# NC HWL 6

## 1

### Framing

#### 1. Extinction is the biggest impact under any framework – future generations, uncertainty, and ethical credibility.

Pummer 15

[Theron, Junior Research Fellow in Philosophy at St. Anne's College, University of Oxford. “Moral Agreement on Saving the World” Practical Ethics, University of Oxford. May 18, 2015] AT

There appears to be lot of disagreement in moral philosophy. Whether these many apparent disagreements are deep and irresolvable, I believe there is at least one thing it is reasonable to agree on right now, whatever general moral view we adopt: that it is very important to reduce the risk that all intelligent beings on this planet are eliminated by an enormous catastrophe, such as a nuclear war. How we might in fact try to reduce such existential risks is discussed elsewhere. My claim here is only that we – whether we’re consequentialists, deontologists, or virtue ethicists – should all agree that we should try to save the world. According to consequentialism, we should maximize the good, where this is taken to be the goodness, from an impartial perspective, of outcomes. Clearly one thing that makes an outcome good is that the people in it are doing well. There is little disagreement here. If the happiness or well-being of possible future people is just as important as that of people who already exist, and if they would have good lives, it is not hard to see how reducing existential risk is easily the most important thing in the whole world. This is for the familiar reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. There are so many possible future people that reducing existential risk is arguably the most important thing in the world, even if the well-being of these possible people were given only 0.001% as much weight as that of existing people. Even on a wholly person-affecting view – according to which there’s nothing (apart from effects on existing people) to be said in favor of creating happy people – the case for reducing existential risk is very strong. As noted in this seminal paper, this case is strengthened by the fact that there’s a good chance that many existing people will, with the aid of life-extension technology, live very long and very high quality lives. You might think what I have just argued applies to consequentialists only. There is a tendency to assume that, if an argument appeals to consequentialist considerations (the goodness of outcomes), it is irrelevant to non-consequentialists. But that is a huge mistake. Non-consequentialism is the view that there’s more that determines rightness than the goodness of consequences or outcomes; it is not the view that the latter don’t matter. Even John Rawls wrote, “All ethical doctrines worth our attention take consequences into account in judging rightness. One which did not would simply be irrational, crazy.” Minimally plausible versions of deontology and virtue ethics must be concerned in part with promoting the good, from an impartial point of view. They’d thus imply very strong reasons to reduce existential risk, at least when this doesn’t significantly involve doing harm to others or damaging one’s character. What’s even more surprising, perhaps, is that even if our own good (or that of those near and dear to us) has much greater weight than goodness from the impartial “point of view of the universe,” indeed even if the latter is entirely morally irrelevant, we may nonetheless have very strong reasons to reduce existential risk. Even egoism, the view that each agent should maximize her own good, might imply strong reasons to reduce existential risk. It will depend, among other things, on what one’s own good consists in. If well-being consisted in pleasure only, it is somewhat harder to argue that egoism would imply strong reasons to reduce existential risk – perhaps we could argue that one would maximize her expected hedonic well-being by funding life extension technology or by having herself cryogenically frozen at the time of her bodily death as well as giving money to reduce existential risk (so that there is a world for her to live in!). I am not sure, however, how strong the reasons to do this would be. But views which imply that, if I don’t care about other people, I have no or very little reason to help them are not even minimally plausible views (in addition to hedonistic egoism, I here have in mind views that imply that one has no reason to perform an act unless one actually desires to do that act). To be minimally plausible, egoism will need to be paired with a more sophisticated account of well-being. To see this, it is enough to consider, as Plato did, the possibility of a ring of invisibility – suppose that, while wearing it, Ayn could derive some pleasure by helping the poor, but instead could derive just a bit more by severely harming them. Hedonistic egoism would absurdly imply she should do the latter. To avoid this implication, egoists would need to build something like the meaningfulness of a life into well-being, in some robust way, where this would to a significant extent be a function of other-regarding concerns (see chapter 12 of this classic intro to ethics). But once these elements are included, we can (roughly, as above) argue that this sort of egoism will imply strong reasons to reduce existential risk. Add to all of this Samuel Scheffler’s recent intriguing arguments (quick podcast version available here) that most of what makes our lives go well would be undermined if there were no future generations of intelligent persons. On his view, my life would contain vastly less well-being if (say) a year after my death the world came to an end. So obviously if Scheffler were right I’d have very strong reason to reduce existential risk. We should also take into account moral uncertainty. What is it reasonable for one to do, when one is uncertain not (only) about the empirical facts, but also about the moral facts? I’ve just argued that there’s agreement among minimally plausible ethical views that we have strong reason to reduce existential risk – not only consequentialists, but also deontologists, virtue ethicists, and sophisticated egoists should agree. But even those (hedonistic egoists) who disagree should have a significant level of confidence that they are mistaken, and that one of the above views is correct. Even if they were 90% sure that their view is the correct one (and 10% sure that one of these other ones is correct), they would have pretty strong reason, from the standpoint of moral uncertainty, to reduce existential risk. Perhaps most disturbingly still, even if we are only 1% sure that the well-being of possible future people matters, it is at least arguable that, from the standpoint of moral uncertainty, reducing existential risk is the most important thing in the world. Again, this is largely for the reason that there are so many people who could exist in the future – there are trillions upon trillions… upon trillions. (For more on this and other related issues, see this excellent dissertation). Of course, it is uncertain whether these untold trillions would, in general, have good lives. It’s possible they’ll be miserable. It is enough for my claim that there is moral agreement in the relevant sense if, at least given certain empirical claims about what future lives would most likely be like, all minimally plausible moral views would converge on the conclusion that we should try to save the world. While there are some non-crazy views that place significantly greater moral weight on avoiding suffering than on promoting happiness, for reasons others have offered (and for independent reasons I won’t get into here unless requested to), they nonetheless seem to be fairly implausible views. And even if things did not go well for our ancestors, I am optimistic that they will overall go fantastically well for our descendants, if we allow them to. I suspect that most of us alive today – at least those of us not suffering from extreme illness or poverty – have lives that are well worth living, and that things will continue to improve. Derek Parfit, whose work has emphasized future generations as well as agreement in ethics, described our situation clearly and accurately: “We live during the hinge of history. Given the scientific and technological discoveries of the last two centuries, the world has never changed as fast. We shall soon have even greater powers to transform, not only our surroundings, but ourselves and our successors. If we act wisely in the next few centuries, humanity will survive its most dangerous and decisive period. Our descendants could, if necessary, go elsewhere, spreading through this galaxy…. Our descendants might, I believe, make the further future very good. But that good future may also depend in part on us. If our selfish recklessness ends human history, we would be acting very wrongly.” (From chapter 36 of On What Matters)

#### 2. Particularity is key, focusing on taking down an entire system ignores material injustices and turns K.

Pappas 16

(Gregory Fernando Pappas, Professor at TAMU Ph.D., Philosophy, University of Texas at Austin, 1990, “The Pragmatists’ Approach to Injustice”, The Pluralist Volume 11, Number 1, Spring 2016)

The pragmatists’ approach should be distinguished from nonideal theories whose starting point seems to be the injustices of society at large that have a history and persist through time, where the task of political philosophy is to detect and diagnose the presence of these historical injustices in particular situations of injustice. For example, critical theory today has inherited an approach to social philosophy characteristic of the European tradition that goes back to Rousseau, Marx, Weber, Freud, Marcuse, and others. Accord- ing to Roberto Frega, this tradition takes society to be “intrinsically sick” with a malaise that requires adopting a critical historical stance in order to understand how the systematic sickness affects present social situations. In other words, this approach assumes that¶ a philosophical critique of specific social situations can be accomplished only under the assumption of a broader and full blown critique of soci- ety in its entirety: as a critique of capitalism, of modernity, of western civilization, of rationality itself. The idea of social pathology becomes intelligible only against the background of a philosophy of history or of an anthropology of decline, according to which the distortions of actual social life are but the inevitable consequence of longstanding historical processes. (“Between Pragmatism and Critical Theory” 63)¶ However, this particular approach to injustice is not limited to critical theory. It is present in those Latin American and African American political philosophies that have used and transformed the critical intellectual tools of ¶ critical theory to deal with the problems of injustice in the Americas. For instance, Charles W. Mills claims that the starting point and alternative to the abstractions of ideal theory that masked injustices is to diagnose and rectify a history of an illness—the legacy of white supremacy in our actual society.11 The critical task of revealing this illness is achieved by adopting a historical perspective where the injustices of today are part of a larger historical narrative about the development of modern societies that goes back to how Europeans have progressively dehumanized or subordinated others. Similary, radical feminists as well as Third World scholars, as reaction to the hege- monic Eurocentric paradigms that disguise injustices under the assumption of a universal or objective point of view, have stressed how our knowledge is always situated. This may seem congenial with pragmatism except the locus of the knower and of injustices is often described as power structures located in “global hierarchies” and a “world-system” and not situations.12¶ Pragmatism only questions that we live in History or a “World-System” (as a totality or abstract context) but not that we are in history (lowercase): in a present situation continuous with others where the past weighs heavily in our memories, bodies, habits, structures, and communities. It also does not deny the importance of power structures and seeing the connections be- tween injustices through time, but there is a difference between (a) inquiring into present situations of injustice in order to detect, diagnose, and cure an injustice (a social pathology) across history, and (b) inquiring into the his- tory of a systematic injustice in order to facilitate inquiry into the present unique, context-bound injustice. To capture the legacy of the past on present injustices, we must study history but also seek present evidence of the weight of the past on the present injustice.¶ If injustice is an illness, then the pragmatists’ approach takes as its main focus diagnosing and treating the particular present illness, that is, the particular situation-bound injustice and not a global “social pathology” or some single transhistorical source of injustice. The diagnosis of a particular injustice is not always dependent on adopting a broader critical standpoint of society in its entirety, but even when it is, we must be careful to not forget that such standpoints are useful only for understanding the present evil. The concepts and categories “white supremacy” and “colonialism” can be great tools that can be of planetary significance. One could even argue that they pick out much larger areas of people’s lives and injustices than the categories of class and gender, but in spite of their reach and explanatory theoretical value, they are nothing more than tools to make reference to and ameliorate particular injustices experienced (suffered) in the midst of a particular and unique re- lationship in a situation. No doubt many, but not all, problems of injustice are a consequence of being a member of a group in history, but even in these cases, we cannot a priori assume that injustices are homogeneously equal for all members of that group. Why is this important? The possible pluralism and therefore complexity of a problem of injustice does not always stop at the level of being a member of a historical group or even a member of many groups, as insisted on by intersectional analysis. There may be unique cir- cumstances to particular countries, towns, neighborhoods, institutions, and ultimately situations that we must be open to in a context-sensitive inquiry. If an empirical inquiry is committed to capturing and ameliorating all of the harms in situations of injustice in their raw pretheoretical complexity, then this requires that we try to begin with and return to the concrete, particular, and unique experiences of injustice.¶ Pragmatism agrees with Sally Haslanger’s concern about Charles Mills’s view. She writes: “The goal is not just a theory that is historical (v. ahistori- cal), but is sensitive to historical particularity, i.e., that resists grand causal narratives purporting to give an account of how domination has come about and is perpetuated everywhere and at all times” (1). For “the forces that cause and sustain domination vary tremendously context by context, and there isn’t necessarily a single causal explanation; a theoretical framework that is useful as a basis for political intervention must be highly sensitive to the details of the particular social context” (1).13¶ Although each situation is unique, there are commonalities among the cases that permit inquiry about common causes. We can “formulate tentative general principles from investigation of similar individual cases, and then . . . check the generalizations by applying them to still further cases” (Dewey, Lectures in China 53). But Dewey insists that the focus should be on the indi- vidual case, and was critical of how so many sociopolitical theories are prone to starting and remaining at the level of “sweeping generalizations.” He states that they “fail to focus on the concrete problems which arise in experience, allowing such problems to be buried under their sweeping generalizations” (Lectures in China 53).¶ The lesson pragmatism provides for nonideal theory today is that it must be careful to not reify any injustice as some single historical force for which particular injustice problems are its manifestation or evidence for its exis- tence. Pragmatism welcomes the wisdom and resources of nonideal theories that are historically grounded on actual injustices, but it issues a warning about how they should be understood and implemented. It is, for example, sympathetic to the critical resources found in critical race theory, but with an important qualification. It understands Derrick Bell’s valuable criticism as context-specific to patterns in the practice of American law. Through his inquiry into particular cases and civil rights policies at a particular time and place, Bell learned and proposed certain general principles such as the one of “interest convergence,” that is, “whites will promote racial advantages for blacks only when they also promote white self-interest.”14 But, for pragma- tism, these principles are nothing more than historically grounded tools to use in present problematic situations that call for our analysis,

## 2

### DA

#### Colonization of Mars is feasible but requires investment incentive to motivate the required tech developments.

Martin & Saydam 21

(BA Journalism University of Central Lancashire, Media & Content Coordinator for The University of New South Wales Serkan Saydam received his BSc, MSc and PhD degrees in Mining Engineering from the Dokuz Eylul University, Izmir, Turkey and completed his Postdoctoral Fellowship at the University of Witwatersrand, Johannesburg, South Africa. He then worked at De Beers for 3 years as project manager in Johannesburg, South Africa. Serkan joined the School of Mining Engineering as a Senior Lecturer in 2006 and was promoted to Associate Professor in 2012. Serkan then was then promoted to the Professorial role in 2017 and he is currently working as a Professor and Director of Research at the School of Minerals and Energy Resources Engineering at UNSW. A key focus of his research is to address the current needs and future challenges faced by the mining industry. These are generally very complex engineering problems, as mining environments become more extreme and constraints are imposed due to increasing social, environmental, and health and safety standards. His fields of research include ground control, mine planning & design, technology integration, new mining methods and off-Earth mining. In addition, he established research collaboration with NASA's Jet Propulsion Laboratory & Kennedy Space Center, and Luxembourg Space Agency as well more than 20 research organisations and universities globally. He has more than 250 publications and graduated 18 PhD students. Serkan is currently Fellow Member of Australian Institution of Mining and Metallurgy; President of the ISRM Commission on Planetary Rock Mechanics; Deputy Director of the Australian Centre for Space Engineering Research (ACSER) at UNSW; Deputy Secretary General and Council Member of the SOMP (The Society of Mining Professors). <https://newsroom.unsw.edu.au/news/science-tech/mars-settlement-likely-2050-says-unsw-expert-%E2%80%93-not-levels-predicted-elon-musk>, USNW Sydney Newsroom, 3/10/21, NCS, <https://newsroom.unsw.edu.au/news/science-tech/mars-settlement-likely-2050-says-unsw-expert-%E2%80%93-not-levels-predicted-elon-musk> brackets for spelling mistake

Robotic mining that can provide water and fuel is the key to developing a colony on the red planet within the next 30 years. Mars will be colonised by humans by the year 2050, as long as autonomous mining processes quickly become more commercially viable. That’s the view of Professor Serkan Saydam from UNSW Sydney in the wake of the amazing landing on Mars by NASA’s Perseverance rover. Perseverance is expected to provide answers about whether forms of life ever existed on the red planet, but it is also designed to help address the challenges of future human expeditions there. Professor Saydam, from the School of Mineral Energy Resources Engineering, says the main focus in terms of creating a colony on Mars is finding water – and being able to extract it and process it using robots before humans land. “Everything is all about water,“ Prof. Saydam says. “You use water as a life support, plus also being able to separate out the hydrogen to use as an energy source. “The process for having humans on Mars will be to set up operations, go there and produce water with robots first, and then be able to extract the hydrogen to make the energy ready before people arrive. “Innovation in robotics and autonomous systems are clearly important so that we have the water ready and the hydrogen separated and ready for when human beings land. “At the moment, we don’t have ability to do it. There are significant research efforts, specifically here at UNSW under ACSER (Australian Centre for Space Engineering Research), about the best way to do it, but there is no consensus yet. It also depends on how many people we expect to be living on Mars. Is it five, or 5000, or 50,000, or even more?“ Entrepreneur Elon Musk has claimed he’s confident there will be a city of 1 million on Mars by 2050, transported there by 1000 Starships proposed by his SpaceX venture, with plans for up to three rocket launches per day. Prof. Saydam says that may be unrealistic in the specific timeframe, but admits that demand for travel and a potential colonisation of Mars is what’s needed to drive the technological developments required. “I think the technology is ready and we already have the knowledge, but the main problem is having the focus,“ says Prof. Saydam, who is organising an International Future Mining Conference in December 2021 that will feature former NASA astronaut Pamela Melroy and Honeybee Robotics vice-president Kris Zacny. “It’s a bigger question: ‘Why don’t we do that already on earth? Why are we still using human beings for physical work in mining here?’ We have huge experience in mining, but still heavily depend on humans. “One issue is that demand is not there. For companies to get involved in developing products (for Mars missions), they need to be able to produce minerals or something that can be used for manufacturing goods and then sell it. “At the moment, everything is just a cost and there is no revenue for companies.“ However, that could be starting to change. United Launch Alliance, a joint venture between Lockheed Martin and Boeing who are heavily invested in the rockets used to launch spaceships, has publicly announced they will pay $500 per kilogram for fuel – derived from water – supplied on the moon. That rises to $3000 per kilogram if the fuel is available in a low-earth orbit. “That immediately creates a market,“ Prof. Saydam says. “Plus, if Elon Musk does what he says and puts people on the surface of Mars in 20 years, then that also creates a market. “I believe a colony on Mars is going to happen, but between 2040 and 2050 is more feasible. This could be shortened depending on the technological advances that can reduce the costs or [form] from stronger motivation. “What I think will happen is that first of all we will do these activities on the moon and have a colony there. Then we can use the moon as a petrol station to get to Mars and beyond. “But before 2050, I think we will have settlements on both the moon and Mars.“

#### Colonizing outer space would both speed up human evolution and increase genetic variation.

Learn 21

(Joshua Rapp Learn is a D.C.-based journalist who writes about science, culture and the environment. He has crossed the Sahara Desert, floated down the Amazon River and explored in more than 50 countries.), “Colonizing Mars Could Speed up Human Evolution”, Discover, 10/2/21, NCS, https://www.discovermagazine.com/the-sciences/colonizing-mars-could-speed-up-human-evolution

As it turns out, human colonization of the harsh and exotic atmosphere on Mars (if we can achieve it) might accelerate our species’ evolution. “Given how different the Martian environment is, you’d expect strong natural selection,” says Scott Solomon, an evolutionary biologist at Rice University in Houston, Texas. Mars sits about 34 million miles away from Earth, depending on the orbital position of both planets, and us Earthlings still face a number of obstacles before we could even reach it. But if we get to Mars and establish a colony of permanent residents, factors like comparatively higher radiation, lower gravity and a vast change in lifestyle could prompt significant evolutionary changes in human bodies — much quicker than those that have transpired on our native planet. Lost in Space Solomon first began pondering how humans might further evolve while teaching introductory biology. He asked students to imagine the ways in which humans may continue to evolve — this question led him down a rabbit hole that inspired his 2016 book, Future Humans. Solomon’s research touches on the hypothetical evolutionary outcomes of humanity’s colonization of Mars. A determining factor in this venture: the precise level of isolation, which would vastly influence how quickly humans would adapt to new conditions. If humans moved back and forth from Earth and Mars as quickly as every generation or two, new influxes of Earth-born human genes moving to the Martian colony could slow the effects of certain genetic mutations. Meanwhile, remaining within the vastly different conditions on Mars might speed up the pace of human evolution. “It could be hundreds of years in the right circumstances,” Solomon says. Here on Earth, evolution often requires a species to experience complete isolation for thousands of years from other populations of the same species. When modern humans and our evolutionary ancestors began to spread across the Earth tens of thousands of years ago, populations were isolated in various places for generations — sometimes for thousands of years. Meanwhile, certain populations have developed characteristics to help them deal with local conditions. For example, high-altitude dwelling groups of humans may have adapted traits that helped them live in such extreme environments. Still, much of this is just plasticity, or the ability of a species to adapt to specific surroundings by taking on various sizes, behaviors and shapes, rather than true evolution. “We can adjust our physiology to different circumstances to a pretty large extent,” Solomon said, as evidenced by the fact that modern humans never evolved into new species despite experiencing vast environmental differences. But it’s possible that Martian humans could live completely isolated from Earth due to a number of conditions, whether economic, political or otherwise. For one, diseases unique to either Earth or Mars could emerge and invoke travel embargoes. Mutant Martians More intense radiation on Mars could also provoke elevated rates of genetic mutations in humans born there. And any favorable mutations that help humans better cope with conditions on Mars may be inherited by future generations. “Increasing the mutation rate gives natural selection more material to operate with,” Solomon says. But these mutations could also be random. If a number of people happen to develop the same chance mutations, either among those living on Mars or their ancestors on Earth, it could cause something like a founding effect. A Mars settlement is likely to consist of a relatively small community in the beginning, and any traits that these founders may share could have a disproportionate effect on the future human development there: This could be as simple as a relatively high number of redheads. But patterns in hair (or even skin) color wouldn’t technically qualify Martians as a new species, Solomon cautions. Yet it's possible that even the first generation of Martians may develop notable physical differences from Earthlings due to gravity changes in a foreign atmosphere, among other adjustments. “They might look different, they might act different,” he says. “They might have physical changes that might be obvious to people that compare them.” Natural Selection Survival of the fittest is a key concept in evolution. But it doesn’t mean the environment will primarily dictate the type of traits that render people well-suited for Martian life. Height seems like an obvious factor in these differences, since Mars has three-eights of Earth’s gravity. “Science fiction has often portrayed Martians or aliens coming from Mars as being tall and lanky and thin,” Solomon says. But the effect could actually be the opposite. The problem is that these body types might pose certain hazards during childbirth — weakened skeletons could fracture people's pelvises while giving birth. So, natural selection may actually favor shorter people with denser bones. Also, Mars’ high radiation levels could directly affect characteristics like skin color or eyesight over generations of evolution. This has already happened on Earth — melanin is more resistant to ultraviolet rays, for example. “Perhaps in the face of this high radiation, we might evolve some new type of skin pigment to help us deal with that radiation,” Solomon says, adding that we could potentially evolve cancer-resistant genes. “Maybe we get our own green men.”

#### Lack of genetic variation due to rapid population growth is a human existential risk.

Ghee 21

(Henry Gee is a paleontologist, evolutionary biologist and editor at Nature. His latest book is A (Very) Short History of Life on Earth (St. Martin’s Press, 2021).), “Humans Are Doomed to Go Extinct”, Scientific American, 11/30/21, NCS, https://www.scientificamerican.com/article/humans-are-doomed-to-go-extinct/

Cast your mind back, if you will, to 1965, when Tom Lehrer recorded his live album That Was the Year That Was. Lehrer prefaced a song called “So Long Mom (A Song for World War III)” by saying that “if there's going to be any songs coming out of World War III, we’d better start writing them now.” Another preoccupation of the 1960s, apart from nuclear annihilation, was overpopulation. Stanford University biologist Paul Ehrlich’s book The Population Bomb was published in 1968, a year when the rate of world population growth was more than 2 percent—the highest in recorded history. Half a century on, the threat of nuclear annihilation has lost its imminence. As for overpopulation, more than twice as many people live on the earth now as in 1968, and they do so (in very broad-brush terms) in greater comfort and affluence than anyone suspected. Although the population is still increasing, the rate of increase has halved since 1968. Current population predictions vary. But the general consensus is that it’ll top out sometime midcentury and start to fall sharply. As soon as 2100, the global population size could be less than it is now. In most countries—including poorer ones—the birth rate is now well below the death rate. In some countries, the population will soon be half the current value. People are now becoming worried about underpopulation. As a paleontologist, I take the long view. Mammal species tend to come and go rather rapidly, appearing, flourishing and disappearing in a million years or so. The fossil record indicates that Homo sapiens has been around for 315,000 years or so, but for most of that time, the species was rare—so rare, in fact, that it came close to extinction, perhaps more than once. Thus were sown the seeds of humanity’s doom: the current population has grown, very rapidly, from something much smaller. The result is that, as a species, H. sapiens is extraordinarily samey. There is more genetic variation in a few troupes of wild chimpanzees than in the entire human population. Lack of genetic variation is never good for species survival. What is more, over the past few decades, the quality of human sperm has declined massively, possibly leading to lower birth rates, for reasons nobody is really sure about. Pollution—a by-product of human degradation of the environment—is one possible factor. Another might be stress, which, I suggest, could be triggered by living in close proximity to other people for a long period. For most of human evolution, people rode light on the land, living in scattered bands. The habit of living in cities, practically on top of one another (literally so, in an apartment block) is a very recent habit.

## 3

### PIC

#### Counterplan: Only the appropriation of geosynchronous orbit by private entities in developing countries is just.

#### Non-appropriation in geosynchronous orbit denies developing countries a fair shot from benefitting from space- it creates functional appropriation as limited slots are awarded to Western countries on a first-come, first-serve basis- BUT firms don’t compensate developing countries for use- allowing private appropriation by developing countries stops Western countries from stealing valuable resources

Thornburg, 19 -- PhD, Associate Professor of Political Science at University of South Carolina Aiken

[Matthew Law, "Are the Non-appropriation Principle and the Current Regulatory Regime Governing Geostationary Orbit Equitable for All of Earth’s States?," The Michigan Journal of International Law, Vol. 40, 2019, http://www.mjilonline.org/are-the-non-appropriation-principle-and-the-current-regulatory-regime-governing-geostationary-orbit-equitable-for-all-of-earths-states/, accessed 1-16-22]

Notions of fairness and common benefit ring throughout the body of international law governing outer space. Indeed, the very preamble of the Outer Space Treaty (“OST”) declares that: [T]he exploration and use of outer space should be carried on for the benefit of all peoples irrespective of the degree of their economic or scientific development…”[1] However, such noble, egalitarian ideas for the future use of outer space may actually create unequal outcomes down on Earth. This blog seeks to briefly highlight just one example of the unfair limits on the use of outer space for less-developed countries as a result of the Outer Space Treaty’s (“OST”) non-appropriation principle.

As the law currently stands, geostationary orbit – a constant orbital position above Earth’s equator – is governed by the OST and is therefore subject to the treaty’s attendant ban on national appropriation. Spaces, or slots, in geostationary orbit[2] are desired because they are exceedingly convenient for communicating with earth. They are highly limited and as a consequence, highly valuable. Moreover, these spaces are allotted on a first-come-first-served basis[3] making them virtually unattainable by less scientifically and economically advanced states[4], or those that are just plain late to the game.

The ban on national appropriation is enumerated in the Second Article of the OST, which states: “Outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by other means.”[5] The geostationary orbital position is generally agreed upon by experts[6] as part of “outer space” and consequently, forbidden from appropriation.

The OST is clear in prohibiting claims of sovereignty, but the subsequent clauses leave much to interpretation when considering what other acts constitute “national appropriation.” In other words, the question surrounding geostationary orbital slots is “whether the continued exclusive occupation by a geostationary satellite of the same physical area is a violation of the ban on national appropriation”[7] by use, occupation, or other means. In his article, Major Legal Issues Arising from the Use of the Geostationary Orbit, Stephen Gorove says that, “it is not clear that a satellite in geostationary orbit would be able to maintain its exact position and occupy the same area over a period of time…” so as to “appropriate” and thus violate Article II of the OST.

The analysis should not turn on whether the satellites in geostationary orbit maintain their exact position. Instead, it is the continual use of the orbital slot that should be examined in light of the OST prohibition. The average lifespan of a geostationary satellite is 15-20 years,[8] effectively shutting out any other state’s use of that slot for at least that long. A time frame of this nature seems to be the exact type of “use or occupation” the treaty seeks to foreclose because of the consequent unequal access to the use of space, and the consequent potential to cement the economic interests of certain nations and firms. Compounding this concern is the fact that operators of the geostationary satellites need only refile with the International Telecommunications Union (“ITU”) to “renew” a slot and replace old satellites with new ones.[9] Essentially, such operators keep the orbital slot indefinitely. In light of the OST – a treaty dominated by goals of fair and equitable use and access to space – endless use of these valuable slots should rise to the level of national appropriation by means of use, occupation, or other means.

The system of geostationary orbital space allocation has elicited several responses, the most famous of which was the Bogotá Declaration (“Declaration”), drafted in resistance to the non-appropriation principle. This was a proclamation by eight equatorial states, which claimed that the geostationary orbit directly above their borders was an integral part of the land over which they exercised complete and exclusive sovereignty.[10] Accordingly, each state claimed that its sovereignty had been breached by the presence of foreign satellites.

This argument failed to garnish much support and the Declaration was not signed by a single space faring nation. The Declaration’s opponents refused to entertain the idea of sovereignty over geostationary orbit as it would be an affront to the non-appropriation principle. Though according to the Declaration, this principle is exactly what “enabled the de facto sovereignty [over geostationary orbit] of dominant, global north states”[11] in the first place. By simply appealing to the non-appropriation principle, scientifically and economically advanced states can reject arguments similar to the Bogotá Declaration out of hand while maintaining their own unfettered use of space. The non-appropriation principle makes orbital slots available to “all” states by law, but in reality they are only available to states with the scientific and economic means to use them.

In a world where the non-appropriation principle has become customary international law,[12] less developed states have attempted to benefit from outer space in other ways. For example, in 1991 the ITU granted Tonga six orbital positions, but shortly thereafter, its national satellite company began renting and auctioning its spaces to other satellite companies, including a Colorado firm.[13] There were various rebukes of Tonga’s actions by both states and private companies, describing the practice as “a transparent attempt to secure as many orbital slots as possible to trade as a commodity for pecuniary gain.”[14] It was also viewed as a violation of the fundamental principle of non-appropriation. In an effort to avoid such situations occurring again in the future, the ITU now conducts rigorous reviews in an effort to ensure that there are genuine intentions for orbital slots.[15]

Following Tonga, it’s clear that states cannot trade an orbital slot granted to them as a pseudo-commodity claim. Based on the lukewarm response to the Bogotá Declaration, it also seems that the international community will not recognize orbital slights by virtue of a nation’s sovereign right to the space over its territory. Of course, there are valid arguments supporting the international rejection of the Bogota Declaration, especially since the national-appropriation principle constitutes international law. But as shown by Tonga, under the current system, even if a less-developed state is afforded geostationary slots, the non-appropriation principle prevents the financial benefit from the sale or lease of such slot.[16] In contrast, private communications firms, and by proxy their home states, are able to benefit financially by selling a stable stream of satellite transmissions to consumers. If the non-appropriation principle allows such private financial gain, why shouldn’t it allow a state to gain in any way it sees fit from the allocation of orbital slots? The principle’s net effect is maintaining the status quo for those states that won the race of placing satellites in geostationary orbit.

Effectively then, orbital slots are only valuable for one reason: their use. Only those states with the capabilities to support government space programs, or the economic stability to support space-capable private firms, will be able to place satellites into geostationary orbit. It seems that the non-appropriation principle has had the effect of replicating in space the global financial imbalance on Earth.

While the non-appropriation principle has appeared to create disproportionate results regarding the use of outer space, such results do appear to be the unintended consequences of an optimistic treaty governing space. Nevertheless, it is critical that the international community begins to reconsider the effects of that treaty, and the legal regime as a whole, on the equitable use of space. As the economic potential of outer space is further unlocked, the function of the non-appropriation principle may have become outdated. Certainly, any change to longstanding international law – namely a revision of the ban on national appropriation – would have significant unintended consequences of its own. However, with the increasing exploitation of outer space for financial gain, the effect of the non-appropriation principle on geostationary orbital allotment will be one of many examples of less developed states being foreclosed from participating in, and benefiting from, the use of space.

## Framing

### Framing

#### The AC tells a very compelling horror story about militarism, neoliberalism, and other structures, but that’s all it is, a story. These systems have drastically reduced structural violence by every empirical metric.

Swan 20

Josh Swan (Policy and Data Analyst for the City Region Economic and Development Institute of the University of Birmingham). “Capitalism and its Impact on Global Living Standards.” City REDI. 18 March 202. JDN. <https://blog.bham.ac.uk/cityredi/capitalism-and-its-impact-on-global-living-standards/>

Fundamentally, it must be said straight away that capitalism has been, and still is, an incredibly overwhelming positive force for the world and is easily the most successful economic system that has ever been produced. Since the time of Karl Marx, the embourgeoisement of populations has led to greater financial and social security, as well as fulfilling careers that were once reserved for the elite. With the right saving plan, many will buy their own home, start their own business, save for their pension and enjoy unprecedented levels of leisure time. Just in case you are still not convinced why this is the single greatest economic system ever invented, let us examine the past. Technology has created more jobs than it has destroyed in the colossal world population boom in the last 144 years. Work is more fulfilling as dull jobs have been automated and creative careers becoming more numerous. Incredible advances in medicine, accountancy and professional services were made under capitalism, and essential products like the television have seen a 98% fall in real-price since 1950. Some would say this is a prerequisite to materialism; the making of commodities to fulfil our happiness and needs. You may say, so what if televisions have fallen in value meaning every family, including poor families that live in a home, can afford one? This isn’t a real argument to say it is the best system in the world… this hasn’t made a huge difference to reprimanding the suffering of Humankind. Well, is it enough to say capitalism has dramatically reduced child mortality rates and vastly increased the lifespan of old age? If that was not so then how would we explain an exponential world population increase? Whilst medical science has been credited for a positive difference with these two areas, the innovative nature of capitalism and the wealth it generated was able to fund and foster scrutiny of medical ideas which led to successful research. For example, in the Soviet Union, the goal of the central planners was to “catch up with and surpass the West”. Despite the Soviet Union in 1986 having a population 14% larger than the United States, they had 73% more hospitals than the US (23,100 vs 6229), 69% more beds for patients, 48% more physicians and 99% more midwives. However, the average life expectancy was 64 and 73 for males and females in the Soviet Union compared to 71 and 78 for males and females in the United States. It may be telling that despite far fewer staff and hospitals, the United States outspent the Soviets by more than $184 billion in 1979 ($645 billion in today’s money) and the US government paid less than half this amount compared to the 92% share the Soviet Union planners contributed. Capitalism enabled the United States to mobilise and efficiently allocate its resources, as well as create far more efficient hospitals than its rival and was able to show a clear health benefit to its population as a result. Other areas of living standards have skyrocketed such as education (and female education), skills, information and social mobility. But most of all, capitalism as a form of trade and enterprise has been the engine in the immense reduction of world absolute poverty as The Guardian writes “In the past 200 years, extreme poverty has collapsed from a whopping 94% of the entire world population to less than 10% today”. 60,000 people are escaping extreme poverty every day because of trade. But if capitalism is so good, why are there huge swathes of populations still poor and suffering today? Capitalism isn’t the cause of this poverty but rather that there is a lack of capitalism that affects these areas. Government corruption, war, political instability and other structural problems prevent power being placed into the markets and operating efficiently in these areas.

#### \*\*\* And prefer objective measures – human cognition drastically inflates the importance of perception in analysis.

Pinker 19

(Steven Pinker is an experimental cognitive psychologist and a popular writer on language, mind, and human nature. His books include "The Language Instinct," "How the Mind Works," and "The Blank Slate."Pinker is the Johnstone Family Professor of Psychology at Harvard University, and his academic specializations are visual cognition and developmental linguistics. His experimental subjects include mental imagery, shape recognition, visual attention, children's language development, regular and irregular phenomena in language, the neural bases of words and grammar, as well as the psychology of cooperation and communication, including euphemism, innuendo, emotional expression, and common knowledge.), “One thing to change: Anecdotes aren’t data”, The Harvard Gazette, 6/21/19, NCS, https://news.harvard.edu/gazette/story/2019/06/focal-point-harvard-professor-steven-pinker-says-the-truth-lies-in-the-data/

QUESTION: What is one thing wrong with the world that you would change, and why? Too many leaders and influencers, including politicians, journalists, intellectuals, and academics, surrender to the cognitive bias of assessing the world through anecdotes and images rather than data and facts. Our president assumed office with a dystopian vision of American “carnage” in an era in which violent crime rates were close to historical lows. His Republican predecessor created a massive new federal department and launched two destructive wars to protect Americans against a hazard, terrorism, that most years kills fewer people than bee stings and lightning strikes. In the year after the 9/11 attacks, 1,500 Americans who were scared away from flying perished in car crashes, unaware that a Boston-LA air trip has the same risk as driving 12 miles. One death from a self-driving Tesla makes worldwide headlines, but the 1.25 million deaths each year from human-driven vehicles don’t. Small children are traumatized by school drills that teach them how to hide from rampage shooters, who have an infinitesimal chance of killing them compared with car crashes, drownings, or, for that matter, non-rampage killers, who slay the equivalent of a Sandy Hook and a half every day. Several heavily publicized police shootings have persuaded activists that minorities are in mortal danger from racist cops, whereas three analyses (two by Harvard faculty, Sendhil Mullainathan and Roland Fryer) have shown no racial bias in police shootings. “How do we change this destructive statistical illiteracy and disdain for data?” Many people are convinced that the country is irredeemably racist, sexist, homophobic, and sexually assaultive, whereas all of these scourges are in steady decline (albeit not quickly enough). People on both the right and left have become cynical about global institutions because they think that the world is becoming poorer and more war-torn, whereas in recent decades global measures of extreme poverty and battle deaths have plummeted. People are terrified of nuclear power (the most scalable form of carbon-free energy) because of images of Three Mile Island (which killed no one), Fukushima (which killed no one; the deaths were caused by the tsunami and a panicked, unnecessary evacuation), and Chernobyl (which killed fewer people than are killed by coal every day). They imagine that fossil fuels can be replaced by solar energy, without doing the math on how many square miles would have to be tiled with solar panels to satisfy the world’s vastly growing thirst for electricity. And they think that voluntary sacrifices, like unplugging laptop chargers, are a sensible way to deal with climate change. How do we change this destructive statistical illiteracy and disdain for data? We need to make “factfulness” (as Hans, Ola, and Anna Rosling call it) an inherent part of the culture of education, journalism, commentary, and politics. An awareness of the infirmity of unaided human intuition should be part of the conventional wisdom of every educated person. Guiding policy or activism by conspicuous events, without reference to data, should come to be seen as risible as guiding them by omens, dreams, or whether Jupiter is rising in Sagittarius.

### ROTB Text

#### The role of the ballot is to vote for the debater who best maintains United States hegemony

#### Reject artificial preclusion—their framework obviously begs the question of whether US intervention is good, so if I impact turn that, I’ve also impact turned the warrants for their framework, which means post-fiat offense determines the direction of which pre-fiat education is valuable

### AT: ROTB BS

#### Academic spaces have been corrupted by liberal pacifism—domestic naysaying about US dominance is not benign; it materially threatens US resolve

Kagan, 1998:

(Senior Associate At The Carnegie Endowment For International Peace. Robert Kagan. “The Benevolent Empire” Foreign Policy, Summer 1998)

**Those contributing to the growing chorus of antihegemony and multipolarity may know they are playing a dangerous game, one that needs to be conducted with the utmost care**, as French leaders did during the Cold War, lest the entire international system come crashing down around them. What they may not have adequately calculated, however, is the possibility that Americans will not respond as wisely as they generally did during the Cold War. Americans and their leaders should not take all this sophisticated whining about U.S. hegemony too seriously. They certainly should not take it more seriously than the whiners themselves do. But, of course, Americans are taking it seriously. In the United States these days, the lugubrious guilt trip of post-Vietnam liberalism is echoed even by conservatives, with William Buckley, Samuel Huntington, and James Schlesinger all decrying American "hubris," "arrogance," and "imperialism." Clinton administration officials, in between speeches exalting America as the "indispensable" nation, increasingly behave as if what is truly indispensable is the prior approval of China, France, and Russia for every military action. Moreover, at another level, there is a stirring of neo-isolationism in America today, a mood that nicely complements the view among many Europeans that America is meddling too much in everyone else's business and taking too little time to mind its own. The existence of the Soviet Union disciplined Americans and made them see that their enlightened self-interest lay in a relatively generous foreign policy. Today, that discipline is no longer present. In other words, foreign grumbling about American hegemony would be merely amusing, were it not for the very real possibility that too many Americans will forget —- even if most of the rest of the world does not —- just how important continued American dominance is to the preservation of a reasonable level of international security and prosperity. World leaders may want to keep this in mind when they pop the champagne corks in celebration of the next American humbling.

## Space Militarization Good

### NC – Turn

#### Militarization by unethical actors is inevitable—renewed US commitment to space dominance is key to avert hegemonic decline more broadly

Strout 21

Nathan Strout (journalist focusing on space policy). “Report broadens conversation on space militarization and Space Force satellite defense.” C4ISRNET. 26 February 2021. JDN. https://www.c4isrnet.com/battlefield-tech/space/2021/02/26/report-broadens-conversation-on-space-militarization-and-space-force-satellite-defense/

WASHINGTON — **Now more than ever, American war fighters depend on space-based capabilities** for their missions. In response, adversaries have developed counter space weapons meant to degrade or deny those capabilities. Even before the U.S. Space Force was established, the Pentagon pivoted to describing space as a war-fighting domain, claiming it reflects a change in the environment led by American adversaries. U.S. officials have laid the blame for the militarization of space squarely at the feet of nations, including **China** and **Russia**, that have developed, tested and fielded various weapons capable of destroying or disabling satellites on orbit. Gen. James Dickinson, head of U.S. Space Command, said a common question he gets asked is, “So why have we militarized space? Well, the answer is we really haven’t. Our competitors have.” That narrative, which he shared Feb. 26 at the virtual Aerospace Warfare Symposium, was a major part of the messaging put out by Pentagon officials and the Trump administration to justify creating the Space Force. Some, however, question the characterization that the militarization of space is a recent development. “Space is not a sanctuary, and really it never was a sanctuary. As soon as we were able to use space for military purposes, nations — including the United States — started developing counter space weapons,” said Todd Harrison, director of the Aerospace Security Project at the Center for Strategic and International Studies. “**Space has been militarized from the beginning. There’s no question** of that.” By nearly every definition, space has already been weaponized, he added. “The cat’s out of the bag,” said Harrison. And while the Space Force doesn’t often talk about counter space weapons publicly, it is developing and fielding its own. Regardless of who initiated the militarization of space or when it happened, the fact remains that America relies on space systems for military operations, and its adversaries have developed counter space weapons to deny those space-enabled capabilities. “This is a war-fighting domain. It is contested. That’s just the fact of life,” said Harrison.

#### DoD Leadership On Space Is Key To Protect U.S. Space Assets And Prevent Conflict

Shumate, 2001:

(Information Weaponization Of Space. James R. Shumate, Lt. Colonel, U.S. Air Force. May 18, 2001.)

Since information has become a key element of government, business, and defense activities, DOD must provide leadership on the current U.S. and international use of space. The extensive use of space for all manner of national activities – civil, commercial, military, and intelligence – has greatly enhanced the effectiveness of U.S. efforts. However, this use of space has created a new vital interest, and presented a huge challenge to the military to protect the key elements of the national infrastructure that are beyond the physical borders of U.S. territory. At the same time, increasing the use of space by other nations has also enhanced the effectiveness of these nations, while creating new vulnerabilities as well. With the increasing number of countries (and even non-state actors) that have access to space – not to mention other technologies that allow power to be projected into space – the likelihood of earth-bound conflicts spreading into space is growing. However, given the present situation and current trends, our country gains the most from space and thereby has the most 4 vulnerability to losing space capabilities. This fact, more than any other, will persuade potential U.S. adversaries to develop capabilities to combat America’s asymmetric space advantage. The prospect of these potential adversaries – Iraq, Iran, Libya, etc – agreeing to arms control treaties, much less complying with them, is not encouraging. Once this reality is acknowledged and appropriate conclusions drawn about the U.S. situation, decision-makers will be more inclined to pursue countervailing capabilities both to defend U.S. space assets as well as to project power against the space – and terrestrial – assets of potential adversaries. Space is one of those critical enablers.

### Space-Based Missile Defense

#### The US and its allies are already committed to missile defense systems. Effective missile defense is key to deterrence and crisis stability.

Kyl, 2013:

(Reflections On Missile Defense And Challenges For The Future. Senator Jon Kyl. January 2013)

Turkey has requested Patriot batteries from NATO to protect that nation against Syrian ballistic missiles, potentially armed with chemical weapons— demonstrating again how missile defense can play a strategic role in providing security for Alliance members and, potentially, making it easier for Turkey to avoid preemptive action against Syria. Japan, South Korea, and the U.S. activated short-, medium- and long-range ballistic missile defense systems in anticipation of North Korea’s recent space/long-range ballistic missile launch—yet another indication that the threat to the U.S. from long-range missiles continues to advance. This is particularly concerning considering the proliferation between Pyongyang and Tehran. As we know, in response to Iran’s development of nuclear weapons and longer-range ballistic missiles, NATO has agreed to support the deployment of short, medium and long-range ballistic missile defense systems to protect Alliance territory, and thereby avoid potential Iranian nuclear blackmail. There is clear recognition today in both the Administration and the Congress that missile defense is an essential element of U.S. national security, which can strengthen deterrence against regional threats, provide assurance to allies, and which can contribute to stability during a crisis. Therefore, it is imperative that we develop a missile defense of the homeland that protects the American people against limited long-range ballistic missile threats and, by reducing our strategic vulnerability to such threats, maintains U.S. freedom of action in support of our national security interests.

#### But, only space-based systems can make missile defense effective and sustainable

Lambakis 07 [Dr. Steven Lambakis, Senior Defense Analyst at the National Institute for Public Policy, 2007. High Frontier, 3:2, “Leveraging Space to Improve Missile Defense,” p. 25]

Today we have an aggressive missile defense development program to look at future basing possibilities for sensors and weapons as part of a layered defense concept. Weapons and sensors at sea, in the air, and in space would enlarge the engagement battle space and make it harder for an enemy to outflank the missile defense system. More platforms means greater flexibility and improved system robustness. Currently, the US has fixed sites at Fort Greely, Alaska and Vandenberg AFB, California for its long-range interceptors. There are also fixed sensors in Alaska, California, and the United Kingdom. These sites are optimized to defend against a limited threat posed by North Korea and Iran. But what if the threat country shifts and “out-flanks” this operational geometry? Optimal orbits for engaging missiles from space would depend on the satellites’ inclinations, which bound the orbital engagement zone between latitudes north and south of the equator at similar distances. With weapons on-orbit, missile defenders would have a capability to engage intercontinental- to medium range ballistic missiles launched from any region within that zone. Intercepts in the boost and midcourse of that missile’s flight could be possible. Essential work to demonstrate the feasibility of critical space-based interceptor functions has already been done (as part of the Brilliant Pebbles development program in the 1980s and early 1990s). The Missile Defense Agency (MDA), should it receive the support of the administration and Congress, could continue development efforts to perfect command and control of space-based assets and long-term storage of propellant, among other things. The important point here is that, all at once, a space-based layer of weapons gives the current missile defense system a true global engagement capability. Without space, the only way to deal with threat uncertainty is to populate the world with fixed and mobile sensors and radars (on ground and at sea). As you might imagine, the cost of doing so would be prohibitive, and would probably not be politically sustainable. Without a space-based layer, missile defenses would continue to require numerous bilateral and multilateral agreements with our allies and friends to host various missile defense assets. And there would continue to be a risk that these assets would not be properly positioned to defend against a particular threat. Space-based interceptors introduce flexibility and a near-global coverage capability into the system, they can offer a very cost effective and, from one perspective, politically-efficient option for dealing with an uncertain and evolving threat.

#### Aggressive US space militarization makes SMDs feasible now, prefer our recent studies

Kyl, 2013:

(Reflections On Missile Defense And Challenges For The Future. Senator Jon Kyl. January 2013)

If funding were made available, space-based boost-phase defense could be a potential game changer. It could protect the U.S. against ICBMs, and thus provide a truly layered missile defense of the homeland. At the request of Congress, the Institute for Defense Analysis (IDA) conducted a study in 2011 of issues associated with a space-based missile defense layer. That study found that a space-based interceptor layer could contribute to the defense of the U.S. against ICBMs; engage the anti-ship ballistic missile threat (a concern related to China); and that the technological maturity exists such that a space-based interceptor layer could be developed within ten years. Aside from allocating funding, the only thing lacking is the political will to do so.

#### Absent SMD, shifting alliances will cause miscalc, crises escalation, and collapse of US extended deterrence

Pfaltzgraff & Van Cleave 09 [Dr. Robert Pfaltzgraff, Professor of International Security Studies at the Fletcher School, Tufts President, Institute for Foreign Policy Analysis, and Dr. William R. Van Cleave, Professor Emeritus, Department of Defense and Strategic Studies at Missouri State et al 2009. “Independent Working Group on Missile Defense, the Space Relationship, & The 21st Century, 2009 Report. http://www.ifpa.org/pdf/IWG2009.pdf]

Our Independent Working Group conclusion is that the United States should deploy a missile defense capable not only of defending against the smaller missile forces of rogue states and a terrorist launch, but also against the missile forces of states such as Russia and China. We make this recommendation with the assumption that the emerging security setting will be one that features multiple actors in possession of missiles who may be members of rapidly shifting coalitions. For example, the ability of the leading member of a coalition opposed to the United States, such as Russia or China, to threaten the United States (as China did during the 1996 Taiwan Strait crisis and more recently in July 2005) can diminish U.S. extended security commitments and possibly contribute to miscalculation and crisis escalation.

#### U.S. SMDs cause global crisis stability and make nuclear escalation impossible

Pfaltzgraff & Van Cleave, 2009:

Dr. Robert **Pfaltzgraff**, Professor of International Security Studies at the Fletcher School, Tufts President, Institute for Foreign Policy Analysis, **and** Dr. William R. Van **Cleave**, Professor Emeritus, Department of Defense and Strategic Studies at Missouri State **et al 2009**. “Independent Working Group on Missile Defense, the Space Relationship, & The 21st Century, 2009 Report. http://www.ifpa.org/pdf/IWG2009.pdf

In light of the growing threat from ballistic missiles**, the United States**, preferably with the support of allies, **needs to deploy missile defenses as part of a broader non- or counterproliferation strategy**. As noted earlier, **a global missile defense would** also **contribute to crisis management by demonstrating a capability to prevent a ballistic missile from reaching its target**. Therefore, **missile defense can contribute vitally to crisis escalation control and to preventing the outbreak of a crisis by demonstrating the futility of missile launches by a would-be aggressor**. Ideally, **such a capability should be space-based** in conjunction with the ground- and sea-based missile defense assets supplied by both our allies and the United States and deployed to the crisis area. **The space-based element**, however, **provides the greatest flexibility since in most cases it would already be in place, ready to provide boost-phase intercepts. The result would be a dampening effect on the crisis because an adversary would be unsure if his [or her] missiles would reach their targets**. Thus **a U.S.-allied system of systems would make it extremely difficult to undermine U.S. crisis decision making by threats to launch ballistic missiles against either the United States or its forces deployed abroad, or against the territory or forces of its allies or coalition partners.**

#### We must act now to avoid a destabilizing global scramble. U.S. space dominance is on balance less destabilizing than any alternative.

Dolman 10 [Everett Dolman, PhD and Professor of Comparative Military Studies at the US Air Force's School of Advanced Air and Space Studies, September 2010, “The Case for Weapons in Space: A Geopolitical Assessment” APSA Annual Meeting, pg 30]

This reasoning does not dispute the fact that US deployment of weapons in outer space would represent the addition of a potent new military capacity, one that would assist in extending the current period of American hegemony well into the future. Clearly this would be intimidating, and America must expect severe condemnation and increased competition in peripheral areas. But such an outcome is less threatening than another, particularly non-liberal authoritarian state doing so, as the necessity of a response in kind is compelling. Placement of weapons in space by the United States would be perceived correctly as an attempt at continuing American hegemony. Although there is obvious opposition to the current international balance of power, the majority of states seem to regard it as at least tolerable. A continuation of the status quo is thus minimally acceptable, even to states working toward its demise. As long as the United States does not employ its power arbitrarily, the situation would be bearable initially and grudgingly accepted over time. Mirror-imaging does not apply here. An attempt by China to dominate space would be part of an effort to break the land-sea-air dominance of the United States in preparation for a new international order. Such an action would challenge the status quo, rather than seek to perpetuate it. This would be disconcerting to nations that accept, no matter how grudgingly, the current international order—including the venerable institutions of trade, finance, and law that operate within it—and intolerable to the United States. As leader of the current system, the United States could do no less than engage in a perhaps ruinous space arms race, save graciously decide to step aside and accept a diminished world status. Seizing the initiative and securing low-Earth orbit now, while the United States is dominant in space infrastructure, would do much to stabilize the international system and prevent an arms race in space. The enhanced ability to deny any attempt by another nation to place military assets in space and to readily engage and destroy terrestrial anti-satellite capacity would make the possibility of large-scale space war or military space races less likely, not more. Why would a state expend the effort to compete in space with a superpower that has the extraordinary advantage of holding securely the highest ground at the top of the gravity well? So long as the controlling state demonstrates a capacity and a will to use force to defend its position, in effect expending a small amount of violence as needed to prevent a greater conflagration in the future, the likelihood of a future war in space is remote. Moreover, if the United States were willing to deploy and use a military space force that maintained effective control of space, and did so in a way that was perceived as tough, non-arbitrary, and efficient, such an action would serve to discourage competing states from fielding opposing systems. It could also set the stage for a new space regime, one that encourages space commerce and development. Should the United States use its advantage to police the heavens and allow unhindered peaceful use of space by any and all nations for economic and scientific development, over time its control of LEO could be viewed as a global public good. In much the same way the British maintained control of the high seas in the nineteenth century, enforcing international norms of innocent passage and property rights, and against slavery, the US could prepare outer space for a long-overdue burst of economic expansion.

#### Only SMDs can solve multiple scenarios for war & destruction

Institute for Foreign Policy Analysis 06 [Independent Working Group on Missile Defense, the Space Relationship and the Twenty-First Century, 2007 report, Washington D.C., August 28, 2006]

Missile defense has entered a new era. With the initial missile defense deployments, the decades-long debate over whether to protect the American people from the threat of ballistic missile attack was settled – and settled unequivocally in favor of missile defense. What remains an open question is how the American missile defense system will evolve in the years ahead to take maximum advantage of technological opportunities to meet present and emerging dangers. There is ample reason for concern. The threat environment confronting the United States in the twenty-first century differs fundamentally from that of the Cold War era. An unprecedented number of international actors have now acquired – or are seeking to acquire – ballistic missiles and weapons of mass destruction. Rogue states, chief among them North Korea and Iran, place a premium on the acquisition of nuclear, chemical, and biological weapons and the means to deliver them, and these states are moving rapidly toward that goal. Russia and China, traditional competitors of the United States, continue to expand the range and sophistication of their strategic arsenals at a time when the United States debates deep reductions in its strategic nuclear forces beyond those already made since the end of the Cold War and has no current modernization program. With a new administration, furthermore, the future development of even our limited missile defense system is in question. Furthermore, a number of asymmetric threats – including the possibility of weapons of mass destruction (WMD) acquisition by terrorist groups or the devastation of American critical infrastructure as a result of electromagnetic pulse (EMP) – now pose a direct challenge to the safety and security of the United States. Moreover, the number and sophistication of these threats are evolving at a pace that no longer allows the luxury of long lead times for the development and deployment of defenses. In order to address these increasingly complex and multifaceted dangers, the United States must move well beyond the initial missile defense deployments of recent years to deploy a system capable of comprehensively protecting the American homeland as well as U.S. overseas forces and allies from the threat of ballistic missile attack. U.S. defenses also must be able to dissuade would-be missile possessors from costly investments in missile technologies, and to deter future adversaries from confronting the United States with WMD or ballistic missiles. America’s strategic objective should be to make it impossible for any adversary to influence U.S. decision making in times of conflict through the use of ballistic missiles or WMD blackmail based on the threat to use such capabilities. These priorities necessitate the deployment of a system capable of constant defense against a wide range of threats in all phases of flight: boost, midcourse, and terminal. A layered system – encompassing ground-based (area and theater anti-missile assets) and sea-based capabilities – can provide multiple opportunities to destroy incoming missiles in various phases of flight. A truly global capability, however, cannot be achieved without a missile defense architecture incorporating interdiction capabilities in space as one of its key operational elements. In the twenty-first century, space has replaced the seas as the ultimate frontier for commerce, technology, and national security. Space-based missile defense affords maximum opportunities for interception in boost phase before rocket boosters have released warheads and decoys or penetration aids.

### Asian Space Race

#### China and the U.S. are in a global scramble for space dominance, fueling an Asian space race. This is the Most Dangerous Scenario, Leading To Global War And Making Conflict Escalation Inevitable

Morini, 2012:

(Daryl Morini. Ph.D Candidate At The University Of Queensland. The Coming U.S.-China Space Race. August 15, 2012.)

China and the U.S. are also assuming increasingly competitive stances on the diplomatic front. China will reportedly [not attend](http://www.e-ir.info/2012/06/26/geopolitical-challenges-to-implementing-the-code-of-conduct-for-outer-space-activities/) the next EU-sponsored negotiations for a Space Code of Conduct, scheduled for October 2012. Some have seen this as an effort by China (and Russia) to score national prestige points by achieving movement on their proposed [*Treaty on the Prevention of the Placement of Weapons in Outer Space (PPWT)*](http://i.cfr.org/content/publications/attachments/PPWT.pdf), rather than the Western-inspired Code of Conduct. These competitive dynamics might seem trivial, even Olympic-spirited, were they not part of a broader context of growing U.S.-China tensions, from the seas of Asia to the deserts of Mars. Nor should we forget the military significance of technological superiority in space in any modern war. The French strategist Vauban coined the military dictum: “He who holds the height holds the bottom.” Although space has no natural defenses, this has some resonance in outer space politics. As early as 2003 prescient analysts predicted that the U.S. and China were “on the threshold of a space race that could radically influence international security.” Dr. John Hickman recently issued a [stark warning](http://www.foreignpolicy.com/articles/2012/06/18/red_moon_rising) about China’s lunar ambitions, suggesting that a future Chinese space base was probable due to loopholes in the 1967 Outer Space Treaty. Even if decades away, a future compromised of great powers scrambling to colonize space, largely fuelled by an [Asian space race](http://thediplomat.com/2010/07/29/us-starting-asia-space-race/), is more plausible than we might imagine. The “terrestrial parochialism” of international politics, and of everyday life, makes this future appear more distant than it may actually be. Were it to materialize, the geopolitical implications on Earth would be dramatic. One need only recall how the colonial Scramble for Africa prefaced World War One among the European powers. The nascent U.S.-China space race is likely to become increasingly militarized. Consider the military appeal of establishing “space superiority” by launching a preventive strike, thereby blinding an enemy’s satellites and, by extension, his command and control capabilities. The logic of space warfare would loom large at the outset of any U.S.-China hot conflict over Taiwan or the South China Sea. Officially, as Erik Seedhouse noted, the “Chinese and the US both appear to attach great importance to the prevention of an arms race in space.” In practice, however, such scientific breakthroughs as the Curiosity landing have “provided the conditions for space to become a platform for warfare – a situation China and the U.S. both understand and neither seems willing to avoid.” This space race is now in full swing, and the race to prevent it is stalling.

#### Allowing Chinese Dominance of Space Causes Asian Space War

Foust, 2012:

(Jeff Foust, Editor And Publisher Of The Space Review. Review: Asia’s Space Race. January 3, 2012.)

This emerging competition is the focus of the new book Asia’s Space Race by James Clay Moltz of the Naval Postgraduate School. As he notes in the book’s introduction, the title may be a bit of a misnomer: unlike the bipolar competition between the United States and the former Soviet Union in the original space race a half-century ago, this environment features multiple races among China, India, Japan, and other emerging space powers in the region. Each country has its own capabilities, interests, and goals in space, resulting in both competition and cooperation with each other and with other nations, including the US. The bulk of the book examines the histories, technologies, and policies of the major Asian space powers, with one chapter each devoted to China, India, Japan, and up-and-coming South Korea; a fifth chapter looks at the various smaller space powers in the region, from Pakistan to Indonesia. Those sections are bookended by chapters that examine the bigger picture, including the interactions among those countries. “While China may be competing with the United States in space, it is equally interested in its relative place with respect to its Asian neighbors,” he writes in an introductory chapter reviewing national motivations and trends in the region. “Moreover, when China sprints forward in its space activity, there is no question that India, Japan, and South Korea all feel challenged and want to react.” One key factor that Moltz expresses concern about in the book is the lack of cooperation among the major Asian space powers: China, India, and Japan are more likely to cooperate with non-Asian nations, like the US, Europe, and Russia, or with smaller Asian space powers, than with each other. That, coupled with “rapidly rising” military space spending by those countries, increases the risk of military confrontation in space among those nations, whose adverse impacts, like orbital debris from anti-satellite weapons, could affect all spacefaring nations.

#### That Goes Nuclear. US Action Is Needed to De-Escalation the Arms Race.

Hitchens, 2002:

(Theresa Hitchens. Director Of The U.N. Institute For Disarmament Research. US Space Policy: Time To Stop And Think. October-November 2002.)

An arms race in space would threaten international stability. Space weapons have inherent first-strike capabilities and, much like nuclear weapons, a dangerous use or lose nature, making them destabilising factors in any military competition. Consider, for example, the high probability that bitter, nuclear-armed enemies India and Pakistan would enter any space arms race. If constructed in the next few years, an international arms control regime would still have a real chance of preventing the outbreak of an arms race in space, by any country. In addition, by limiting other nations' pursuit of space weapons and/or counterspace weapons, the United States might be able to maintain its current military edge for a longer period of time.

#### And, Chinese space dominance makes Sino-U.S. war inevitable

Teng and Lee, 2008:

(China’s Militarization Of Space: Motivations And Implications For U.S.-Chinese Relations.2008. Lee, Kuo Hsiung. Teng, Chung Chian. Chung Chian Teng, Is A Dean of National Chengchi University's College of International Affairs.)

China's irresponsible actions in space only underscore that growing trend, and point to a disturbing strategic environment in the years ahead. That said, the likely U.S. response to any AS AT attack on an American government satellite, which would be viewed much in the same way that an attack on U.S. terrestrial forces would be (i.e. an act of war), probably rule it out barring a massive miscalculation on the part of the Chinese leadership or a Chinese decision to engage in a Pearl Harbor style sneak attack. The danger lies in the fact that as the PRC's counter-space capabilities grow and become more subtle with the development of micro-satellites, nano-satellites and other less conspicuous AS AT platforms which could potentially interfere with U.S. satellites without going so far as destroying them, the U.S.-Sino relationship in space may become more unstable because the potential Chinese menu of options would be increasingly tempting, offering as it would ever more possibilities at a time when the U.S. reliance upon satellites was ever greater. To offset this scenario, which would mix a dangerous brew of Chinese capabilities with U.S. vulnerabilities in a situation that could escalate rapidly to general war, the U.S. can be expected to not only diversify and strengthen its orbital assets, but also to develop better air-breathing reconnaissance platforms, such as smaller, stealthier Unmanned Arial Vehicles (UAV) with longer dwell times in order to have the ability to rapidly restore lost satellite coverage in a crisis. This U.S. diversification and multiplication of reconnaissance assets would thereby both strengthen the durability of its C4ISR network and force the PRC to plan for more targets, thus making it a less tempting option and creating an environment for better deterrence. Let us now conclude this chapter with a summation and a brief policy suggestion.6.3 Offensive Realist Policy Prediction The successful Chinese ASAT test the world witnessed in the January of 2007 was not a diplomatic anomaly caused by a PRC desire to force the issue of space arms control nor the result of inter-bureaucracy miscommunication, rather, it was the natural progression of the Chinese governments unique party-military relationship and the PLA's strategic thinking. Despite its rhetoric of peace and shared prosperity, China is aggressively seeking to defeat the Taiwanese people psychologically and trump the U.S. militarily through the use of counter-space weapons. It would be a great folly for the U.S. to limit itself in space because not only does it enjoy a great advantage there, any treaty limiting the weaponization of outer space would be impossible to verify given that China's space program is opaque and military-controlled. It seems clear that American policymakers understand the importance of outer space to U.S. national security, and for that reason one can expect an increase (albeit a covert one) in the build-up of space control assets, especially those that would provide for better space awareness, in conjunction with terrestrial elements such as UAVs to provide a measure of redundancy in case orbital assets were to become disabled or destroyed. For the reasons illustrated in this study, China can be expected to continue down the road of space weaponization that it has already traveled for years, and space will ever more deeply become the realm of a cold-war-style strategic competition between the U.S. and the PRC. This is undesirable given the current level of international cooperation enjoyed in outer space, however, the anarchic nature of international relations makes it unavoidable that great powers hedge against each other, and one can hardly think of two great powers with a greater need to hedge than the U.S. and the PRC.

#### U.S.-China War Prompts a Full-Scale Nuclear Attack; Official Statements Prove

Blair, 08:

(Bruce G. Blair, No Date. General Zhu and Chinese Nuclear Preemption. President Of The World Security Institute. http://www.chinasecurity.us/index.php?option=com\_content&view=article&id=257)

A leading military strategist in China recently jolted an audience of foreign journalists with a radical vision of China’s conduct during a future war with the United States over Taiwan. Maj.-Gen. Zhu Chenghu, dean of China’s National Defense University, espoused the view that China would have no choice but to respond with nuclear weapons if the United States attacked Chinese territory with conventional (non-nuclear) forces during such a conflict, a view that contradicts the longstanding nuclear doctrine of China. Zhu outlined a scenario in which China, facing defeat in the conventional phase of combat, would cross the nuclear threshold to launch a massive preemptive strike that would destroy hundreds of American cities.

#### Only Aggressive U.S. militarization of space deters China’s rise and prevents an Asian conflict

Quigley, 2009:

(Erik N. Quigley. Major, U.S. Air Force. April 2009. Geo-Political Considerations To China’s Rise In Space Power)

Although it is not clear how long the Long War (GWOT) will consume a good portion of the annual US defense budget, increasing DoD funding to space programs is critical not only in supporting the GWOT, but also in deterring threatening space-faring nations such as China. The argument to maintain the space control advantage is emphasized from General Thomas D. White‘s statement, ―capability to deter war is enhanced by the ability to control space and that, in future wars, space control will be coequal with air and sea control.‖ 84 Today‘s DoD budget however does not reflect an equal funding stream of air-land-sea-space and cyber domains. In order for the US to be successful with deterring China‘s rise in space power, they need to be first to the punch – they must establish and maintain an aggressive offense to develop, procure and posture US military space assets similar to the effort given during the nuclear arms race of the Cold War. Leading space theorists such as Jim Oberg and Everett Dolman suggest that weaponizing space is inevitable.85 If this is to be the case, the US cannot afford to lose this race of controlling space. Oberg agrees that the US cannot afford to lose this opportunity (to be the first to field them), otherwise it will likely find itself held hostage to the state that does.86 Whatever the solution, a geo-political consideration to tactfully assess this space race is required so as not to diminish the years of good economic relations with China. The US cannot be first to the punch without the proper care, feeding, and funding of its space acquisition programs. Consistent with rebalanced national strategies and space policy, the DoD along with the Air Force should re-prioritize requirements for programs that support both the GWOT long war and emerging space threats such as China. Strategy and policy changes should drive funding allocation justified by events such as the recent Chinese ASAT shoot down.

### Terrorism Module

#### Space Militarization Solves For Nuclear, Chemical, And Biological Terrorism

Dolman and Cooper, 2011:

Everett C. Dolman, Professor of Comparative Military Studies at the US Air Force’s School of Advanced Air and Space Studies, Henry F. Cooper, Jr., Director of the Strategic Defense Initiative Organization, Department of Defense, March 7, 2011, “Toward a Theory of Space Power, Chapter 19: Increasing the Military Uses of Space,” http://www.ndu.edu/press/lib/pdf/spacepower/space-Ch19.pdf

Weapons in space could provide the global security needed to disrupt and counter small groups of terrorists wherever they operate, at the very moment they are identified. Currently, UAVs, dependent on space support for operations, fly persistent missions above areas of suspected terrorist activity in Iraq, providing real-time intelligence and, in some cases, onboard weapons to support ground forces in a specific area. Tactical units are informed of approaching hostiles, and due to all-weather and multi-spectral imaging systems, both friendly (Blue Force) and enemy tracking can occur throughout engagement operations. When ground troops are unable to respond to threatening situations beyond their line of sight or are unable to catch fleeing hostiles, armed UAVs can engage those threats. The other option in a large-scale counterterror operation is to bring in an overwhelming number of troops, enough to create a line across the entire country that can move forward, rousting and checking every shack and hovel, every tree and ditch, with enough Soldiers in reserve to prevent enemy combatants from re-infiltrating the previously checked zones. America could in this manner combat low-tech terrorism with low-tech mass military maneuvers, perhaps at a cost savings over an effective space-based surveillance and engagement capability (if one does not count the value of a Soldier's life), but we do not think dollar value is the overriding consideration in this situation. Terrorism in the form of limited, low-technology attacks is the most likely direct threat against America and its allies today, and space support is enabling the most sophisticated response ever seen. All-source intelligence has foiled dozens of attacks by al Qaeda and its associates. But what of the most dangerous threats today? Weapons of mass destruction, particularly nuclear but also chemical and biological ones, could be delivered in a variety of means vulnerable to interception if knowledge of their location is achieved in time for counteroperations to be effective. In situations where there is no defense available, or the need for one has not been anticipated, then time is the most precious commodity.

#### Extinction

Alexander, 2002:

(Professor at George Washington, Yonah Alexander, FDCH Testimony before the Immigration and Claims subcommittee, 2/28, <http://judiciary.house.gov/legacy/alexander022802.htm>)

Scores of countries have experienced sporadic and relentless subnational and government-sponsored terrorism in the post-World War II period. Epitomizing the state of anarchy of contemporary life and increasingly becoming a universal nightmare, terrorism includes: kidnapping of businesspeople, assassination of political leaders, bombing of embassies, and hijacking of aircraft. Modern terrorism, in contrast to its older features, has introduced a new breed of warfare in terms of threats, technology, victimization, and responses. Perhaps the most significant dangers that evolve from modern day terrorism are those relating to the safety, welfare, and rights of ordinary people; stability of the state system; health of economic development; expansion of democracy; and possibly survival of civilization itself

### IF TIME

#### Space Militarization Is Inevitable. Multiple countries are already militarizing space and testing ASATs.

Hitchens, 2012:

(TIME Magazine, Interviewing The World Economic Forum’s Teresa Hitchens, Director Of The U.N. Institute For Disarmament Research. October 3, 2012. What If Space Was The Next Frontier For War.)

While it may sound like science fiction, a number of the world’s major militaries are already preparing for combat in space. The World Economic Forum, in collaboration with TIME, spoke with Theresa Hitchens, director of the U.N. Institute for Disarmament Research (UNIDIR). She warns that strikes against satellites could push [earth](http://topics.time.com/earth/) wars to a new level. (The views expressed here are her own, not those of the [United Nations](http://topics.time.com/united-nations/).) Is there really a threat for conflict in space? We may not be about to see a real life Death Star hovering into view, but we will see earth wars elevated into space. It is almost inevitable that if a major conflict arises between developed powers, satellites will become targets. This was not the case ten years ago, but since then satellites have increasingly been integrated into a nation’s ability to project power and pursue a war. They are used for military communications, for mapping and to guide bombs. A modern army could not operate in a satellite-free environment. This is worrying when you consider that, if a satellite is destroyed or damaged, it is not only the military functions that are taken out: most of them carry out all kinds of essential civilian services, too. What warning signs have you seen already? Three nations have tested anti-satellite weapons in the last three decades: the United States and the Soviet Union in the 1980s, then China in 2007. The latter shocked a lot of people. China sent a kinetic weapon – a solid warhead – slamming into one of its own weather satellites, causing an explosion which created thousands of pieces of debris in one of the most crowded orbits around earth. The worst part was not the demonstration of capability, as pretty much everyone knew China could do something like this, it was the question of why they chose to demonstrate it in the manner in which they did. What’s more, any country that has a medium-range ballistic weapon and a reasonable commercial satellite programme can develop an anti-satellite weapon, and there is no real international agreement on what norms of behaviour are acceptable. I am pretty sure that France, India and Israel all have the capacity.

#### Only U.S. Space Militarization Prevents Competition In Space And Deters Conflict Globally

Fedel and Carter, 2012:

(Space Weaponization: What Is The Future Of Space. Alex Carter And Nassim Fedel, Writing For Agora Magazine. May 2, 2012.)

The clear solution to these problems is that the U.S. must be the first to launch weaponized satellites. Doing so would put the U.S. at the top of the Earth’s gravity well, thereby definitively preventing competitors from weaponizing space and from threatening our satellites. Additionally, this policy would reduce the likelihood of global conflict on Earth. If the U.S. were to weaponize space, it would have an easy, extremely powerful, and near-instantaneous response to crises anywhere on Earth, making its ability to make diplomacy much more viable and its threats more credible.[[9]](http://www.blogger.com/blogger.g?blogID=1002466382558498914#_ftn9) Moreover, as offensive realism dictates, space power would provide for an additional offensive mode of deterrence, allowing the U.S. to actively and preemptively stop attempts at reversing the global order.[[10]](http://www.blogger.com/blogger.g?blogID=1002466382558498914#_ftn10)