U.S. alone, there are about 5,700 passenger flights PER DAY. Even if we are simultaneously supporting dozens of orbital hotels, building a city on Mars, and constructing a network of space solar power satellites, we will be hard pressed to generate more than a tiny fraction of that traffic level.

#### Two External Alt Causes:

#### 1] Copper

Berkeley 1/13 (Robert Rhew and Berkeley geo chemists, [UC Berkeley professor of geography and of environmental science, policy and management], 1-13-2022, “Copper-based chemicals may be contributing to ozone depletion: Some ozone-destroying chemicals are unaccounted for. Are copper-based fungicides producing them?“, ScienceDaily, accessed: 1-15-2022, https://www.sciencedaily.com/releases/2022/01/220113151441.htm) ajs

In a paper appearing this week in the journal Nature Communications, UC Berkeley geochemists show that copper in soil and seawater acts as a catalyst to turn organic matter into both methyl bromide and methyl chloride, two potent halocarbon compounds that destroy ozone. Sunlight worsens the situation, boosting production of these methyl halides by a factor of 10. The findings answer, at least in part, a long-standing mystery about the origin of much of the methyl bromide and methyl chloride in the stratosphere. Since the worldwide ban on chlorofluorocarbon (CFC) refrigerants and brominated halons used in fire extinguishers starting in 1989, these methyl halides have become the new dominant sources of ozone-depleting bromine and chlorine in the stratosphere. As the long-lived CFCs and halons slowly disappear from the atmosphere, the role of methyl halides increases. "If we don't know where methyl bromide and methyl chloride are coming from, then how can we make sure that those compounds are reduced along with CFCs?" said the paper's senior author, Robert Rhew, UC Berkeley professor of geography and of environmental science, policy and management. "By 2050, we should be back to relatively normal ozone, but things like the continued emissions of methyl bromide and methyl chloride are road bumps in the road to recovery. Copper usage in the environment is projected to increase rapidly in the next few years, and this should be considered when predicting future halogen load and ozone recovery."

#### 2] Illegal CFC sources

Mcglaun 21 (Shane Mcglaun, [Slash Gear Writer], 5-19-2021, “MIT study suggests illegal production of CFCs has continued“, SlashGear, accessed: 1-15-2022, https://www.slashgear.com/mit-study-suggests-illegal-production-of-cfcs-has-continued-19673398/) ajs

Researchers at MIT have discovered that ozone-depleting chlorofluorocarbons known as CFCs stay in the atmosphere for less time than previously estimated. CFCs were phased out globally in 2010, and the research suggests they should be in the atmosphere in much lower concentrations than recent measurements suggest. The study suggests that new and illegal production of CFCs has likely occurred in recent years. The study specifically points out [new emissions](https://news.mit.edu/2021/cfc-atmosphere-ozone-0518) of CFC-11, CFC-12, and CFC-113 that would represent a violation of the Montréal Protocol. That protocol was designed to phase out the production and consumption of CFCs along with other ozone-damaging chemicals. The study estimates that new global CFC-11 emissions is higher than previous studies reported. MIT’s study is also the first to quantify new global emissions of CFC-12 and CFC-113. Lead study author Megan Lickley says the team found total emissions coming from new production is around 20 gigagrams a year for each of those molecules. The study also identified new emissions of CFC-12 and CFC-113, which Lickley says were previously overlooked. In the past, CFCs were used commonly in manufacturing refrigerants, aerosol sprays, chemical solvents, and building insulation. When they are emitted into the atmosphere, the chemicals can stay in the stratosphere interacting with ultraviolet light and releasing chlorine atoms that erode the protective ozone layer surrounding the earth. Today, most CFCs are emitted by “banks,” old refrigerators, air conditioners, and insulation manufactured before the ban. For the study, the researchers calculated the amount of CFCs remaining in banks today by developing a model analyzing industry production of CFCs over time and how quickly various types of equipment release CFCs. That value was then incorporated in the current recommended values for the lifetime of the chemicals to calculate concentrations of bank-derived CFCs that could be expected in the atmosphere over time. The team says the calculated lifetimes for CFC-11, 12, and 113 are 49 years, 85 years, and eight years respectively, compared to current values of 52, 100, and 85 years respectively. The results imply emissions are likely higher than the best estimates have suggested.

### 1NC---AT: Astronomy

#### Chance of asteroids is tiny and no extinction

Robert **Walker 16**. Software Developer of Tune Smithy, Wolfson College, Oxford. 12-14-2016. "Why Resilient Humans Would Survive Giant Asteroid Impact." Science 2.0. https://www.science20.com/robert\_inventor/we\_wont\_go\_extinct\_after\_a\_major\_asteroid\_impact\_even\_96\_of\_species\_extinct\_0\_chance\_of\_humans\_extinct-187383

This is something you hear said so often - that we risk being hit by an asteroid that could make humans extinct. But do we really? This is the article I’m commenting on, a recently breaking news story: Earth woefully unprepared for surprise comet or asteroid, Nasa scientist warns. Some are already worrying that it means that we are all due to die in the near future from an asteroid impact. Well, no, it doesn't mean that. So, what is the truth behind it? The source of all this is a comment by Dr Joseph Nuth who warns: “But on the other hand they are the extinction-level events, things like dinosaur killers, they’re 50 to 60 million years apart, essentially. You could say, of course, we’re due, but it’s a random course at that point.” Photograph of comet Siding Spring by Hubble - right hand image is more processed. This comet did a close flyby of Mars and at one point was predicted to have a tiny chance of hitting Mars. In the end it missed Mars by more than a quarter of the distance from Earth to the Moon If you read the rest of the article, it’s a worthy goal, to prepare us for asteroid impacts of all sizes from the small Chelyabinsk one up to really large 10 km ones. There are a number of things potentially confusing about this statement however, if you read it as a non scientist. Although there is a risk of “mass extinction” if a large asteroid hit Earth, “mass extinction” there doesn’t mean “extinction of humans”, we are such a resilient species that we would certainly survive a giant asteroid impact. We are not “due” an extinction at all. Next giant impact is most likely to happen many millions of years into the future. As we'll see, there is almost zero chance of a giant impact in the next century. There is however much we can do to protect ourselves from smaller asteroids. As a result of extensive asteroid surveys over the last couple of decades: We can be pretty sure (as in perhaps 99.999999% sure) that there isn’t an extinction level asteroid headed our way in the next century. We know the orbits of all the Near Earth Asteroids that could do this and none will hit Earth over that timescale. That leaves comets, and the chance of that is something like 1 in 100 million per century, as a very rough guess (since 99% of the impacts are thought to be from asteroids). This risk has been pretty much retired due to the automated asteroid searches by the likes of Pan STARRS. But the chance of a smaller asteroid impact is still high enough to make it worth working on it, especially since this is the one natural hazard we can not only predict to the minute, decades in advance, with enough information but also prevent also, given a long enough timeline. We are already close to completing the survey of 1 km asteroids (90% done). With a bit more funding we could also find most of the asteroids down to 45 meters in diameter. As a result of new developments in the science of asteroid detection, this could be done for a cost of only $50 million to protect the entire Earth. We would then be able to deflect asteroids decades before they are due to hit, which is a far easier task than a last minute deflection. First when he said "You could say, of course, we’re due, but it’s a random course at that point.”" - that is a scientist speaking as a scientist. But of course people sharing this on social media, retweeting, writing new stories about it, pick up the “we are due” and omit the scientific qualification “but it’s a random course at that point”. To say that we are “due” a mass extinction is a bit like saying that after you throw nine heads, you are due to throw a tail. Not true. The chance that the next coin toss is a tail is always going to be 50/50 for a fair coin no matter how many heads you throw. It's the same with extinctions. So long as it is a random process, then an extinction that happens every 60 million years could happen tomorrow or it could be 60 million years or 120 million years before it happens. On average we would still expect to wait 60 million years for the next such mass extinction even if the last one happened hundreds of millions of years ago. It’s just as for the coin toss. Same for an extinction event of a size that happens every 100 million years. If you look at the diagram the big five are irregularly spaced. The last one happened 66 million years ago. But they are irregularly spaced so we can't conclude either that we need to wait 44 million years for the next big extinction either. Some scientists have tried to discern a periodicity in the extinctions of perhaps 26 to 30 million years. If they are right then we are due the next extinction perhaps 15 million years or so from now. But that is very controversial and if true, it wouldn’t cover all mass extinctions. At any rate that's so far into the future it makes no difference to us now, if they are right or wrong. We could get a mass extinction in the next few millions of years. But it is nearly impossibly unlikely in the next century.

#### OR Uq-overwhlems, double bind—1AC Spencer says they’re inevitable AND will collide with Earth

#### Newest research from NASA proves any threat is at least a thousand years away

Mack 19 (Eric, “NASA says city-smashing asteroids aren't so common,” 6-27, <https://www.cnet.com/news/nasa-says-city-smashing-asteroids-arent-so-common/>)

Asteroids are all around us, but we shouldn't be losing sleep over the big buggers. A small space rock was spotted just before slamming into the atmosphere last weekend, and over 20,000 near-earth asteroids have been cataloged, but new research from NASA finds impacts that could do serious damage aren't very frequent. Perhaps the last time an asteroid large enough to inflict serious hurt on a limited part of the Earth's surface (we're not talking about an extinction-level space rock like the one that ended the dinosaurs) came knocking was in 1908. In June of that year, the so-called Tunguska Event impacted an unpopulated part of Siberia and was witnessed by only a handful of people, but it flattened 500,000 acres of forest, scorched the Earth and knocked people out of their chairs 40 miles away (64 km). It's easy and terrifying to imagine what the result might have been had chance dictated the impact occurred over a major metropolitan area instead. "Tunguska is the largest cosmic impact witnessed by modern humans," David Morrison, a planetary science researcher at NASA's Ames Research Center in Silicon Valley, said in a release. "It also is characteristic of the sort of impact we are likely to have to protect against in the future." But when researchers revisited the Tunguska Event with the help of computer models and tooked into account the latest data on the population of asteroids in our neighborhood, they found that such major impacts are exceedingly rare. The results, published in the journal Icarus, find that such a powerful impact should only be expected roughly every thousand years or longer rather than once every century or so, as was previously thought. While this is certainly good news for all earthly life forms, the threat of an asteroid impact is still very real and worth preparing for, as the 2013 bolide explosion over Russia reminded us. "A lot of uncertainty remains about how large asteroids break up in the atmosphere and how much damage they could cause on the ground," said NASA researcher and co-author Lorien Wheeler. "However, recent advancements in computational models, along with analyses of the Chelyabinsk and other meteor events, are helping to improve our understanding of these factors so that we can better evaluate potential asteroid threats in the future."