# Round 2 1NC v. San Mateo ZS

## 1NC

#### The US government is perfectly positioned to focus on space governance and let private entities develop tech – this avoids bilateral or unilateral missions that increase the chance for conflict and space weaponization while creating effective multilateral agreements that spill over

Rosenberg and Marber 21 (Mark Y. - CEO of Geoquant and an adjunct professor at Columbia University’s School of International and Public Affairs, Peter - teaches at Harvard University and is a senior portfolio manager at Aperture Investors, 2/22, “America Needs a Supercharged Space Program,” [accessed 9/25/21], <https://foreignpolicy.com/2021/02/22/biden-space-force-race-policy-rockets-china/>)

In 2015, the U.S. government granted U.S. citizens the right to own any materials they extract in space, blowing open the door for civilian space business. In 2018, China launched a reconnaissance rover on the moon’s far side that’s been gathering data for more than 18 months now. In late 2019, then-President Donald Trump launched the formation of the U.S. Space Force as part of the military, while early 2020 saw the National Aeronautics and Space Administration (NASA) sign a contract with Axiom Space to build the first commercial space station. And in October 2020, the United States led the signing of the Artemis Accords, a set of bilateral agreements on space with Australia, Canada, Italy, Japan, Luxembourg, Italy, the United Kingdom, and the United Arab Emirates, which deliberately skirted the United Nations and did not include space rivals such as China and Russia. (Ukraine and Brazil were later added to the accords.) Although this pact claims to affirm the Outer Space Treaty, it actually increases the potential for conflict by expanding the interpretation of commercial space law while drawing hard geopolitical borders. Without Russia and especially China on board, much of the world will see the Artemis Accords as the informal rulebook of a cliquish club rather than a true multilateral agreement. Meanwhile, a new space race is gathering stream: In addition to this year’s unmanned missions to Mars, both the United States and China are planning moon landings later this decade. The Biden administration must prioritize a more multilateral approach to space governance than what was taken under Trump. Just like on Earth, a lack of international standards in space will likely lead to chaotic, wasteful competition. A 2011 U.S. law blocking NASA from cooperating with Chinese agencies has already shut China out of the U.S.-Russian International Space Station, prompting the Chinese to start building their own while partnering with Russia on a lunar research station. Revising this law would be a good place for the Biden administration to start. Cooperating with China in space might be a sensible hedge against growing conflict on Earth. Unregulated space activity could create a myriad of problems from accidentally or intentionally blocked data transmission to orbital pollution from too many space objects. Indeed, U.S. companies are currently the worst offenders, highlighting the need for more targeted regulation. Just a few uncontrolled collisions could generate enough debris to render near-Earth space unusable. And of course, no one wants to see space weaponized with extremely expensive, escalating arms races. Given private U.S. companies’ increasingly aggressive push to expand space exploration, the U.S. government is in a position to structure a more effective extraterrestrial regulatory regime. Renewed U.S. leadership founded on rebuilt space capabilities will be key to any hope for multilateral space cooperation. A more dedicated focus on space governance and a more aggressive approach to exploration can be the underpinnings of a future “New Space Deal.” A supercharged space program can help build entire new industries, create new jobs, green the economy, turbocharge next-generation communications, and expand the frontiers of science and technology. By uniting Americans behind a common purpose, it could even help mend the country’s frayed democracy. It would also reestablish Washington’s leadership in the fight against climate change and for a stronger multilateral system. Who else but the United States could even contemplate such a bold plan?

#### Non-state actors in space are conflict dampeners – they avoid geopolitical tension and have financial incentives to keep conflict low

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In the terms of privatization and space security, space remains relatively untapped, but commercial and military benefits from space exploration/exploitation could even lead to ‘privatization of space’. Such privatization will result from growing pressure on spacefaring countries to defect from cooperation, since is less viable with good number of multiple actors who entered the space.36 However, space policy and space research are characterized by very high costs, which are rather impossible to bear by private companies, limited by economic calculation. As pointed out earlier, under-investment in technological development by private companies it is related to the fact that these actors are not focused on profits of a social nature, such as improving the quality of life of the recipient of the product.37 This makes some technology, potentially beneficial to society, not developed or introduced into use, because the profit margin is too small to make this viable for commercial players. To conclude, privatization of space security can develop in unexpected ways, but in today’s space environment private actors would rather play the role of security regulators than security providers. When investment in space technologies is less profitable than other areas of economy, private actors would focus on soft law and conflict prevention in space, and new private initiatives will appear. For example, apart from important space companies, as SpaceX or Blue Origin active in outer space, other private actors as Secure World Foundation (SWF), who focus on space sustainability, will play more important role in crafting international guidelines for space activities.38 This path the way for future solutions and projects, as cleaning the space debris, extracting resources from asteroids and planetoids, refuelling satellites, providing payload capabilities for governmental entities on market-based logic, will be based on activity non-state actors, providing soft law and regulatory solutions, where space faring states are unable to find any compromise. Therefore private companies will be in fact global (or space) regulators, as part of UNCOPUS, being involved in space activities.39 The last argument for private involvement in space security comes from an approach based on common good and resilience of space assets, emphasized by the Project Ploughshares, as an important part of space security. As of 2017 there are more than 700,000 man-made objects on the Earth’s orbit bigger than 1 cm, while 17,000 of them are bigger than 10 cm.40 Some of them are traced by SSA systems, both American and European, but these systems are public-military owned, and private operators are not granted any access to this data. Any collision of space object with space debris, even with small particles, might result in a chain reaction, called Kessler’s syndrome, and not only private but public, and military assets will be destroyed or impaired. In such conditions, a reluctant cooperation between the public and private sector, and unwillingness to share vulnerable data by public actors seem to confirm that private space activity is more than necessary. This is an apparent case when logic of mistrust between state powers must be overcome by private actors, perhaps by suggesting common preferences for debris mitigation, and space situational awareness. In the case of space debris, Space Data Association, an initiative supported by private sector, with its main aim to enhance data sharing between commercial satellite operators, could be an example of nascent public good provided by private actors for the sake of global security.

#### Space weaponization and arms racing ensure space war goes nuclear – only strong private competition can check conflict

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Abstract. The military use of space, including in support of nuclear weapons infrastructure, has greatly increased over the past 30 years. In the current era, **rising geopolitical tensions between** the United States and Russia and China **have led to assumptions** in all three major space powers **that warfighting in space now is inevitable, and possible because of rapid technological advancements**. New capabilities for disrupting and destroying satellites include radio-frequency jamming, the use of lasers, maneuverable space objects and more capable direct-ascent anti-satellite weapons. **This situation, however, threatens international security and stability among nuclear powers. There is a continuing and necessary role for diplomacy, especially the establishment of normative rules of behavior, to reduce risks of misperceptions and crisis escalation, including** up to the **use of nuclear weapons**. U**.S. policy and strategy should seek a balance between traditional military approaches to protecting its space assets and diplomatic tools to create a more secure space environment.** I. INTRODUCTION Outer space is recognized by all nations as “the province of mankind” not subject to national boundaries or appropriation via both treaty – especially the 1967 Outer Space Treaty1 – and by the practice of nation states. Since the dawn of the space age, the use of satellites has become integral to the global economy, including providing communications, weather services, mapping, precision timing and navigation services for shipping, secure crossborder banking, and Internet connectivity. Every state has both an interest in making use of space, and reason to deal with its use by other states, because **the activities in space by one actor have the potential to impact all others**, for good or for bad. In addressing international and national security, and nuclear security in particular, the space environment has played a role of great importance from almost the beginning of the nuclear age. The first satellites launched by the Soviet Union and the United States were oriented toward seeking information on what was transpiring in areas controlled by the other, and to verify bilateral arms control agreements. While in short order space systems also were integrated to the offensive uses of long-range delivery systems by providing photographic information about potential targets, strategic space systems were during the Cold War widely viewed as stabilizing the Superpower nuclear competition. The use of space for military purposes has continued into the present era, with increasing capabilities to take advantage of large segments of the electromagnetic spectrum for acquiring intelligence, communicating globally, and generally supporting ways of using nuclear weapons both for deterrence, and, should deterrence fail, use of those weapons against an adversary. Most of the nuclear weapon possessing states operate satellites for these purposes. Perhaps as importantly, space systems over the last two decades have become integral to the tactical warfighting ability of many modern states – a situation that has complicated the status of space systems as strategically stabilizing. Indeed, the growing use of space by many countries to achieve victory on the battlefield has increased both the vulnerability of militaries to attacks on their space systems and has, at the same time, increased their value as potential targets in a war. Over the past 50 years, the Soviet Union, the United States, and China have carried out experiments in or aimed at the outer space environment – mostly the area close to the atmosphere in Low Earth Orbit (LEO) – that show the capability to destroy a satellite, or to disrupt its functions. The specter of space warfare for many years has, among other negative consequences, raised concerns that a state’s nuclear retaliatory capability could be compromised. This concern also applies more generally, of course, to an ability to disrupt communications functions for other military, or civilian, purposes. In the 1980s, there was a period when the United States, and perhaps others, explored whether systems based in space could be used to destroy an adversary’s intercontinental ballistic missiles, or their payloads. The so-called Star Wars program under the Reagan Administration envisioned the deployment of a system of satellites that would seek to destroy the missiles/warheads launched at the United States. One technology explored envisioned detonating a nuclear explosive to generate a beam of x-rays that would put out of commission the adversary’s warhead. Thus far, such technologies have not succeeded in playing a role in the nuclear-weapon situation globally. However, the U.S. descendant of the Star Wars program – currently limited to conventionally equipped, ground- and sea-based missile defense interceptors with limited capability against a full-blown nuclear attack – continues to stress nuclear deterrence and stability between the United States and Russia, as well as China, which maintains a much smaller nuclear arsenal than the Cold War adversaries. However, recent missile experiments by China have demonstrated the vulnerability of the geosynchronous equatorial orbit (GEO), where many hundreds of satellites are “parked” carrying out communications and other functions, including nuclear weapons support systems and spy satellites. II. INCREASED THREATS INVOLVING OUTER SPACE Since the first satellites were launched in the 1950s by the Soviet Union and then the United States, the Russian Federation, the United States, China, India, Japan, and other states have, without much coordination, launched so many satellites into space into various orbits and at various altitudes that there is currently a strong risk of both congestion and competition. There is no global regime for regulating outer space activities. The Outer Space Treaty of 1967, to which all the launching states, and most others, are party2 mandates that outer space be used solely for peaceful purposes, and prohibits the stationing of nuclear or other weapons of mass destruction in that environment. (The Treaty does not prohibit the transit of nuclear weapons, e.g. as a payload on a submarine-launched ballistic missile, through outer space; furthermore under common law practice, defensive military activities are tolerated as compliant with “peaceful purposes.”) The Outer Space Treaty, however, makes it clear that states are responsible for their own space activities, and compliance with international law. And while there are a number of other spacerelated treaties, UN principles and voluntary agreements managed by various UN and multilateral bodies, a nation’s activities in space are largely regulated by that nation alone. There is no international legal requirement for any one state to coordinate its satellite launches or maneuvers with others. Environmental Threats: Crowding and Debris Some 1,500 operational satellites are now in orbit, owned by more than 80 states or other entities. These states and entities have varying levels both of proficiency and of knowledge of the established laws and rules affecting space. In the radio frequency band of the electromagnetic spectrum, interference is rising, especially in the GEO regime. Some of this interference is deliberate, undertaken for political purposes, despite the fact that deliberate interference is one of the few legally binding restraints in the international space arena3 . The evolution in satellite technology has led to the wider use of smaller satellites, including so-called “Cubesats,” that can be deployed in constellations, especially in LEO. The number of operational satellites is expected to rise to many thousands within the decade. LEO, in particular, is becoming incredibly crowded with satellites, making tracking of on-orbit objects extremely difficult. Furthermore, many small satellites have no ability to maneuver to avoid collisions with other satellites and space debris. The half-century of using space has resulted, from the breakup of satellites and other activities, in a considerable amount of on-orbit debris – including satellites no longer in use, parts of satellites that have broken up, launcher stages, nuts and bolts, and debris from the deliberate destruction of satellites. The United States and others track some 23,000 orbiting pieces with a diameter of greater than 10 cm. This debris is especially dangerous if a satellite or transiting vehicle collides with a piece, since the closing velocity of such a collision on-orbit is very high – some 7.5 kilometers per second (faster than a bullet) in LEO. Worse yet, even very small debris, most of which cannot be detected much less tracked, can destroy an operational satellite; it is estimated that some 500,000 to one million pieces of debris smaller than 10 centimeters exist on orbit. **It is widely agreed that new international measures to better coordinate space activities are required to ensure that the space environment is sustained**. In 2007, the United Nations Committee for the Peaceful Uses of Outer Space (COPUOS) in Vienna, Austria, agreed on a set of guidelines for the mitigation of space debris, which are slowly being implemented by many space-faring states. It may be that such measures will eventually require removal of debris from orbit, as the decay of debris from space into the atmosphere where it burns up (or falls on Earth) is a very long-term prospect, taking as much as 25 years in LEO. Sadly, the lifetime of debris in GEO, like diamonds, is practically forever. COPUOS currently is working on a set of recommended best practices to ensure the “long-term sustainability of space.” COPUOS has a 2018 deadline to finish this work; however, there is already discussion of follow-on effort that may include international guidelines for debris removal. Increasing Military Tensions in Space In the geopolitical sphere, compared with the period following the breakup of the Soviet Union, the current decade is witnessing increased tensions between the United States and Russia, and between the United States and China. The geopolitical situation in space has been further eroded by the proliferation of experimentation with and/or deployment of dual-use technologies with “counterspace,” i.e. satellite attack, capabilities. As noted above, China, Russia and the United States all have tested (or in some cases deployed) such technologies in both LEO and GEO. The United States continues to have an advantage in military space capabilities, but its edge is eroding as China and Russia dedicate more resources. Most technologies involved in sustaining systems in orbit are dual-use, but certain specific activities are raising suspicions about potential intended weapons use. The capability to maneuver satellites is particularly relevant. Russia placed a satellite called Luch/Olymp in GEO that maneuvered or drifted over a considerable range, and at several points in 2015 came extremely close to commercial satellites owned by Intelsat.4 Intelsat called the move “irresponsible,” but their request for information from Russia went unanswered. The maneuvers further prompted concern at the U.S. Defense Department about the satellite’s mission, which has not been revealed by Moscow. The United States also has carried out programs in GEO that could have potential weapons capabilities. For example, the PAN, an acronym for Palladium at Night, is a classified program apparently dealing with communications platforms, and perhaps providing other capabilities.5 The Geosynchronous Space Situational Awareness Program (GSSAP) is a U.S. military satellite constellation that also maneuvers in orbit, designed, according to the Pentagon, with the objective of inspecting other satellites orbiting in GEO. Such activities are known as Rendezvous and Proximity Operations (RPO), and have a number of benign applications such as satellite refueling, inspection and repair. Russia is carrying out other such experiments in LEO, as are China, the United States, Japan and Sweden. The commercial applications of maneuvering satellites are also increasing. Among the number of more directly identifiable counterspace technologies now available, the most widespread are ground-based radio-frequency jammers, which can be used to disrupt satellite communications and operations. In addition, there are efforts to develop lasers for disrupting or degrading systems based in space. Russia, China and the United States have also carried out projects involving terrestrially based missiles carrying anti-satellite payloads. The United States as early as the 1980s launched missiles from an F-15 fighter jet with this objective. A 2007 Chinese test, involving the destruction of a non-functional Chinese weather satellite in LEO, released a considerable quantity of debris. The United States subsequently launched a missile from an Aegis cruiser that was advertised to have the objective of destroying a satellite in a decaying orbit, but this did not prevent speculation that the mission also had the objective of demonstrating a similar capability to that of China. Over decades, the U.S. missile defense program has also heavily relied on the space environment, for early warning, for communications, and as a place for engaging and destroying hostile systems. Noted above is the Reagan Administration’s “Star Wars” program, pursued with the idea of creating a “shield” against intercontinental ballistic missiles. **The harder-line rhetoric that has been employed in recent years also has had an inevitable impact of raising tensions**. The United States has pivoted from an approach of “strategic restraint” to one emphasizing “warfighting.”6 In particular, the budgets for providing resiliency in space systems and counterspace capabilities have been increasing. At the same time, Russian accusations that U.S. activities have a hostile objective, and its responses to U.S. representations, have become shriller. Russia has called the anti-ballistic missile system SM-3 2A an anti-satellite weapon, while touting its own objectives for acquiring anti-satellite capabilities. In 2013, China tested a missile, the Dong Ning-2, which appears capable of reaching satellites in GEO. Chinese military space activities lack transparency, but it seems clear that such activities include the objective of being able to exercise counterspace actions. Most troubling, there has been a lack of serious dialogue among these Big Three states. Multilateral Efforts to Reduce Risks For many years, a direct approach to concerns about the potential for weaponizing space (space has been militarized since the dawn of the space age, but so far cannot be said to have been weaponized) has been debated within the United Nations, as well as at the Conference on Disarmament in Geneva. The Russian-Chinese cosponsored initiative, on the Prevention of an Arms Race in Outer Space, has been on the agenda of the Conference on Disarmament since 1985, and under that agenda item Moscow and Beijing have proposed a treaty to ban weapons in space.7 However, the Conference has been all but immobilized by wider disagreements since that time; and the United States remains firmly opposed to the proposed treaty. There have been a number of efforts to set norms of behavior in space in order to guard against misunderstanding and conflict in space. Most recently, the 2013 UN Group of Governmental Experts (GGE) on Transparency and Confidence-Building Measures in Outer Space Activities released a set of recommended initiatives for states to implement, including improved communications about objects in orbit.8 Unfortunately, little work has been done since to implement the recommendations, either at the multilateral level or by individual states. However, the United States, Russia and China have recommended that the UN Disarmament Commission, based in New York, and the deliberative body on arms control issues, take up the question of implementation of the GGE recommendations. While the initial proposal has been received favorably, a decision regarding whether to put the issue on the Commission’s formal agenda will not be made until Fall. III. POLICY QUESTIONS FOR THE UNITED STATES In view of the increased uncertainties affecting the use of outer space, particularly in the area of international security, the United States needs to address several issues with some urgency. First, what is the appropriate mix of resiliency measures to apply in the coming years? A subsidiary question in this regard is what is an appropriate role for commercial providers? And should the U.S. military switch to constellations of small satellites for some national security missions? The budgetary implications of achieving objectives, and establishing appropriate requirements, are important components of pursuing this mix. And there is the inevitable bureaucratic overlap between the Department of Defense and the Intelligence Community. Such “turf” issues require constant attention lest they adversely impact on the fulfillment of national, vice institutional, objectives. Lengthy acquisition programs put systems at risk of becoming obsolescent earlier than they would otherwise become outdated. As part of this latter issue, the United States will need to consider what reforms are needed in the acquisition process, and related organizational arrangements. The integration of Department of Defense and Intelligence Community programs and activities is inevitably a delicate matter; it will require especial focus from the White House, in particular as resiliency is now being embedded into the requirements for acquisition of new systems. A more far reaching issue is how best to strike a balance between the defensive aspects of counterspace and the offensive aspects. And integral to addressing this balance is the impact of U.S. options to respond to hostile space activities on the stability of the strategic/nuclear relationships: U.S.-Russia, U.S.-China, and a large number of other such relationships involving the nuclear-weapon-possessing states. If “arms racing” resumes, or, in the case of India and Pakistan, continues, how will the use of space, specifically for counterspace activities, impact on these races, and vice-versa? Will there be a deterioration in nuclear deterrence? Will an offensive strategy involving the targeting of an adversary’s nuclear-related satellites emerge? These are questions that beg answers in the near-term, as budgetary and policy decisions are being made. **It is also important to consider the role of diplomacy in dealing with international security for outer space.** Diplomacy, in the form of both self-restraint and in reassurance of potential adversaries regarding intentions, has been a part of the tool kit for managing competition in space from the beginning of the space age. Can effective “rules of the road” be further developed? The limited success, but slow pace, of multilateral efforts should not be seen as failure, however. Diplomacy is a difficult business, often characterized by a “one step forward, one step back” dynamic. There is some optimism to be found in the ongoing COPUOS effort, which while a slightly sideways approach, will have positive impacts on international security if successful. While the Disarmament Commission has little power, the advent of discussions there would provide a much needed multilateral forum for addressing the security issues for space given the decades-long impasse at the Conference on Disarmament. Finally, **one should not overlook the value of bilateral diplomacy, particularly among the Big Three space powers. Further work will also be needed to regulate the proliferation of technologies in the commercial sector**. This will likely involve export control, and measures for the management of “traffic” in space (STM). However, care must be given to weigh national security concerns against the needs of commercial industry to thrive in the international marketplace. There is a tendency in the national security community to try to “close the barn door after the horses have escaped” that must not be indulged in the space domain, given the reliance of the national security sector on commercial capabilities and technological innovation. IV. THE NEED FOR A “TIME OUT” To date, no state is deploying dedicated anti-satellite weapons. Testing of capabilities does not a program make. That said, the trend lines are currently negative and require both time and analysis to mitigate. It would be irresponsible for the United States, or any other country, to leap to conclusions about the “inevitability” of all-out war in space. A balanced strategy, which combines resiliency, deterrence, and diplomacy **will be required to** protect national security and **ensure international security**. While development of some anti-satellite capabilities for potential future use may be wise, a run-away space arms race is not desirable for any party. It may be that a viable modus vivendi could be a situation of “implied deterrence:” i.e., the development of dual-use technologies with inherent weapons capabilities in a transparent manner so as to provide the knowledge to others that, if pushed, antisatellite weapons could be deployed. And despite the difficulties to date, **the prospect of the multilateral establishment of norms shows some possibility of promise.** This involves the implementation of recommendations by the Group of Governmental Experts discussed above; of the COPUOS LTS (long-term sustainability) best practices work making progress by 2018; the successful efforts to codify the legal regime that are underway (e.g., those at McGill University in Montreal), and perhaps the UN Disarmament Commission addressing TCBMs in 2018. These efforts must be given a chance to ripen, however much frustration is involved in the processes. It can perhaps be helpful to think of the world as being surrounded on all sides by a large fishbowl, of indefinite dimensions in the outward direction, with the atmosphere at the intersection between “outer” space and the land and waters below. Looked at in this way, human activities in outer space have little room to be confined to a single state: the world as a whole is impacted by those activities. Accordingly, when dealing with outer space, traditional concepts of absolute roles for state sovereignty must inevitably be modified to serve the objectives of global peace, security and stability. Whether this reality will at some point lead to an appreciation that reliance on force, nuclear weapons in particular, cannot play the role in space that it does on the Earth, remains to be seen.

### Innovation good

#### innovation solves poverty and the environment

Harte and Harte 12

John, Professor of Ecosystem Sciences at the University of California, Berkeley and Mary Ellen, biologist and columnist who writes on climate change and population, “Alarmism Is Justified”, Foreign Affairs, 00157120, Sep/Oct 2012, Vol. 91, Issue 5

The Limits to Growth predicted catastrophe: humanity would deplete natural resources and pollute itself to death. Its solution was less economic growth, more recycling, and organic farming. My essay documented how the book's predictions were wildly off, mainly because its authors ignored how innovation would help people overcome environmental challenges. Because the book's goal was so dramatic -- averting the end of the world -- its recommendation was for society to simultaneously do everything in its power to forestall that outcome. Today, much of the environmental movement continues to evince such alarmism and, consequently, is unable to prioritize. Developed countries focus as much on recycling, which achieves precious little at a high cost, as they do on attaining the much larger benefits from tackling air pollution, a massive, if declining, threat. Meanwhile, some environmentalists' demands are simply counterproductive. Avoiding pesticides, for example, means farming more land less efficiently, which leads to higher prices, more hunger, more disease (because of a lower intake of fruits and vegetables), and less biodiversity. My essay argued that although the The Limits to Growth's analysis has been proved wrong, much of its doomsaying and policy advice still pervades the environmental debate 40 years later. These four critiques, instead of refuting my argument, in fact vindicate it. First, only Dennis Meadows really tries to defend The Limits to Growth's predictions of collapse, and he does so with little conviction. Second, at least some of the responses accept in principle that society needs to prioritize among its different environmental goals and that economic growth will make achieving them easier -- in Frances Beinecke's words, "prosperity often leads to greater environmental protection." Third, all four of the critiques of my essay rely on the language of doom to motivate action, which, to the detriment of the environment, convinces society that it must pursue all its environmental goals at once, regardless of the costs and benefits. Finally, by focusing on the threats of economic growth to the environment, the authors generally neglect that growth has lifted billions of people out of grinding poverty and that others may remain poor because of the developed world's environmental concerns, real or imagined. WRONG AGAIN Defending The Limits to Growth, Meadows curiously complains that I address only the original book, which is "long out of print." He then posits that my case rests on one table from that book, on resource depletion, which he says I misrepresent. That is incorrect on several counts. First, it is patently false to claim, as Meadows does by way of a quotation from Matthew Simmons, that "nowhere in the book was there any mention about running out of anything by 2000." (Jørgen Randers makes a similar point.) The Limits to Growth quoted approvingly the first annual report by the U.S. government's Council on Environmental Quality, in 1970: "It would appear at present that the quantities of platinum, gold, zinc and lead are not sufficient to meet demands. At the present rate of expansion … silver, tin and uranium may be in short supply even at higher prices by the turn of the century." Meadows' own table publicized "the number of years known global reserves will last at current global consumption," showing that gold, lead, mercury, silver, tin, and zinc would not last to the year 2000. The instances go on. According to the book's model, the main driver of the global system's so-called collapse would be the depletion of resources, and averting that outcome was the book's widely publicized rallying cry. So focusing on that aspect of the book can hardly be called a misrepresentation. What is more, claiming that this is my only critique ignores that I also showed how the book got pollution wrong and how its analysis of collapse simply did not follow. Meadows and Randers both claim that in their model, pollution consisted of long-lived toxics, not air pollution. In fact, they were much more vague on this question in 1972. In the best case for their predictions of deadly pollution, they meant air pollution, which today accounts for about 62 percent of all environmental deaths, according to the World Bank and the World Health Organization. But if they indeed meant long-lived toxics, their prediction that "pollution rises very rapidly, causing an immediate increase in the death rate" has been clearly disproven by the declining global death rate and the massive reductions in persistent pollutants. John Harte and Mary Ellen Harte put forth a similarly weak defense of The Limits to Growth, as they do not challenge my data. They quote an article by the ecologists Charles Hall and John Day to say that The Limits to Growth's results were "almost exactly on course some 35 years later in 2008." This is simply wrong when it comes to resource levels, as the data in my original article shows, and indeed the cited article contains not a single reference for its claims about oil and copper resource reductions. Harte and Harte further argue that the increase in the cost of resources during the last ten years is evidence of "the limitations on the human enterprise." Meadows claims that this uptick may "herald a permanent shift in the trend." Yet neither carries through the argument, because the empirical data from the past 150 years overwhelmingly undermine it. The reason is that a temporary increase in the scarcity of a resource causes its price to rise, which in turn encourages more exploration, substitution, and innovation across the entire chain of production, thereby negating any increase in scarcity. Harte and Harte demonstrate the unpleasant arrogance that accompanies the true faith, claiming that I "deny" knowledge, promote "scientific misconceptions," and display "scientific ignorance." They take particular issue with my assertion that DDT is a cheap solution to malaria, stating that I overlooked the issue of biological resistance. In fact, all malarial treatments face this problem, but DDT less so than the others. Whereas many malarial treatments, such as dieldrin, work only by killing insects, DDT also repels and irritates them. Dieldrin strongly selects for resistance, whereas DDT works in three ways and even repels 60 percent of DDT-resistant mosquitoes. FALSE ALARM All four critiques contain grand dollops of doom. Beinecke invokes "alarming" environmental problems from overfishing to the destruction of the rain forests and global warming. These are real issues, but they, too, deserve practical thinking and careful prioritization. Fish and rain forests, like other resources subject to political control, tend to be overused. By contrast, when resources are controlled by individuals and private groups, their owners are forced to weigh long-term sustainability. Indeed, Beinecke's response reflects the most unfortunate legacy of The Limits to Growth: because of its persistent belief that the planet is in crisis, the environmental movement suggests tackling all environmental problems at once. This is impossible, of course, so society ends up focusing mainly on what catches the public's attention. Beinecke acknowledges that campaigns to enact environmental policy "emerged from what people saw with their own eyes: raw sewage in the Great Lakes, smog so thick that it obscured the George Washington Bridge, oil despoiling Santa Barbara's pristine beaches." Yet the smog killed more than 300,000 Americans annually, whereas the effects of the oil spills, although serious, were of a much lower order of magnitude. She claims that the U.S. Clean Air Act somehow contradicts my argument, when I in fact emphasized that society should have focused much more on cleaner air. Today, roughly 135,000 Americans still die from outdoor air pollution each year, and two million people, mostly in the developing world, die from indoor air pollution. Instead of focusing on the many negligible environmental problems that catch the public's attention, as the U.S. Environmental Protection Agency did when it focused so heavily on pesticides in the 1970s and 1980s, government should tackle the most important environmental problems, air quality chief among them. Beinecke misses this tradeoff entirely. Harte and Harte demonstrate a similar lack of proportion and priority. In response to my claim that a slightly larger portion of the world's arable land -- roughly five percent -- will need to be tapped in order to feed humanity, they offer an unsubstantiated fear that such an expansion would undermine "giant planetary ecosystems." Yet when they fret about pesticides, they seem impervious to the fact that eschewing them would require society to increase the acreage of land it farms by more than ten times that amount. COOL DOWN If The Limits to Growth erred in some of its quantitative projections, then perhaps, as Harte and Harte put it, its "qualitative insights [are] still valid today." Randers cites global warming as the new reason the book was right. Discussing his predictions for high carbon dioxide emissions, Randers writes, "This future is unpleasantly similar to the 'persistent pollution scenario' from The Limits to Growth." But the comparison is unfounded and leads to poor judgment. In The Limits to Growth's, original formulation, pollution led to civilizational decline and death. Although many environmentalists discuss global warming in similarly cataclysmic terms, the scenarios from the Intergovernmental Panel on Climate Change project instead a gradually worsening drag on development. Standard analyses show a reduction of zero to five percent of global GDP by 2100, in a world where the average person in the developing world will be 23 times as rich as he or she is today. Moreover, although the responses to my essay invoke global warming as a new rallying cry for environmental activism, they fail to suggest specific actions to avert it. Harte and Harte claim that "the scientific community knows how to transition to renewable clean energy." Sure, developed countries have the technical know-how to adopt clean energy, but they have not done so because it would still be phenomenally expensive. Policies aimed at stopping climate change have failed for the last two decades because much of the environmental movement, clutching dearly to The Limits to Growth's alarmism and confident sense of purpose, has refused to weigh the costs and benefits and has demanded that countries immediately abandon all polluting sources of energy. Many economists, including the 27 climate economists involved in the 2009 Copenhagen Consensus on Climate conference, have pointed out smarter ways forward. The best means of tackling global warming would be to make substantial investments in green energy research and development, in order to find a way to produce clean energy at a lower cost than fossil fuels. As one of the leading advocates of this approach, I cannot comprehend how Harte and Harte could claim that I do not support clean-energy innovation. Unfortunately, the world will be hard-pressed to focus on smarter environmental policies until it has expunged the dreadful doom of The Limits to Growth. And unless the environmental movement can overcome its fear of economic growth, it will also too easily forget the plight of the billions of poor people who require, above all, **more and faster growth**

#### The critique is totalizing – compassionate attempts to influence a situation don’t yield their impacts

Stephen S. Bush 12, assistant professor of religious studies at Brown University, Journal of Religious Ethics, 40(3), “Georges Bataille's Mystical Cruelty”, p. 552-555

The first thing I want to do is to explore the notion of instrumentalization that is so important for Brintnall’s position. Brintnall says that compassion and sadism are “structurally analogous” to each other, because “both are bound up in a potentially instrumentalizing subject-object perspective on the world,” a perspective that is the “foundation” of violence. So in achieving an ecstatic relation to others that is not instrumentalizing, Bataille’s meditation “exerts great pressure to eradicate the dispositions that produce sadistic violence.” This is an important opinion and it bears not just on the study of Bataille but on the study of mysticism and morality in general, since many philosophers of mysticism take as paradigmatic a unitive experience that, similarly to Bataille, effaces the subject-object distinction.∂ However, I do not think that the instrumentalization/non- instrumentalization distinction has the ethical significance that Brintnall attributes to it, and I do not think, as Brintnall and Bataille do, that subject-object relations involve “inherently alienating violence.” Not all instrumentalization is ethically problematic or tends toward violence. We instrumentalize each other all the time and could not carry on our affairs without doing so. Many goods we rightly regard as valuable require instrumentalizing relations. What matters is that when we treat others as a means to an end, we simultaneously respect them as an end in themselves. We cannot treat them as a mere means. It is possible to regard someone as both a means and an end, in other words. This is what the Kantians tell us, and though I do not count myself among their number, they are on to something here. When we buy a head of lettuce at a farmer’s market, we treat the farmer as a means to our end, but the important thing is we do not treat her as merely a means. We must treat her in such a way that regards her as a means to our end (of obtaining salad ingredients) but also as someone who has her own ambitions, desires, concerns, attachments, and decision-making capacities. To give an extreme example: if we abducted her and kept her in captivity, forcing her to grow and provide food for us, then we would be treating her merely as a means. So the ethically relevant distinction is not between instrumentalizing and non-instrumentalizing relations with others, but rather between different types of instrumentalizing, subject-object relations.∂ This leads me to doubt that compassion and sadism are structurally analogous. If Brintnall is right that sadism is a teleological project centered on “mastering, controlling, and dominating,” then it is a teleological project that treats people as mere means. Compassion, however, does not have this feature. And I stress in saying this that not all actions that the agent (or some other party) deems compassionate actually are. People can and often do mistake their attempts to dominate others as compassion. The reverse is possible as well: the patient may regard an action that is actually compassionate as an attempt to dominate and master. But one cannot properly identify an action as compassionate and also regard it as an instance of treating someone as a mere means. Any plausible account of what a compassionate action is would rule out that such an action merely instrumentalizes the patient. In speaking of certain actions as being classifiable as compassionate or not, I do not mean to deny that, on the psychological level, motivations for actions are often complex and contradictory, and I do not mean to deny that one might be motivated to act in a certain way by a complex mixture of compassionate and domineering motives. But even so—even though compassion can coexist with the will to dominate—the will to dominate is not itself what compassion is about. Whatever else compassion is, it is a concern for suffering and vulnerable people that regards their well-being as an end. So I disagree with Brintnall when he says that compassion is often about mastery and domination.∂ Just as I think that relations that involve instrumentalization and the subject-object distinction come in good and bad varieties, so also I think that ecstatic relations come in good and bad varieties. I learned this from Bataille, in fact, and this is an important insight that he has to make against philosophers who unambiguously valorize unitive mystical experiences. Human sacrifice, for Bataille, is a non-instrumentalizing relationship (Bataille 1991, 45–61). One takes the slave or captive who could otherwise be a productive economic unit and slaughters him. The ecstatic loss of self can occur just as well in a frenzy of violent destruction— murder, torture, rape, and the like—as it can in solitary meditation or consensual sex. The wolf does not regard its prey as an object discontinuous with itself (Bataille 1989, 17–25). So too for the human: it is not necessarily the case that in ecstasy one opens to and encounters others in a symmetric and reciprocal relationship. One can ecstatically subordinate the other to oneself or be subordinated to the other.∂ To see this, we need to explore the relation between sadism and inner experience more fully. I am not sure that Brintnall is right that sadism transpires exclusively in the realm of project. Of course, it depends on what exactly we mean by sadism, and we could turn to various sources to delineate the term: common parlance, a literary analysis of Sade’s writings, psychoanalytic theory, and S/M practices, for example, would give us different conceptions of the idea. Bataille at one point described sadism as involving “the desire to hurt and to kill” (Bataille 1986, 183). These desires are not quite the same as the attempt or desire to master and control (one could conceivably exercise mastery and control without inflicting pain or killing), so it is not clear to me that the desire to hurt and kill requires or presupposes a sense of self versus object or of self-aggrandizement. Indeed, the orgiastic frenzies of which Bataille so often wrote consist simultaneously of violent assault and the ecstatic loss of self, such as when the maenads devour their children (Bataille 1986, 113). Of course what is most important to me about this is not, at the end of the day, whether the right label for such actions and passions is sadism, but that we reject any perspective that does not give us sufficient ethical resources to condemn such actions and counteract such passions.∂ So for me instrumentalization and non-instrumentalization do not fall on different sides of the moral dividing line. Rather, the line cuts through both categories. I will turn now to the final thing I want to say, and that is that Brintnall’s response to my essay tends to present things as though there are only two relevant options: actions that strive to master and control, and the inaction of Bataillean ecstasy. He worries that “intervention in the world on behalf of the other” too readily occurs as “mastery of the world.” However, attempts to influence a situation are not necessarily attempts to master or control it. For example, I might try to persuade my child of the choice I think is best for him, but forego means beyond persuasion and set myself to respect his decision whatever it turns out to be, whereas a desire to master or control him might resort to humiliation or coercion when persuasion fails. Influence without mastery involves a proper sense of the limits of its efforts, and it more readily acknowledges failure than mastery does. Influence without mastery involves a respect for the other that refuses both non-intervention and domination.∂ There is then a third way between apathetic disengagement and mastery, and in fact, some of the theologians who challenge and inspire me the most are in search of practices that exemplify this third way. Sarah Coakley, for example, advocates a form of vulnerability that she explicitly contrasts to a desire to control. Coakley is especially relevant to the present conversation because her vision of vulnerability is rooted in practices of contemplation and meditation, and also because she shares with Brintnall’s Ecce Homo an opposition to domineering masculinism. The vulnerability Coakley finds in contemplation is opposed to the will to dominate, but not to the will to influence one’s society and contest injustice: she sees a virtue in “prophetic resistance” and enjoins her readers to “meet the ambiguous forms of ‘worldly’ power in a new dimension, neither decrying them in se nor being enslaved to them, but rather facing, embracing, resisting or deflecting them with discernment” (Coakley 2002, xviii, 38). Coakley’s meditative practices have a connection to the ethical life, but they do not stand on their own as supreme authorities. They are teleological in nature, and so susceptible to criticism by the various authorities in the Christian tradition (which are themselves susceptible to criticism). To be sure, Coakley is a minority perspective in the Christian tradition, which has been and still is domineering and cruel all too often, as Brintnall rightly notes. But she gives an example of an option between apathetic disengagement and mastery, and she does so with resources to differentiate between cruelty and kindness and to articulate a preference for one over the other.