Chicago Debate League
2011/12

Core Files

Researched by Brian Peterson (with contributions from Andrew Glennon)
Edited by David Song (with contributions from Les Lynn)

Resolved: The United States federal government should substantially increase its exploration and/or development of space beyond the Earth's mesosphere.

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Background Notes – Lunar Mining: The Science and Key Terms

Terrestrial: limited to the planet Earth

Cislunar: between the Earth and the Moon

Lunar: relating to the Moon

Helium-3: Helium-3 is a rare variety of Helium that would provide fuel for a clean, super-efficient electricity generator. The science is very complicated, but basically Helium-3 molecules are lighter than normal Helium because they have only 1 neutron instead of 2. This small difference allows Helium-3 to substitute for more radioactive materials (such as Tritium, a radioactive isotope of hydrogen) in nuclear fusion reactors to produce a lot of power with very little radiation. Current reactors are not built to take advantage of Helium-3 because there is not very much of it on Earth, but it is a plentiful mineral in the dirt that covers the surface of the Moon. A good discussion of the types of fusion energy reactors (and the differences between Helium-3 and Tritium) can be found at:
http://www.popularmechanics.com/science/space/moon-mars/1283056

"The Basics of Limitless Power: Albert Einstein's famous E=MC2 equation reflects the enormous energy that can be released by fusing atoms. Hydrogen atoms fusing together to create helium powers the sun.

1. FIRST GENERATION: Scientists have duplicated solar fusion on Earth by using two "heavy" hydrogen atoms--deuterium [also known as heavy hydrogen, one of two stable hydrogen isotopes found on Earth] and tritium--which fuse at lower temperatures than ordinary hydrogen. A first-generation deuterium-tritium fusion reactor operated experimentally for 15 years at the Princeton Plasma Physics Laboratory in New Jersey.

2. SECOND GENERATION: While useful for studying fusion, reactors operating with deuterium-tritium fuel are impractical for commercial use. Among other things, the reaction produces large amounts of radiation in the form of neutrons. Substituting helium-3 for tritium significantly reduces neutron production, making it safe to locate fusion plants nearer to where power is needed the most, large cities. This summer, researchers at the University of Wisconsin Fusion Technology Institute in Madison reported having successfully initiated and maintained a fusion reaction using deuterium and helium-3 fuel.

3. THIRD GENERATION: First-generation fusion reactors were never intended to produce power. And, even if they are perfected, they would still produce electricity in much the same way as it is created today. That is, the reactors would function as heat sources. Steam would then be used to spin a massive generator, just as in a coal- or oil-fired plant. Perhaps the most promising idea is to fuel a third-generation reactor solely with helium-3, which can directly yield an electric current--no generator required. As much as 70 percent of the energy in the fuels could be captured and put directly to work."

Tokamak: A type of fusion reactor device, the most likely to be used with Helium-3 - "a machine that generates a doughnut-shaped magnetic field to confine the superheated plasmas necessary for fusion."

Background Notes – Lunar Mining: The Law and Key Terms

Property rights: Property rights, in general, involve the ability of private companies or people to claim exclusive use of an area of land (including all natural resources on the surface of that land). If property rights are guaranteed by a government, then legal penalties would apply to anyone (or any company) who violated those rights by trespassing or stealing resources. Lunar property rights would give companies the ability to claim areas on the Moon as their own property. Currently, the Moon is considered to be a common area that isn't owned by any nation or company, so a government would need to recognize and protect property rights in order for anyone to claim land on the Moon.

A more legally precise definition of property rights, as protected by the United States federal government, can be found at: http://www.econlib.org/library/Enc/PropertyRights.html

"A property right is the exclusive authority to determine how a resource is used, whether that resource is owned by government or by individuals. Society approves the uses selected by the holder of the property right with governmental administered force and with social ostracism. If the resource is owned by the government, the agent who determines its use has to operate under a set of rules determined, in the United States, by Congress or by executive agencies it has charged with that role. Private property rights have two other attributes in addition to determining the use of a resource. One is the exclusive right to the services of the resource. Thus, for example, the owner of an apartment with complete property rights to the apartment has the right to determine whether to rent it out and, if so, which tenant to rent to; to live in it himself; or to use it in any other peaceful way. That is the right to determine the use. If the owner rents out the apartment, he also has the right to all the rental income from the property. That is the right to the services of the resources (the rent). Finally, a private property right includes the right to delegate, rent, or sell any portion of the rights by exchange or gift at whatever price the owner determines (provided someone is willing to pay that price). If I am not allowed to buy some rights from you and you therefore are not allowed to sell rights to me, private property rights are reduced. Thus, ***the three basic elements of private property are (1) exclusivity of rights to choose the use of a resource, (2) exclusivity of rights to the services of a resource, and (3) rights to exchange the resource at mutually agreeable terms."***

Outer Space Treaty: Most governmental exploration and uses of outer space are determined by the Outer Space Treaty (the technical name is "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies"). It was signed in 1967 by the United States, and is still the primary document explaining when it is legal and allowed for countries to create new developments in space. The actual text of the treaty, as well as a list of the countries and organizations that have signed the treaty, can be found at: http://www.oosa.unvienna.org/oosa/SpaceLaw/outerspt.html

"The Outer Space Treaty provides the basic framework on international space law, including the following principles: the exploration and use of outer space shall be carried out for the benefit and in the interests of all countries and shall be the province of all mankind; outer space shall be free for exploration and use by all States; outer space is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means; States shall not place nuclear weapons or other weapons of mass destruction in orbit or on celestial bodies or station them in outer space in any other manner; the Moon and other celestial bodies shall be used exclusively for peaceful purposes; astronauts shall be regarded as the envoys of mankind; States shall be responsible for national space activities whether carried out by governmental or non-governmental entities; States shall be liable for damage caused by their space objects; and States shall avoid harmful contamination of space and celestial bodies."

Lunar Mining 1AC (1/7)

Contention 1 is Inherency: The United States federal government is not encouraging development of lunar mineral resources.

A. The current government space policy is not providing adequate incentives for private investment of mining facilities on the Moon, and the funding that has been provided will not be sustained long-term.

JOBES AND WASSER, 2008
[Douglas, president of the Space Settlement Institute; and Alan, Chairman of The Space Settlement Institute and a former CEO of the National Space Society, former member of the AIAA Space Colonization Technical Committee, former member of the Board of Directors of ProSpace, and a former Senior Associate of the Space Studies Institute; "SPACE SETTLEMENTS, PROPERTY RIGHTS, AND INTERNATIONAL LAW: COULD A LUNAR SETTLEMENT CLAIM THE LUNAR REAL ESTATE IT NEEDS TO SURVIVE?," *Journal of Air Law and Commerce*, Winter, 73 J. Air L. & Com. 37, lexis-nexis]

Unfortunately, neither private enterprise nor government currently has a sufficient incentive to invest the billions of dollars [*39] necessary to make space settlement happen. In the private sector, even the recent accomplishments of space entrepreneurs such as Richard Branson and Robert Bigelow are but tiny steps towards settlement. n3 These billionaires may be able to get a few passengers to low Earth orbit, but it is very unlikely that they will finance technology for people to live in space, especially on the Moon or Mars. n4 They may be wealthy, but they are not that wealthy. And the U.S. government's current "Return to the Moon" plan n5 has numerous hurdles, not the least of which is whether financing will be sustained over the next decades by future administrations. In any case, the goal of the program is not a thriving settlement on the Moon, but rather a limited, government-run Moon base. n6 The government space programs of other countries are even farther behind with regard to space settlement. n7

B. There are no technical barriers to mining the Moon, but the legal uncertainty regarding lunar property rights is keeping companies on Earth.

COOK, 1999
[Kevin, J.D., Georgetown University Law Center; "The Discovery of Lunar Water: An Opportunity to Develop a Workable Moon Treaty," Georgetown International Environmental Law Review, Spring, 2011 Geo. Int'l Envtl. L. Rev. 647]

More than any technical challenge, the lack of legal stability is the primary impediment to investment in lunar mining and the commercial development of outer space. n46 From a technical perspective, the exploitation of resources on the moon and other solar system bodies is fast becoming feasible. n47 According to a previous NASA Administrator, "there are no insurmountable technological impediments to the exploitation of extraterrestrial resources." n48 Rather, the constraints on development of space resources such as the water ice discovered [*655] by Lunar Prospector are imposed by policy, economics, and law. n49 To foster public or private resource development on the moon, there must be the potential to realize a return on investments and earn profits, which requires a stable and predictable legal environment. n50 Space law is one of the most unstable areas of international law, largely because of the uncertain property regime promulgated in the Outer Space Treaty and the Moon Treaty. n51 Without the certainty offered by clear and stable law, no government or private enterprise is willing to incur the risks and costs that exploitation of space resources entail, n52 and space resources will remain underutilized. n53

Lunar Mining 1AC (2/7)

Contention 2 is the Harms: Without quickly discovering new sources of energy, the global economy will collapse and war is inevitable.

A. Even though fiscal policy has slowed the recession, rising energy prices will inevitably create a new economic collapse.

AUSTIN, 2010
[Steve, analyst for Oil-Price.net ; "Do Rising Oil Prices Predict Another Economic Recession?," 12/13, http://www.oil-price.net/en/articles/rising-oil-prices-predict-economic-recession.php]

The year 2008 saw the American economy topple over like a towering stack of light weight cards with the financial and market crash. The recession changed the economy of the country and left many people without jobs and means to sustain their families. More houses were put on foreclosure than ever before, leaving an even larger number of families homeless and destitute with no one to bank on. The initial contention was that the primary reasons for the recession that hit the country in 2008 was the downfall of the financial services market and the housing market. More and more financial experts came forward with another, more accurate reason for the financial crash. The reason put forward and accepted widely was that the market financial crash was caused by the high oil price rise which shot to an all time high of $147 per barrel in the year 2008. Looking Better Briefly In order to help the economy to gain a firm footing, the Federal Reserve took up the initiative of increasing the monetary base (quantitative easing). Two years down the line however, this idea seems to be showing wear. Pumping billions of dollars into the lagging economy boosted spending budgets for some but at the cost of devaluating the dollar. On the plus side, the country's economy is slowly recovering. The oil consumption of the country that had taken a hit after the recession has also been picking up. Crude Oil Now In a developed nation like the United States, every single aspect of business and life requires some or the other form of oil. As per the current scenario, crude oil is trading at much higher than what it was last at $87.82 per barrel on December 10, 2010. Truth be told, this price is nowhere as high as that which caused the Great Recession of mid 2008. The nation's economy is still recuperating from the recession though. Even a comparatively lower oil price at $85-90 per barrel adds to the heavy burden being lugged around by the consumers. It also adds to the woes of the financial market. When it is considered that the United States economy is still recuperating from the recession, the impact of rising energy prices is amplified. Reaching New Highs Experts predict that the end of the year 2010 might see the crude oil prices rise to $90 per barrel which would bring the already tottering economy to its knees. The economy is still running at its sluggish pace whereas the oil prices are rising unaffected by the situation of the economy. This non-elastic relationship has forced people to accept the fact that these high oil prices might just cause another recession in the year 2010. The reason a crash might be in the cards is not just the primary fact that the oil prices are rising but that the prices are rising at a fast rate making it impossible for the economy to keep up with it. China Taking Over World Economy While market analysts are running pillar to post to come up with solutions before the market crashes and brings them all down, the fact remains that the peak oil crisis has no reasonable solution in sight. The world economy now has a new backbone and that is the consumer rich country of China. The Red Dragon seems to have replaced the United States at least as far as relevance to the world economy goes. Most Asian economies seem to be thriving at the time when the American economy is reeling on a downward spiral path. Cycle of Crashes The problem here is that we seem to be caught in a vicious circle as far as market crashes and high oil prices are concerned with both of them aiding and abetting each other. A higher oil price increases the trade deficit of the US. This increased export bill leads to a weaker state of the dollar currency. A weak dollar in turn pulls up the international prices of dollar denominated commodities. This allows the oil prices to increase further leading to exorbitantly higher oil prices. A market crash for the US then becomes inevitable.

Lunar Mining 1AC (3/7)

B. After initial government assistance, private companies will be able to carry the load in mining for lunar minerals.

JAKHU AND BUZDUGAN, 2008
[Ram and Maria, Institute of Air and Space Law, McGill University; "Development of the Natural Resources of the Moon and Other Celestial Bodies," *Astropolitics,* v.6 n.3]

Given the perceived difficulties that confront private companies from starting large-scale development of space applications related to natural resources from the Moon and other celestial bodies, governments should assist the private sector in several ways. It can be expected that the private sector might take over once the difficulties of covering the start-up costs and building initial infrastructure are overcome. Assistance can take on different arrangements discussed below.

C. Without developing new energy supplies, energy shortages caused by fossil fuels will cause massive poverty and wars in the next 50 years.

KULCINSKI, 2000
[Gerald, Director of the Fusion Technology Institute at the University of Wisconsin; "The Development of Lunar 3He Resources," Presented at the 4th International Conference on Exploration and Utilisation of the Moon, July, http://fti.neep.wisc.edu/FTI/pdf/fdm1128.pdf]

One of the greatest challenges facing society in the 21st century is the development of a safe, environmentally friendly, economical, and long lasting supply of energy. This need is driven by the expected doubling of the World's population in the next 50 years [1], and the drive for the under-developed nations of the Earth to improve their standard of living. Increased energy needs in 2050, of perhaps two to three times the present demand (Figure 1) will severely strain the existing fossil fuel resources and could result in unacceptable modification of the weather through the so-called greenhouse gas effect. Furthermore, regional imbalances in fossil energy reserves between nations could result in political instabilities that might even provoke armed confrontations as governments try to satisfy the aspirations of their citizens.

D. And a new economic collapse will drag the United States into global war.

MEAD, 2009
[Walter Russell, Henry A. Kissinger Senior Fellow in U.S. Foreign Policy at the Council on Foreign Relations; "Only Makes You Stronger," *The New Republic*, 2/04, http://www.tnr.com/article/only-makes-you-stronger]

None of which means that we can just sit back and enjoy the recession. History may suggest that financial crises actually help capitalist great powers maintain their leads--but it has other, less reassuring messages as well. If financial crises have been a normal part of life during the 300-year rise of the liberal capitalist system under the Anglophone powers, so has war. The wars of the League of Augsburg and the Spanish Succession; the Seven Years War; the American Revolution; the Napoleonic Wars; the two World Wars; the cold war: The list of wars is almost as long as the list of financial crises. Bad economic times can breed wars. Europe was a pretty peaceful place in 1928, but the Depression poisoned German public opinion and helped bring Adolf Hitler to power. If the current crisis turns into a depression, what rough beasts might start slouching toward Moscow, Karachi, Beijing, or New Delhi to be born? The United States may not, yet, decline, but, if we can't get the world economy back on track, we may still have to fight.

Lunar Mining 1AC (4/7)

Thus, we present the following PLAN:

The United States federal government should enact a tax-incentivized property rights system for corporations to establish permanent mining settlements on the Moon.

Lunar Mining 1AC (5/7)

Contention 3 is Solvency: The plan provides enough incentive for companies to begin mining for Helium-3 and exporting it to Earth.

A. Establishing property rights on the Moon is a critical first step to getting commercial mining ventures started.

JAKHU AND BUZDUGAN, 2008
[Ram and Maria, Institute of Air and Space Law, McGill University; "Development of the Natural Resources of the Moon and Other Celestial Bodies: Economic and Legal Aspects," *Astropolitics,* v.6 n.3]

One element that plays a major role in the future of commercialization of exploration and use of space resources is the issue of protection of property rights. A strong private property regime can encourage commercialization and settlement of outer space. A communitarian property system will inhibit economic development and leave exploration and settlement in the realm of governments, who cannot always afford to undertake such activities.58 Experts anticipate an integrated system of lunar and asteroid mining, habitation in outer space, and space-based solar power generation. In such scenarios, the right to maintain a facility in a given location relative to another space object, or the right to exploit a given mineral deposit on a celestial body, may lead to conflicts. The institution of real property appears to be an efficient method of allocating limited resources, like materials and location.59 According to Wayne White: A regime of real property rights would provide legal and political certainty. Investors and settlers could predict the outcome of a conflict with greater certainty by analogizing to terrestrial property law. Settlers and developers would also be reassured knowing that other nations would respect their right to remain at a given location.60 Mineral rights, spectrum rights, rights of way, orbital slots, intellectual property, and title deeds are essential factors in accomplishing an optimal development environment for space resource utilization.61 A private company would likely not invest in lunar or asteroid prospecting and mining until private property rights are guaranteed; investors prefer to be protected against unlawful interference from others.62 The provisions of international space law addressing the issue of property rights in outer space are discussed later in this paper. To summarize this section, one can anticipate that the discussion over the need for a regime providing for property rights is likely to become increasingly debated as space develops. As mentioned above, in the U.S. the report published by the Commission on Implementation of U.S. Space Exploration Policy recommends that "Congress increase the potential for commercial opportunities related to the national space exploration vision by . . . assuring appropriate property rights for those who seek to develop space resources and infrastructure [emphasis added]."

Lunar Mining 1AC (6/7)

B. Lunar resources like Helium-3 can replace fossil fuels on Earth.

BREARLEY, 2006
[Andrew, University of Southampton; "Mining the Moon: Owning the Night Sky?," *Astropolitics,* v.4 n.1]

Helium-3 is an isotope of helium, which forms part of fusion nuclear reactions;19 it is formed in the Sun, arriving at the Moon on the solar wind. Fusion reactions utilizing Helium-3 produce more power and less waste than traditional nuclear reactors.20 Such is the potential of Helium-3 that there is the possibility of it being mined on the Moon, then brought back to the Earth to serve as a power supply.21 Its transportation to the Earth is potentially justified on the basis that all forms of helium are rare terrestrially. Particularly notable in research concerning the possibility of mining the Moon, in order to extract Helium-3 for use as an energy source, is the work of Harrison Schmitt and Gerald Kulcinski.22 Schmitt described Helium-3 as potentially providing: a long term alternative to our use of fossil fuels on Earth, as well as the basis for future lunar and Martian settlement. Further, by-products of the extraction of Helium-3 from the lunar surface can sustain future travellers and settlers of deep space with water, oxygen, hydrogen fuel, and food.23

C. Congressional action recognizing property rights on the Moon would encourage other countries to follow, and would not cost money or be controversial.

WASSER, 1997
[Alan, Chairman of The Space Settlement Institute and a former CEO of the National Space Society; "How to Restart a Space Race to the Moon & Mars," Moon Miners Manifesto, March, http://www.asi.org/adb/06/09/03/02/103/space-race.html]

Although it is now often forgotten, the international law created by the 1967 treaty is not the norm in human history. The right to claim newly settled property has always provided the economic incentive for human expansion. (Would Europeans have ever settled America if they couldn't claim ownership of the land they settled?) In this case, immediately re-saleable property deeds are the only possible "product" that can be profitably brought back from space at current launch costs. Space settlement will not occur until we get the historically normal condition restored. To really "enable the space frontier", we will have to re-establish a rule of law something like this: Any private entity (presumably a consortium of companies) which establishes a permanently inhabited base on the Moon or Mars, (or any planet or asteroid), with guaranteed regular transportation shuttling between the base and the Earth, open to any paying passenger, immediately acquires full legall recognized and saleable title to hundreds of thousands of square miles around the base. The land grant for the first such base on the Moon would need to be at least the size of Alaska, which would be worth almost four billion dollars at even $10 an acre. That's big enough to allow the winning consortium to begin earning back their expenditure immediately by selling off pieces of it, but still less than 4% of the Moon's surface. On Mars the land grant would have to be more like the size of the United States, worth about 23 billion dollars at $10 an acre. If that's still not enough, there is plenty of room to enlarge the grants. Of course, the establishment of their space transport service, which enabled the consortium to win the land grant in the first place, will dramatically increase the value of their land over what it is worth today, when it is inaccessible. As with the land grants that paid for building America's trans-continental railroads, vast wealth would be created (out of thin vacuum, so to speak) by giving formerly worthless land real value and an owner. Although neither has realized it yet, it would be a huge plum Congress could give to the aerospace companies, without costing the taxpayers anything! Suddenly there would be a market for Moon rockets. Imagine if a consortium of respected companies, led by, say, KKR or Mitsubishi, decided to try for the

[This evidence continues on the next page...]

Lunar Mining 1AC (7/7)

[Wasser evidence continues with no text deleted…]

prize, and asked for bids on a rocket capable of shuttling back and forth to the Moon. If we could get something like this enacted into U.S., and preferably international, law the space race would quickly resume, this time among consortia of private companies. After the first announcement of an attempt to set up a lunar base, others, all over the world, would say, "we can't let them claim the Moon, WE must get there first". Fear of competitors is still the best motivator. Once competition gets going, companies all around the world will seek their governments' help and investment, perhaps reestablishing a healthy spirit of national competitiveness in space, despite the ban on national sovereignty. There are six or seven common arguments against property rights as an incentive for space settlement, but there is a good answer to each. First, there is the "giggle factor" problem. After 30 years the current strange no-ownership system has come to seem normal, and what had always been normal throughout history, now seems funny somehow. Actual passage of such legislation would cure the giggle factor fast. Second, there is the feeling, left over from the socialist value system, that property ownership in space is somehow immoral…that space development should be a case of "from each according to his ability, to each according to his need". Of course, that doesn't work in space, either. Then there are those who feel that a "space race" would be undignified and untidy and therefore should be avoided, even if that meant there would be no space development. But a "space race" certainly would be the fastest way to open the frontier. There are those who consider the 1967 treaty untouchable because of its other provisions, (some of which, even I agree are worth keeping). Others say there is no need to do anything since the treaty did not actually prohibit the acquisition of private property in space. The answer to both is that, although that provision doesn't actually prohibit it, it certainly does have a "chilling effect" on any attempt to use private property as an incentive for space development, because it removes the most common basis for establishing private property. Thus, under that treaty, we both can and must establish a new basis for recognition of private property. The recent report from the Clementine team finally put to rest one of the most common arguments against the use of land grants as an incentive for privately funded space settlement; the argument that there is no such thing as "valuable property" on the Moon. Think of private ownership, officially recognized by the US government, of a Lunar Land Grant the size of Alaska, including that crater of permanently frozen water and the mountain on its shore with the almost permanently sunlit top, (which Ben Bova, in his wonderful new book "Moonrise" was kind enough to call "Mt. Wasser"). Such a land grant would be worth a fortune right now, with no way to get there. How many times more than that would it be worth once there really was a privately owned settlement on the mountain, with a space line going back and forth open to any paying passenger. Another argument is that since there is no currently profitable use for lunar land, it is "worthless". But land is one thing people buy, hold and sell even when there is no current way to "use it" because they can make a tremendous profit buying such land and holding it either until a use arises, or a "greater fool" is willing to pay even more for it. My favorite example is some Florida swamp land in the center of the state, with no roads and nothing but alligators for miles. That "useless" land was bought and sold numerous times for a century or more, for a few more pennies an acre eachtime, until the next to last owner sold it to Walt Disney, who'd finally thought of a use for it. There is still plenty of "useless" swamp land being traded in central Florida, (or desert land in the southwest), and people are getting rich on it without ever thinking up a use for it that would pay for the airboat needed to get to it. Would you pay ten dollars an acre for some of it? How about a piece on the best route for another super highway between Tampa and Orlando, which might be built in 25 or 50 years? Right now, the National Space Society [NSS] is promoting a taxpayer funded "humans to Mars" program. I sincerely hope we succeed. But, in case we fail to get the government to put up those tens of billions of dollars, I think we should hedge our bets by simultaneously trying to get a space land grant law enacted. We should be trying to find a Congressional representative to introduce legislation saying that, while the U.S. makes no claim of national sovereignty, until and unless a new treaty on outer space property rights is adopted, all U.S. courts are to recognize and defend the validity of a land claim by any private company (or group of companies) which met the specified conditions. The legislation should urge other countries to adopt similar laws and instruct the State Department to try to negotiate a new treaty making the same rules international law. The U.S. law could encourage other nations to pass similar laws by limiting the recognition of claims to entities based in countries which offer reciprocity to U.S. companies. The law could pledge to defend extraterrestrial properties by imposing sanctions against aggressors. Since it would not cost anything, or need any appropriations, such legislation might pass as a minor revision of property law, without much publicity, which is probably best considering the "giggle factor" problem. After it was enacted we could start publicizing it, probably by getting someone to announce an attempt to meet the conditions and make a claim.

Add-on Advantage: Space Militarization (1/2)

A. An unregulated race to mine Helium-3 causes rapid deployment of space weapons and accidental nuclear war.

BELJAC, 2008
[Marko, a Foreign Policy In Focus contributor, teaches at the University of Melbourne; "Arms Race in Space," 3/28, http://www.fpif.org/articles/arms_race_in_space]

As noted, China has tested an anti satellite weapon and Russia has stated that it would not allow other states to control space and threaten its own space assets. In Asia a nascent space race seems to be developing between China, Japan and India. In the far future the large deposits of Helium-3 on the moon's surface could lead to a militarized race to colonize the moon to secure Helium-3 for nuclear fusion energy technologies based on anuetronic fusion reactions in the context of depleting hydro-carbons. Washington argues that it has too much commercially riding on space to allow others to have the potential capability of disrupting U.S. space assets. In 1998 the failure of one satellite, the Galaxy IV, made some 80% of pagers in the U.S. malfunction. Though the latest Russian and Chinese space arms control proposal is flawed, because of the clumsy definition of what constitutes a "space weapon," this doesn't mean that space arms control is not possible in principle. A global space arms control regime would protect U.S., Russian, Chinese, and even Australian space assets. An arms race in space will eventually lead other states to catch up with the United States and thereby placing Washington's commercial satellites at risk. Space weaponization may well have cataclysmic consequences given the link between space weapons and nuclear weapons strategy. This is because Russia, and the United States, to a certain extent rely on satellites for early warning of nuclear attack. As other space nations with nuclear weapons develop their space capacity it is expected that they will follow suit. The deployment of space weapons means that the first shot in a nuclear war would be fired against these early warning satellites. Currently strategic planners in Moscow have about 10 minutes between warning of an attack and the decision to launch nuclear weapons in response before they impact. Weapons in space would lower this in certain scenarios down to seconds. This would also apply for weapons placed in space that would be considered to be defensive such as say a space based Ballistic Missile Defense interceptor or a "counter-ASAT" weapon. On occasion, ground warning radars falsely show that a nuclear attack has been launched. In the 1990s a false alarm went all the way up to President Boris Yeltsin and was terminated after approximately eight minutes. We are still here, noted analysts believe, because warning satellites would have given Moscow real time information showing the alarm to be false. Should such a false alarm coincide with an accident involving an early warning satellite when space weapons are known to exist, an accidental nuclear exchange could result. The risk would increase if the false alarm occurred during a crisis. Space weapons could lead to itchy fingers on nuclear triggers. They would therefore significantly increase the importance nuclear weapon states place upon nuclear deterrence.

Add-on Advantage: Space Militarization (2/2)

B. An accidental nuclear launch causes retaliation and takes out medical facilities, causing extinction.

PR NEWSWIRE, 1998
[Beth Israel Deaconess Medical Center; "NEJM Study Warns of Increasing Risk of Accidental Nuclear Attack," 4/29]

An 'accidental' nuclear attack would create a public health disaster of an unprecedented scale, according to more than 70 articles and speeches on the subject, cited by the authors and written by leading nuclear war experts, public health officials, international peace organizations, and legislators. Furthermore, retired General Lee Butler, Commander from 1991-1994 of all U.S. Strategic Forces under former Chairman of the Joint Chiefs of Staff, General Colin Powell, has warned that from his experience in many "war games" it is plausible that such an attack could provoke a nuclear counterattack that could trigger full-scale nuclear war with billions of casualties worldwide. The authors describe the immediate effects of an "accidental" launch from a single Russian submarine that would kill at least six to eight million people in firestorms in eight major U.S. cities. With hospitals destroyed and medical personnel killed, and with major communications and transportation networks disrupted, the delivery of emergency care would be all but impossible, according to Forrow and his colleagues.

Add-on Advantage: Russia Resource War (1/3)

A. Russia is pressing for a lunar mining initiative faster than the United States, and will use control of Helium-3 to control global energy supplies.

THE TELEGRAPH, 2007

[Adrian Blomfield, staff writer, "Russia sees moon plot in NASA plans," 5/01, http://www.telegraph.co.uk/news/worldnews/1550246/Russia-sees-moon-plot-in-Nasa-plans.html]

NASA announced in December that it was planning to build an international base camp on one of the Moon's poles, permanently staffing it by 2024. Russia's space rocket manufacturer Energia revealed an even more ambitious programme last August, saying it would build a permanent Moon base by 2015. While the Americans have either been coy or dismissive on the subject, Russia openly says the main purpose of its lunar programme is the industrial extraction of helium-3. Dismissed by critics as a 21st-century equivalent of the medieval alchemist's fruitless quest to turn lead into gold, some scientists say helium-3 could be the answer to the world's energy woes. A non-radioactive isotope of helium, helium-3 is a proven and potent fuel for nuclear fusion - so potent that just six metric tons would supply Britain with enough energy for a year. As helium-3 is non-polluting and is so effective in such tiny quantities, many countries are taking it very seriously. Germany, India and China, which will launch a lunar probe to research extraction techniques in September, are all studying ways to mine the isotope. "Whoever conquers the moon first will be the first to benefit," said Ouyang Ziyuan, the chief scientist of China's lunar programme. Energia [Russian space rocket manufacter] says it will start "industrial scale delivery" of helium-3, transported by cargo space ships via the International Space Station, no later than 2020. Gazprom, the state-owned energy giant directly controlled by the Kremlin [Russian government], is said to be strongly supportive of the project. The United States has appeared much more cautious, not least because scientists are yet to discover the secrets of large scale nuclear fusion. Commercial fusion reactors look unlikely to come on line before the second half of this century. But many officials in Moscow's space programme believe Washington's lunar agenda is driven by a desire to monopolise helium-3 mining. They allege that President Bush has moved helium-3 experts into key positions on Nasa's advisory council. The plot, says Erik Galimov, an academic with the Russian Academy of Sciences, would "enable the US to establish its control of the energy market 20 years from now and put the rest of the world on its knees as hydrocarbons run out."

Add-on Advantage: Russia Resource War (2/3)

B. Russia seeks to gain control global energy markets to establish its national power, but this expansion will cause conflict with the United States, Europe, and China.

SCHWARZ, 2004

[Peter, "secretary of the International Committee of the Fourth International and a member of the World Socialist Website Editorial Board, "The Caucasus Powder Keg: Russia Threatens Military Interventions," 9/28, http://www.wsws.org/articles/2004/sep2004/russ-s28.shtml]

The energy sector plays a key role in Putin's great power plans. It constitutes 40 percent of national tax receipts, 55 percent of export profits, and 20 percent of the Russian economy. In the Ukraine, in Georgia and in Kazakhstan, Russian firms close to the Kremlin [Russian government] are buying up gas and oil companies. The conflict between the Kremlin [Russian government] and a section of the oligarchs is about who will exercise control over this sector. The state, according to Russia expert Alexander Rahr, will "not permit that this sector, on which Russia depends to reemerge as a great power, is controlled by the particularist interests of profit-seeking oligarchs, or that it falls under the control of foreign transnational enterprises." He says that, although Putin does not want to renationalise the oil companies that were denationalised in the 1990s, they will have "to fit in with the Kremlin's rules of play, otherwise they will share the same fate that befell 'Yukos,' which has been made an example of." (CIS Barometer, September 2004) On these two key questions—control of the immense energy reserves of Russia and Central Asia, and supremacy over the states of Eastern Europe, the Caucasus and Central Asia — interests collide that cannot be reconciled peacefully in the long term. They are not only cause for constant tensions between Russia on the one hand and the US and Europe on the other; the strategic aims of America, the European powers and, in the long term, China, clash irreconcilably here as well. That makes Central Asia and the Caucasus a powder keg of future confrontations.

Add-on Advantage: Russia Resource War (3/3)

C. Russian expansionism will cause multiple nuclear wars, proliferation of nuclear weapons, and Middle East instability.

COHEN, 1996
[Ariel, Research Fellow, Kathryn and Shelby Cullom Davis Institute for International Studies, Heritage Foundation, Heritage Foundation Reports, 1/25; http://theriseofrussia.blogspot.com/2010/11/some-see-expulsion-of-washingtonian.html]

Much is at stake in Eurasia for the U.S. and its allies. Attempts to restore its empire will doom Russia's transition to a democracy and free-market economy. The ongoing war in Chechnya alone has cost Russia $ 6 billion to date (equal to Russia's IMF and World Bank loans for 1995). Moreover, it has extracted a tremendous price from Russian society. The wars which would be required to restore the Russian empire would prove much more costly not just for Russia and the region, but for peace, world stability, and security. As the former Soviet arsenals are spread throughout the NIS, these conflicts may escalate to include the use of weapons of mass destruction. Scenarios including unauthorized missile launches are especially threatening. Moreover, if successful, a reconstituted Russian empire would become a major destabilizing influence both in Eurasia and throughout the world. It would endanger not only Russia's neighbors, but also the U.S. and its allies in Europe and the Middle East. And, of course, a neo-imperialist Russia could imperil the oil reserves of the Persian Gulf. n15 Domination of the Caucasus would bring Russia closer to the Balkans, the Mediterranean Sea, and the Middle East. Russian imperialists, such as radical nationalist Vladimir Zhirinovsky, have resurrected the old dream of obtaining a warm port on the Indian Ocean. If Russia succeeds in establishing its domination in the south, the threat to Ukraine, Turkey, Iran, and Afganistan will increase. The independence of pro-Western Georgia and Azerbaijan already has been undermined by pressures from the Russian armed forces and covert actions by the intelligence and security services, in addition to which Russian hegemony would make Western political and economic efforts to stave off Islamic militancy more difficult. Eurasian oil resources are pivotal to economic development in the early 21 st century. The supply of Middle Eastern oil would become precarious if Saudi Arabia became unstable, or if Iran or Iraq provoked another military conflict in the area. Eurasian oil is also key to the economic development of the southern NIS. Only with oil revenues can these countries sever their dependence on Moscow and develop modem market economies and free societies. Moreover, if these vast oil reserves were tapped and developed, tens of thousands of U.S. and Western jobs would be created. The U.S. should ensure free access to these reserves for the benefit of both Western and local economies.

2AC Inherency: ANSWERS TO 1NC #1: "Current Moon Vision Policy Now" (1/2)

They say there's a current moon policy now, but …

_____ **1. We are still inherent. Their evidence is about the Bush administration and is not indicative of current policies. Extend our more recent 1AC JOBES AND WASSER evidence from 2008, that current plans are for a limited Moon Base with no definite mining plans and that legal uncertainty keeps companies from investing in moon missions, extend our 1AC COOK evidence.**

_____ **2. Current international space law is broken; it doesn't encourage nations to take advantage of lunar natural resources.**

COOK, 1999
[Kevin, J.D., Georgetown University Law Center; "The Discovery of Lunar Water: An Opportunity to Develop a Workable Moon Treaty," Georgetown International Environmental Law Review, Spring, 2011 Geo. Int'l Envtl. L. Rev. 647]

The present body of international space law fails to accommodate those parties, governmental or non-governmental, who would risk their time, energy, and capital to explore and develop outer space. It fails because it does not provide the legal certainty and the economic incentives to promote and sustain the development of space. n307 It fails also because, in the pursuit of equity over efficiency, it has attained neither objective. Consequently, only a fraction of the industrial potential for outer space is presently being realized. n308 While the Outer Space Treaty has provided an initial foundation for space law, and appears suitable as an umbrella agreement for the foreseeable future, n309 it achieves its widespread acceptance at the expense of clarity and specificity. The Moon Treaty attempts to provide that specificity but -- as presently written -- is too [*691] controversial to be widely accepted; consequently, it is largely irrelevant. n310 It offers some useful markers for future space policy, but it does not provide specific guidance to enable the creation of an effective international governance regime. n311 At least one authority concludes that the Moon Treaty has done little to foster commercial space exploitation because of the doubts it has cast regarding exploitation restrictions and a possible exploitation moratorium, coupled with the specter of a pending-but-undefined international regime. n312

2AC Inherency: ANSWERS TO 1NC #1: "Current Moon Vision Policy Now" (2/2)

_____ 3. Without established property rights, companies face the risk of huge lawsuits and this deters them from investing.

JOBES AND WASSER, 2008

[Douglas, president of the Space Settlement Institute; and Alan, Chairman of The Space Settlement Institute and a former CEO of the National Space Society, former member of the AIAA Space Colonization Technical Committee, former member of the Board of Directors of ProSpace, and a former Senior Associate of the Space Studies Institute; "SPACE SETTLEMENTS, PROPERTY RIGHTS, AND INTERNATIONAL LAW: COULD A LUNAR SETTLEMENT CLAIM THE LUNAR REAL ESTATE IT NEEDS TO SURVIVE?," *Journal of Air Law and Commerce*, Winter, 73 J. Air L. & Com. 37, lexis-nexis]

Another possible argument, based on the "inevitable" future, is that there is no need to push the legal envelope by passing Lunar land claims recognition now, because once a space settlement is established, a property rights regime will evolve naturally. It certainly is true that, if a permanent space settlement were established without prior legislation, there would be claims [*71] of property ownership in space that would have to be litigated at length in the courts of the United States and other countries. In fact, if no advance legislation has been passed, there will be outrageous property claims based on much lesser bases than actual settlement. n156 This legal uncertainty scares off space developers who fear that, after they have spent a fortune developing space, they will only win the right to spend another fortune on legal bills. n157 Worse, it would force unqualified judges to legislate in haste from the bench, possibly producing very bad rules. Reinstein says, "A legal system that is unclear as to the rights of developers in the land they develop is almost as prohibitive of positive development as a system forbidding development altogether." n158 Antitrust and Trade Regulation lawyer David Everett Marko adds, "Free enterprise institutions simply cannot make significant investments in space while they are under the threat of lawsuits over the meaning of treaty terms ... ." n159 Therefore, it is not at all surprising that, without the incentive that advanced legal certainty would provide, space settlement is not currently happening, and it probably never will.

2AC Harms [Economy]: ANSWERS TO 1NC #1: "Plan Can't Solve Oil Prices" (1/2)

They say that plan can't solve for oil prices, but …

____ 1. Our evidence is not specific to oil. Extend the 1AC KULCINSKI evidence: Helium-3 will revolutionize all energy markets and create innovative new technologies that can replace all fossil fuels, which are currently scare and will cause conflict between nations.

____ 2. Just one ship-load of Helium-3 could power the United States for a year.

WIRED, 2006
[John Lasker, Staff Writer; "Race to the Moon for Nuclear Fuel," 12/15, http://www.wired.com/science/space/news/2006/12/72276]

The isotope is extremely rare on Earth but abundant on the moon. Some experts estimate there a millions of tons in lunar soil -- and that a single Space-Shuttle load would power the entire United States for a year.

____ 3. Using resources already available, we can build solar energy collectors on the moon that will power Earth and cover the cost of the plan.

CREMINS AND SPUDIS, 2007
[Thomas, National Aeronautics and Space Administration; and Paul, Johns Hopkins University Applied Physics Laboratory; "Viewpoint: The Strategic Context of the Moon Echoes of the Past, Symphony of the Future," *Astropolitics,* v.5 n.1]

The Moon is easily reachable, requiring the same energy needed to reach GEO; typical travel times to and from the Moon are between 3 to 5 days. It is an airless, silent world that nonetheless contains usable resources of material and energy to enable space travel and habitation. The Moon rotates slowly once every 28 days, thus having a day-night cycle of 14 days. Such a lengthy day-time enables us to collect solar energy for an uninterrupted block of time, potentially enabling the production of energy on the surface of the Moon to export to the Earth. An array of solar collectors on the Moon, positioned on opposite hemispheres, could provide enough energy to address a significant fraction of the world's needs. The key to making such a system work is fabricating solar arrays and their supporting hardware directly from lunar materials. This circumvents the show-stopping feature of traditional space Solar Power System (SPS) satellites—the high cost of launching multiple square kilometers of arrays into Earth orbit. To avoid this cost, we will use material that is already on the Moon.

2AC Harms [Economy]: ANSWERS TO 1NC #1: "Plan Can't Solve Oil Prices" (2/2)

____ 4. Long periods of sunlight exposure on the Moon allows the collection of solar energy to send to Earth.

CREMINS AND SPUDIS, 2007
[Thomas, National Aeronautics and Space Administration; and Paul, Johns Hopkins University Applied Physics Laboratory; "Viewpoint: The Strategic Context of the Moon Echoes of the Past, Symphony of the Future," *Astropolitics,* v.5 n.1]

In addition to materials, the Moon is also an energy-rich environment. The Moon rotates once every 28 Earth days, allowing a solar array on its equator to absorb over 14 days of continuous, cloud-free sunlight. This long daytime is followed by an equally long night time, thus creating a problem for constant energy generation by solar power. But because the Moon's spin axis is perpendicular to the plane of its orbit around the Sun, selected areas at both poles are in nearly constant sunlight. This sunlight can be collected by solar arrays, which themselves can be fabricated and manufactured from lunar materials. The creation of such a solar farm at the poles of the Moon can provide lunar inhabitants with constant, renewable power at whatever levels of power generation that may be desired. Ultimately, we may make enough electrical power on the Moon to export it for use in cislunar space and eventually, on the Earth.27

____ 5. Helium-3 is rare on Earth, but plentiful on the Moon.

HELIUM MAGAZINE, 2008
[Dori Beldi; "A look at the helium industry in Russia," 2/17;
http://www.helium.com/items/868713-a-look-at-the-helium-industry-in-russia]

The second stable isotope is helium-3 which is extremely rare in our atmosphere. It is a variant of helium that is missing a neutron created through the process of nuclear fusion. On earth, it is believed there is about 20 pounds of helium-3, but on the moon, it is overflowing. The sun naturally does the nuclear fusion for us, and the solar winds carry the helium through space until it rests in places such as the moon, Uranus, and other planets. Now, it's up to us to go get it. Russia is one of the few countries that is doing just that.

____ 6. Helium-3 is plentiful on the moon and is a cheap, powerful, clean energy source.

WIRED, 2006
[John Lasker, Staff Writer; "Race to the Moon for Nuclear Fuel," 12/15,
http://www.wired.com/science/space/news/2006/12/72276]

Helium-3 is considered a safe, environmentally friendly fuel candidate for these generators, and while it is scarce on Earth it is plentiful on the moon. As a result, scientists have begun to consider the practicality of mining lunar Helium-3 as a replacement for fossil fuels.

2AC Harms [Economy]: Answers To 1NC #2: "Helium-3 Fusion Years Away"

They say Helium-3 Fusion is years away, but …

____ Current research and commercial investments allow for make use of Helium-3 safe and viable

SCHMITT, 2003
[Harrison, CHAIRMAN INTERLUNE-INTERMARS INITIATIVE, INC; "Testimony of Hon. Harrison H. Schmitt: Senate Hearing on "Lunar Exploration"," 11/06, http://www.spaceref.com/news/viewsr.html?pid=10924]

Past technical activities on Earth and in deep space provide a strong base for initiating this enterprise. Such activities include access to and operations in deep space as well as the terrestrial mining and surface materials processing industries. Also, over the last decade, there has been historic progress in the development of inertial electrostatic confinement (IEC) fusion at the University of Wisconsin-Madison. Progress there includes the production of over a milliwatt of steady-state power from the fusion of helium-3 and deuterium [heavy hydrogen, the other key ingredient in creating fusion reactions]. Steady progress in IEC research as well as basic physics argues strongly that the IEC approach to fusion power has significantly more commercial viability than other technologies pursued by the fusion community. It will have inherently lower capital costs, higher energy conversion efficiency, a range of power from a few hundred megawatts upward, and little or no associated radioactivity or radioactive waste. It should be noted, however, that IEC research has received no significant support as an alternative to Tokamak-based fusion from the Department of Energy in spite of that Department's large fusion technology budgets. [Tokamak - a type of fusion reactor device] The Office of Science and Technology Policy under several Administrations also has ignored this approach.

2AC Harms [Economy]: Answers To 1NC #3: "Helium-3 Mining Not Cost-Effective"

They say mining for Helium-3 isn't cost effective, but…

_____ 1. Extend the 1AC BREARLEY evidence: Helium-3 is cost effective because it creates byproducts that sustain the mining process, creating a self-renewing cycle.

____ 2. Helium-3 is worth billions more than any current energy option, and creating a market would have a huge economic impact.

SCHMITT, 2003
[Harrison, CHAIRMAN INTERLUNE-INTERMARS INITIATIVE, INC; "Testimony of Hon. Harrison H. Schmitt: Senate Hearing on "Lunar Exploration"," 11/06, http://www.spaceref.com/news/viewsr.html?pid=10924]

Helium has two stable isotopes, helium 4, familiar to all who have received helium-filled baloons, and the even lighter helium 3. Lunar helium-3, arriving at the Moon as part of the solar wind, is imbedded as a trace, non-radioactive isotope in the lunar soils. It represents one potential energy source to meet this century's rapidly escalating demand. There is a resource base of helium-3 of about 10,000 metric tonnes just in upper three meters of the titanium-rich soils of Mare Tranquillitatis. This was the landing region for Neil Armstrong and Apollo 11 in 1969. The energy equivalent value of Helium-3 delivered to operating fusion power plants on Earth would be about $4 billion per tonne relative to today's coal. Coal, of course, supplies about half of the approximately $40 billion domestic electrical power market. These numbers illustrate the magnitude of the business opportunity for helium-3 fusion power to compete for the creation of new electrical capacity and the replacement of old plant during the 21st Century.

2AC Harms [Economy]: Answers To 1NC #4: "Launch Costs Too High" (1/2)

They say launch costs are too high for companies to invest in lunar mining, but …

____ 1. Extend the 1AC JAKHU AND BUZDUGAN evidence: the profit potential from mining Helium-3 is so large that companies will be willing to invest the launch costs once their property rights are guaranteed. They can't invest now because they aren't sure they will see profits from an unprotected mining site.

____ 2. Ships can permanently be assigned to mine resources, making the mission sustainable.

CREMINS AND SPUDIS, 2007
[Thomas, National Aeronautics and Space Administration; and Paul, Johns Hopkins University Applied Physics Laboratory; "Viewpoint: The Strategic Context of the Moon Echoes of the Past, Symphony of the Future," *Astropolitics,* v.5 n.1]

It is the destiny of this nation, built on exploration and discovery, to continue this tradition into the arena of space. The Moon's resources of material and energy can be exploited to build systems that extend our reach and capability in space. A transportation infrastructure that can routinely reach the Moon can also routinely access cislunar space—that zone where many of the world's most valuable space borne assets reside. Currently, ongoing space operations require fabrication and launch of a system, its use for some period of time, and then its eventual abandonment. With a transportation system in cislunar space, we will routinely visit and repair, maintain, refurbish, expand, and upgrade satellites on a regular basis. Spacecraft will no longer be built to a planned obsolescence and then abandoned, but instead will be designed to permit unlimited lifetime and capability for expansion and extension. In short, we will evolve from the existing "sortie" approach to space travel to an approach that allows sustained, constant, and routine access to all locations in cislunar space.

____ 3. Recognizing property rights creates a bigger incentive than any other economic factor in determining whether private companies will push for the Moon.

JOBES AND WASSER, 2008
[Douglas, president of the Space Settlement Institute; and Alan, Chairman of The Space Settlement Institute and a former CEO of the National Space Society, former member of the AIAA Space Colonization Technical Committee, former member of the Board of Directors of ProSpace, and a former Senior Associate of the Space Studies Institute; "SPACE SETTLEMENTS, PROPERTY RIGHTS, AND INTERNATIONAL LAW: COULD A LUNAR SETTLEMENT CLAIM THE LUNAR REAL ESTATE IT NEEDS TO SURVIVE?," *Journal of Air Law and Commerce*, Winter, 73 J. Air L. & Com. 37, lexis-nexis]

There appears to be one incentive, however, that could spark massive private investment leading to the establishment of permanent space settlements on the Moon and beyond with an immediate payback to investors. The concept of "land claims recognition" (developed by author Alan Wasser and others over the last twenty years) seems to be the most powerful economic incentive, much more so than all the other incentives, such as government-funded prizes and corporate tax holidays combined. n8 If and when the Moon and Mars are settled in the future through other incentives, the nations of Earth will eventually have to recognize these settlements' authority over their own land. But to create an incentive now, governments would need to commit to recognizing that ownership in advance, rather than long after the fact.

2AC Harms [Economy]: Answers To 1NC #4: "Launch Costs Too High" (2/2)

____ 4. Establishing property rights convinces companies to invest.

JAKHU AND BUZDUGAN, 2008
[Ram and Maria, Institute of Air and Space Law, McGill University; "Development of the Natural Resources of the Moon and Other Celestial Bodies: Economic and Legal Aspects," *Astropolitics,* v.6 n.3]

In order to facilitate commercialization in space, there needs to be a well-defined property rights regime. By ensuring companies exclusive rights to resources, they would have the incentives to invest and develop a business enterprise. Legal uncertainties regarding resource appropriation and protection of real property rights are barriers to private sector involvement in natural resource utilization. According to current international space law, there are some impediments to private property in space, but they are not insurmountable.

2AC Harms [Economy]: Answers To 1NC #5: "Helium-3 Fusion Takes Too Long"

They say that Helium-3 fusion takes too long, but …

____ 1. Close's objections are wrong; there are other reactors capable of producing energy from Helium-3.

MIT TECHNOLOGY REVIEW, 2007
[Mark Williams, "Mining the Moon: Lab experiments suggest that future fusion reactors could use helium-3 gathered from the moon," 8/23;
http://www.technologyreview.com/printer_friendly_article.aspx?id=19296&channel=energy&section=]

Close points out that in a tokamak--a machine that generates a doughnut-shaped magnetic field to confine the superheated plasmas necessary for fusion—deuterium [heavy hydrogen, the other key ingredient in creating fusion reactions] reacts up to 100 times more slowly with helium-3 than it does with tritium [the main alternative to helium-3].. In a plasma contained in a tokamak, Close stresses, all the nuclei in the fuel get mixed together, so what's most probable is that two deuterium nuclei will rapidly fuse and produce a tritium nucleus and proton. That tritium, in turn, will likely fuse with deuterium and finally yield one helium-4 atom and a neutron. In short, Close says, if helium-3 is mined from the moon and brought to Earth, in a standard tokamak the final result will still be deuterium-tritium fusion. Second, Close rejects the claim that two helium-3 nuclei could realistically be made to fuse with each other to produce deuterium, an alpha particle and energy. That reaction occurs even more slowly than deuterium-tritium fusion, and the fuel would have to be heated to impractically high temperatures--six times the heat of the sun's interior, by some calculations--that would be beyond the reach of any tokamak. Hence, Close concludes, "the lunar-helium-3 story is, to my mind, moonshine." Close's objection, however, assumes that deuterium-helium-3 fusion and pure helium-3 fusion would take place in tokamak-based reactors. There might be alternatives: for example, Gerald Kulcinski, a professor of nuclear engineering at the University of Wisconsin-Madison, has maintained the only helium-3 fusion reactor in the world on an annual budget that's barely into six figures. Kulcinski's He3-based fusion reactor, located in the Fusion Technology Institute at the University of Wisconsin, is very small. When running, it contains a spherical plasma roughly 10 centimeters in diameter that can produce sustained fusion with 200 million reactions per second. To produce a milliwatt of power, unfortunately, the reactor consumes a kilowatt. Close's response is, therefore, valid enough: "When practical fusion occurs with a demonstrated net power output, I--and the world's fusion community--can take note." Still, that critique applies equally to ITER and the tokamak-based reactor effort, which also haven't yet achieved breakeven (the point at which a fusion reactor produces as much energy as it consumes). What's significant about the reactor in Wisconsin is that, as Kulcinski says, "We are doing both deuterium-He3 and He3-He3 reactions. We run deuterium-He3 fusion reactions daily, so we are very familiar with that reaction. We are also doing He3-He3 because if we can control that, it will have immense potential." The reactor at the Fusion Technology Institute uses a technology called inertial electrostatic confinement (IEC). Kulcinski explains: "If we used a tokamak to do deuterium-helium-3, it would need to be bigger than the ITER device, which already is stretching the bounds of credibility. Our IEC devices, on the other hand, are tabletop-sized, and during our deuterium-He3 runs, we do get some neutrons produced by side reaction with deuterium." Nevertheless, Kulcinski continues, when side reactions occur that involve two deuterium nuclei fusing to produce a tritium nucleus and proton, the tritium produced is at such a higher energy level than the confinement system that it immediately escapes. "Consequently, the radioactivity in our deuterium-He3 system is only 2 percent of the radioactivity in a deuterium-tritium system."

2AC Harms [Economy]: ANSWERS TO 1NC #6: "Economy Resilient to Energy Prices" (1/3)

They say energy costs aren't key to the economy, but …

____ 1. This evidence is empirically denied. High energy prices caused economic collapses historically, and they can't identify a single safeguard that has been implemented to change this now. Consumers have less money to spend on durable goods if they are spending more on energy, creating a direct economic trade-off.

____ 2. Even if energy isn't solely responsible for a collapse, it exacerbates other factors such as unemployment and magnifies the total impact.

REUTERS, 2011
["Gas prices, Europe may be weighing on US jobs -Obama," 6/06, http://af.reuters.com/article/energyOilNews/idAFN0629510620110606]

President Barack Obama, in his first direct comments about May's weak U.S. jobs data that alarmed financial markets, said on Monday high gas prices and the European debt crisis were creating headwinds to growth. "We don't know yet what has happened in terms of this particular blip, what we do know is gas prices went up and that got consumers worried … what's happening in Europe has people nervous. So we've got some headwinds going up against us," he told WEWS-TV news in Cleveland, Ohio. The U.S. economy created just 54,000 new jobs last month -- significantly fewer than the 150,000 that had been forecast -- and unemployment edged up to 9.1 percent from 9 percent in April, according to data released on Friday. "Over the last 15 months, we've created more than 2 million jobs in the private sector. What has happened though is any given month, you are going to have sometimes better than expected jobs reports, sometimes worse than expected jobs reports," he said in the interview. Obama said after the data was released that the U.S. economy faced bumps in the road, but he did not comment directly on the disappointing employment report, which has raised concerns about the durability of the U.S. recovery.

2AC Harms [Economy]: ANSWERS TO 1NC #6: "Economy Resilient to Energy Prices" (2/3)

____ 3. And, presume on the side of caution because energy prices are rising, putting us closer to the brink.

THE OKLAHOMAN, 2011
[Mark Jewell, Staff Writer; "Experts say high energy prices here to stay," 6/11, http://www.newsok.com/experts-say-high-energy-prices-here-to-stay/article/3576233?custom_click=pod_headline_energy-news]

Tight supplies, rising production costs and growing global demand point to long-term energy price increases, investors in commodities said at this week's Morningstar Investment Conference. A look at those three factors: Supplies The amount of excess capacity, or the difference between the amount of oil being produced globally and what's being consumed, is shrinking to levels not seen since oil prices hit a record $147 a barrel in the summer of 2008, says Geoff Jay, an energy stock analyst with mutual fund company Janus Capital Inc. Spare capacity in the oil market has slipped from around 15 percent a couple of years ago to 5 percent currently. Production costs The expense of extracting oil from the ground continues to rise, despite new technologies to tap deposits that previously weren't economically feasible to drill, says MacKenzie Davis, a commodities strategist with RS Investments and co-manager of the RS Global Natural Resources Fund. "We're working through all the cheap barrels that are available to be produced," he says. At current costs of production, the price of oil must be at least $80 for drilling projects to be economically feasible, Davis says. That leaves some wiggle room that encourages oil companies to go ahead with drilling projects, as the price is currently around $100 a barrel. That's why prices at the pump remain high, currently around $3.80 a gallon, slightly lower than a few weeks ago. But within three years, oil will need to be priced at nearly $100 a barrel for drilling projects just to be feasible, Davis says. That projection is based on his expectations that oil will become increasingly costly to pull out of the ground.

____ 4. Lunar mining will do more for the economy than the internet boom.

HELIUM MAGAZINE, 2009
[Millard Hahs; "Space exploration in the future," 4/04; http://www.helium.com/items/1401886-helium-3-will-kick-off-the-next-big-thing-space-mining]

Space mining : The Economic Future for the World. Every citizen has a huge stake in what becomes of the known, and valuable mineral resources in our solar system. Mining in space is the "Next Big thing" of entrepreneurs and may eclipse the past economy boost of the former Silicone Valley. In fact mining will provide the "wherewithal" to open up space to private astronauts and launch the new Space Race.

2AC Harms [Economy]: ANSWERS TO 1NC #6: "Economy Resilient to Energy Prices" (3/3)

____ 5. Establishing property rights immediately boosts the domestic aerospace industry.

JOBES, 2005
[Douglas, president of the Space Settlement Institute; "Lunar Land Claims Recognition: Designing the Ultimate Incentive for Space Infrastructure Development," *Space Times*, May, http://www.space-settlement-institute.org/Articles/LCRSpaceTimesMay2005.pdf]

On February 10, Congressman Ken Calvert, the newly appointed chairman of the Space and Aeronautics Subcommittee of the House Science Committee, spoke before the Federal Aviation Administration's annual commercial space transportation conference. Calvert stated, "In 2010, the shuttle will be retired, so there is right now a need to move people into space quickly, safely, and reliably, I believe that need could be met in large part by the private sector.... The job of Congress is to pass legislation and exercise its oversight functions in such a way that will enable this industry to succeed." In June 2004, the President's Commission on Implementation of United States Space Exploration Policy (also known as the Aldridge Commission) specifically recommended prizes, tax incentives, regulatory relief, and the assurance of "appropriate property rights for those who seek to develop space resources and infrastructure." It's hard to imagine a more effective way to help the private space industry succeed than by passing legislation creating a financial incentive worth billions of dollars to research, design, develop, and build vital components of the infrastructure in space. And what would motivate Congress to pass a lunar land claims recognition law? Unlocking billions of dollars in private investment for the development of the space industry and space infrastructure would create an economic boom for this country in the aerospace and technology sectors. Untold new technology jobs would be created. More young people in this country would become interested in pursuing science as a career, inspired by a private industry race to the Moon in which they could possibly participate, just as the young generation was inspired during the Apollo era. An intensive effort on the part of the private sector to develop space infrastructure will have many economic and societal benefits. A catalyst like that which a lunar land claims recognition law would provide is needed now to jumpstart the development of space infrastructure. As Anita Gale points out, "The effect of adding space infrastructure will be like building a freeway in Southern California. After the first elements of infrastructure are in place, gas stations and restaurants are built at the exits, then hotels, and finally entire towns. After the first big spaceport or settlement is established, there will be a space construction boom."

____ 6. Boosting the aerospace industry to mine in space is worth trillions of dollars to the U.S. economy.

FOUNTAIN, 2003
[Lynn, J.D. Candidate, University of Connecticut School of Law; "Creating Momentum in Space: Ending the Paralysis Produced by the "Common Heritage of Mankind" Doctrine;" *Connecticut Law Review*; Summer, 35 Conn. L. Rev. 1753, lexis-nexis]

Although the proposed legal structure presents some formidable hurdles, the benefits to be derived from space industry should motivate all interested parties to end the standstill. In previous centuries, we imagined untold wealth beyond the seas. Today, we should look toward space. Billions of dollars have already been earned in the satellite industry. 182 But [*1783] that barely scratches the surface of the trillions that are yet to be made in other space industries. Entrepreneurs, engineers, and scientists envision harvesting solar power, mining valuable minerals, and establishing luxury tourist resorts in orbit and on the Moon. 183 Even NASA has recently recognized the benefits to be gained from the involvement of private industry in space. 184 Below are a few of the areas in which private industry is currently investing, or hopes to invest in the near future, and their potential benefits for humankind.

2AC Add-on Advantage [Russia Resource War]: Answers To - 1NC 1#: "Authors Unqualified – No Energy War with Russia"

They say our authors are unqualified and inaccurate about today's Russia, but …

____Our evidence has specific political and economic warrants proven by recent historical events. Russia's invasion of Georgia, the crackdown on pro-democracy activists, and the annual threat to shut off natural gas exports to the European Union all prove our argument. They should be arguing against our warrants, not our authors.

2AC Add-on Advantage [Russia Resource War]: Answers To 1NC #2: "Russia Cooperates on Energy" (1/2)

They say Russia's cooperating with us on energy, but …

____Extend the SCHWARZ 2004 evidence: Russia will use control of global energy markets to blackmail the rest of the world, and will use profits from that to expand into an aggressive military empire that makes war inevitable.

____Russia has adopted a Cold War attitude toward space cooperation with the United States on lunar mining.

THE TELEGRAPH, 2007
[Adrian Blomfield, staff writer, "Russia sees moon plot in NASA plans," 5/01, http://www.telegraph.co.uk/news/worldnews/1550246/Russia-sees-moon-plot-in-Nasa-plans.html]

Mankind's second race for the moon took on a distinctly Cold War feel yesterday when the Russian space agency accused its old rival NASA of rejecting a proposal for joint lunar exploration. The claim comes amid suspicion in Moscow that the United States is seeking to deny Russia access to an isotope in abundance under the moon's surface that many believe could replace fossil fuels and even end the threat of global warming. A new era of international co-operation in space supposedly dawned after the United States, Russia and other powers declared their intention to send humans to the moon for the first time since 1972. But while NASA has lobbied for support from Britain and the European Space Agency, Russia claims its offers have been rebuffed.

____The country that develops Helium-3 mining first will control global energy markets.

HELIUM MAGAZINE, 2008
[Dori Beldi; "A look at the helium industry in Russia," 2/17; http://www.helium.com/items/868713-a-look-at-the-helium-industry-in-russia]

With the cost of this endeavor being so mind-staggering, why would any country want to go it alone? Because the one with most helium-3 wins. The value of helium-3 is so high, the country that brings all the theories to fruition could have the power to bring the rest of the world to it's knees. Here are some examples of what the potential for helium-3 is and why everyone wants it: - It's estimated monetary value is three to four billion dollars per ton, and it's estimated the moon has about one million tons of helium-3. The gross revenues for the countries mining and exporting helium-3 will be in the billions per year. - it's a virtual limitless power source. - the energy contained in 1 million metric tons of Helium-3, reacted with deuterium [heavy hydrogen, the other key ingredient in creating fusion reactions], would generate about 20,000 terrawatt-years of thermal energy. A terrawatt-year is one trillion watt-years. - About the amount of helium-3 it takes to fill a semi truck's trailer is enough to power the United States for one year. - Helium 3 is non radioactive and burns clean unlike fossil fuels. Problems with global warming will be reduced, possibly reversed over time, by replacing the fuels that accelerate global warming. So, again, it appears the race for the moon is on. And, this time, there is too much as stake for those left out at the finish line. There is especially too much at stake for Russia. For a country whose economic dependence relies so heavily on exporting resources, it's foreseeable what helium-3 will mean to them.

2AC Add-on Advantage [Russia Resource War]: Answers To 1NC #2: "Russia Cooperates on Energy" (2/2)

____Without a system of property rights, conflict between private developers and competing governments is inevitable.

WHITE, 1997
[William, Attorney; "Real Property Rights in Outer Space," http://www.space-settlement-institute.org/Articles/research_library/WayneWhite98-2.pdf]

A development regime which provides some form of property rights will become increasingly necessary as space develops. Professionals foresee an integrated system of solar power generation, lunar and asteroidal mining, orbital industrialization, and habitation in outer space. In the midst of this complexity, the right to maintain a facility in a given location relative to another space object may create conflict. Such conflicts may arise sooner than we expect, if private companies begin building subsidiary facilities around space stations. Eventually large public facilities will become the hub of private space development, and owners will want to protect the proximity value of their facility location. It also seems likely that at some point national governments and/or private companies will clash over the right to exploit a given mineral deposit. Finally, the geosynchronous orbit is already crowded with satellites, and other orbits with unique characteristics may become scarce in the future.

____Establishing a property rights system solves conflict and lunar development.

WHITE, 1997
[William, Attorney; "Real Property Rights in Outer Space," http://www.space-settlement-institute.org/Articles/research_library/WayneWhite98-2.pdf]

The institution of real property is the most efficient method of allocating the scarce resource of location value. Space habitats, for example, will be very expensive and will probably require financing from private as well as public sources. Selling property rights for living or business space on the habitat would be one way of obtaining private financing. Private law condominiums would seem to be a particularly apt financing model -- inhabitants could hold title to their living space and pay a monthly fee for life-support services and maintenance of common areas. Even those countries which do not have launch capability would benefit from a property regime. Private entities from the developing nations could obtain property rights by purchasing obsolete facilities from foreign entities that are more technologically advanced. A regime of real property rights would provide legal and political certainty. Investors and settlers could predict the outcome of a conflict with greater certainty by analogizing to terrestrial property law. Settlers and developers would also be reassured, knowing that other nations would respect their right to remain at a given location.

2AC Add-on Advantage [Russia Resource War]: Answers To 1NC #3: "Russia Can't Mine Moon" (1/2)

They say Russia has no ability to compete for lunar mining, but …

____Extend the TELEGRAPH 2007 evidence: Russia is actively investing in technology to harvest minerals from the Moon. Their evidence is old and from a U.S. author with no knowledge of Russian government policy.

____Several countries, including Russia and China, are racing to get access to lunar minerals.

JAKHU AND BUZDUGAN, 2008
[Ram and Maria, Institute of Air and Space Law, McGill University; "Development of the Natural Resources of the Moon and Other Celestial Bodies: Economic and Legal Aspects," *Astropolitics,* v.6 n.3]

In fact, in recent years, the exploration of natural resources on the Moon, Mars, and other celestial bodies received considerable and growing attention from spacefaring nations. For example, in February 2004, NASA released "The Vision for Space Exploration" 16 based on United States (U.S.) President George W. Bush's new space exploration policy, "A Renewed Spirit of Discovery: The President's Vision for U.S. Space Exploration."17 The new policy, now renamed the U.S. Space Exploration Policy, makes the human return to the Moon by the year 2020 a priority for human space missions as precursors for human exploration of Mars and other destinations.18 The main rationale is that a permanent lunar base on the Moon could lead to the development and testing of new sustainable exploration approaches, including space resource utilization.19 This is also the rationale for a number of other spacefaring states. Russia, for example, announced more definite plans to mine the isotope Helium-3 on the Moon by 2020.20 The project will involve building a permanent base on the Moon by 2015, and establishing a heavy-cargo transport link that would allow industrial-scale delivery of this rare isotope.21 The European Space Agency (ESA) undertook steps to explore the Moon as well by launching a spacecraft on 27 September 2003, which entered lunar orbit on 15 November 2004, carrying a set of miniaturized instruments that studied the chemical composition of the lunar surface.22 China expressed intentions to explore the Moon and is allegedly considering the prospect of lunar mining.23 On 14 September 2007, Japan launched the Kaguya (SELENE) mission to explore the Moon from orbit.24 In addition, the Japanese Space Agency (JAXA) is planning a long-term space program that includes constructing a research base on the Moon starting around 2025.25 The Indian Space Research Organization (ISRO) plans to launch a robotic mission to the Moon (Chandrayaan-1) in October or December 2008. This mission will involve the placing of a 525-kg spacecraft around the lunar orbit, with the purpose of collecting data that will allow for the chemical mapping of the entire lunar surface.26 This new ISRO project reflects the views of the scientific community in India that advocate the need to seriously pursue the mining of Helium-3 from the lunar surface.27

2AC Add-on Advantage [Russia Resource War]: Answers To 1NC #3: "Russia Can't Mine Moon" (2/2)

____There is an international race to gain access to Helium-3, and Russia and China are combining resources to win.

HELIUM MAGAZINE, 2009
[Millard Hahs; "Space exploration in the future," 4/04; http://www.helium.com/items/1401886-helium-3-will-kick-off-the-next-big-thing-space-mining]

A lunar "land grab" will be full on in a few short years. The players will be private companies and individuals from United States, Japan, Korea, India, China, Russia, France, Great Britain the list goes on. All interested nations that are deeply committed to a presence in space have a stake, and their are differences of opinion about which nation can dominate outer space. None the less, if humans learn how to live a separate nations and zones without jealousy or dictatorial greed, Space mining will first be a boon to every nations economy. Mining, and exploration carried out by robotic missions, and later by live astronauts in co-operation with finance partners-all in accord with international treaties will see new wonders and bring back new hope to a world that is beginning to "burst at the seams". Recently, Russia flatly announced that by 2014, the Russian Bear will join the Dragon of China as "Partners in Space": Together, they will engage in mining "ilmenite" a titanium silicate containing the isotope Helium-3, a nuclear reactant. Helium at certain temperatures is a metal, but roasted out of an ore called ilmenite, the metal from the sun escapes as a gas (at about 800 degrees Fahrenheit) At this temperature, astronauts could process the ore in a simple device making use of the sun and reflectors. China and Russia are strange bedfellows, but they can share costs to afford the ride. They will share experience, data, and reap scientific and other spoils on a manned mission to Phobos, the greater moon of Mars, and the best command and control outpost. Could Helium-3 be fueling this coalition? Do they want materials for perfecting the theoretical potential of 3-He-clean energy? At the very least their priorities are in line with the desperate needs of a dying planet.

____Harvesting Helium-3 will fundamentally change the global energy economy, and Russia is almost there.

HELIUM MAGAZINE, 2008
[Dori Beldi; "A look at the helium industry in Russia," 2/17; http://www.helium.com/items/868713-a-look-at-the-helium-industry-in-russia]

In one decade, Russia has recovered from the abyss of economic depression to become one of the world's strongest economies, primarily due to the increased demand for natural resources such as oil. Because Russia's economy is so heavily dependent on exporting these resources, their vested interest to begin harvesting helium, helium-3 to be exact, may well be a necessity. Once harvested, helium-3 isotopes will literally change the world. Helium-3 is a powerful element that could make fossil fuels become, I'll say, "antiquated." Now underway, this endeavor is so globally mammoth, it could potentially bring us to a new age when it comes to fruition in the next 30 years, and appears Russia may be leading the way.

2AC Solvency: Answers To 1NC #1: "International Law Conflict with China"

They say moon property rights will lead to conflict with China, but …

____ 1. No internal link: Their evidence says "conflict in space," not war. Conflicts happen in U.S./China relations all the time, but they always get negotiated out before military action takes place; the recent anti-satellite weapons test proves.

____ 2. A stable legal regime that allows lunar mining will create cooperation among space powers.

COOK, 1999
[Kevin, J.D., Georgetown University Law Center; "The Discovery of Lunar Water: An Opportunity to Develop a Workable Moon Treaty," Georgetown International Environmental Law Review, Spring, 2011 Geo. Int'l Envtl. L. Rev. 647]

The exploitation of outer space, however, is about more than just the maximization of profits. Space offers a chance for humanity to create a new paradigm that avoids the conflicts of the past and promotes peace. n54 The American Apollo program, in the words of physicist Freeman Dyson, was the "moral equivalent of war," offering a "bloodless technological competition" with the Soviet Union. n55 That paradigm of bloodless conflict has shifted into a new model of international cooperation and joint business ventures, as demonstrated by the multinational launch industry and the International Space Station. n56 The development of the natural resources of outer space offers another avenue for international cooperation, with the added advantage that moving resource extraction operations off-planet also can reduce environmental impacts here on Earth and protect the terrestrial environment. However, the primary driver for development of outer space resources will be economic gain, and without a stable and predictable legal [*656] regime to foster such profit-making ventures, the ancillary societal benefits that can be derived from space will never be realized.

____ 3. The U.S. has the biggest economic stake in the Moon, so any law passed domestically would get the rest of the world on board.

JOBES, 2005
[Douglas, president of the Space Settlement Institute; "Lunar Land Claims Recognition: Designing the Ultimate Incentive for Space Infrastructure Development," *Space Times*, May, http://www.space-settlement-institute.org/Articles/LCRSpaceTimesMay2005.pdf]

The legislation could easily be structured to include participation by the international community -- and in fact should be so to make it clear the plan is not an American attempt at a land grab on the Moon. It would, of course, be desirable if other nations were to pass similar laws, although initially that would not be necessary. Because the United States represents such a large fraction of the world's economy and often leads the way on economic matters, the United States's recognition of a private lunar land claim would be a sufficient start.

2AC Solvency: Answers To 1NC #2: "No Moon Infrastructure"

They say there's no infrastructure on the moon now, but …

____ 1. Extend the 1AC JAZKHU AND BUZDUGAN evidence: High profit potentials will get companies to invest in new infrastructure.

____ 2. Enough materials exist on the Moon to sustain long-term missions with new infrastructure.

CREMINS AND SPUDIS, 2007
[Thomas, National Aeronautics and Space Administration; and Paul, Johns Hopkins University Applied Physics Laboratory; "Viewpoint: The Strategic Context of the Moon Echoes of the Past, Symphony of the Future," *Astropolitics,* v.5 n.1]

The abundant materials and energy of the Moon will allow us to create new capabilities in space.26 From lunar materials, we can extract building materials to construct the various facilities of the lunar habitat, ranging from the simple use of loose soil to shield the habitat from cosmic radiation, to the creation of ceramics and glass for a variety of building purposes. Other important products include life-support consumables, especially oxygen and water. The lunar soil is almost one-half oxygen by weight; the task is to break the very strong chemical bonds holding oxygen in rock to liberate the gas and then store and use it later. Hydrogen is rare on the Moon; it is present at the Apollo sites only as a minor component in the soil, implanted there by the solar wind over billions of years. The reason lunar polar ice would be so valuable is that it is a concentrated source of both oxygen and hydrogen which can be extracted with systems of modest energy and mass. The ability to make propellant is a key step in the ability to conduct economic and industrial operations in space; propellant made on the Moon serves the cislunar transportation system by ultimately permitting the refueling of planetary vehicles. The initial systems and infrastructure to develop lunar water can be developed and flight tested using extensions of current space technology (e.g., launch vehicles, satellite components, and solar systems) and the increasingly relevant and important terrestrial "Hydrogen Economy."

____ 3. The Moon has enough resources to sustain missions.

CREMINS AND SPUDIS, 2007
[Thomas, National Aeronautics and Space Administration; and Paul, Johns Hopkins University Applied Physics Laboratory; "Viewpoint: The Strategic Context of the Moon Echoes of the Past, Symphony of the Future," *Astropolitics,* v.5 n.1]

Natural resources discovered on the Moon include oxygen from the lunar soil, water from the ice poles, and numerous volatile gases that can be used to supply fuel and construction materials. All these resources can be exploited for permanent bases on the lunar surfaces and space missions to/from the Moon.1 Perhaps, the most valuable resource on the Moon is Helium-3, a fuel that can be used to support a future development of nuclear fusion for energy. Helium-3 is considered by some experts as an ideal fuel because it is powerful and has the advantage of generating very little radioactive by-product.2 While scarcely available on the Earth, Helium-3 is estimated to be plentiful on the Moon.3 Experts argue that this rare isotope could be extracted and transported to the Earth using existing terrestrial mining technology.4

2AC Solvency: Answers To 1NC #3: "NASA Ineffective"

They say NASA is ineffective in Moon missions, but …

____ 1. Fiat solves the link: we guarantee implementation of the plan, which means the necessary bureaucratic adjustments would happen to make NASA capable of overseeing property rights.

____ 2. Congress passing the law solves immediately and motivates the private sector to fill in where government agencies are lacking

JOBES, 2005
[Douglas, president of the Space Settlement Institute; "Lunar Land Claims Recognition: Designing the Ultimate Incentive for Space Infrastructure Development," *Space Times*, May, http://www.space-settlement-institute.org/Articles/LCRSpaceTimesMay2005.pdf]

To enable lunar land claims recognition. Congress would need to pass legislation outlining the specific conditions under which a private lunar land claim would, following the establishment of a privately funded lunar base, be recognized. The U.S. government itself would not claim any land, but would instead recognize the right of the private group, consortia, or business that finances and builds a permanent base to make a claim. Lunar land cannot be bought and sold today because there is no legal basis for ownership or exchange, but that could be changed by a land claims recognition law. A lunar land claims recognition law would use property rights as an incentive to motivate private individuals and companies to do something of great value for all of society.

Lunar Mining Negative – Table of Contents

1NC Frontline: Inherency

1. Current U.S. policy already targets the moon for its resources.

CREMINS AND SPUDIS, 2007
[Thomas, National Aeronautics and Space Administration; and Paul, Johns Hopkins University Applied Physics Laboratory; "Viewpoint: The Strategic Context of the Moon Echoes of the Past, Symphony of the Future," *Astropolitics,* v.5 n.1]

The Moon as a destination is visible in the adoption of a new U.S. space policy, the Vision for Space Exploration (Vision or VSE), announced by President George W. Bush in January 2004.1 The unfurling of the Vision represents a watershed opportunity to recast the direction of the space program and its relevance to our national and international development. An analog to this fundamental turning point is the development of modern naval policy at the beginning of 20th century.2 At that time, geopolitical, technological, economic, and national security trends came together with national leadership to chart a fresh framework for U.S. strategic development, enabled by its maritime capabilities that focused on the challenges and opportunities presented by extended and permanent U.S. interests beyond our shores. The Vision largely centers on providing the National Aeronautics and Space Administration (NASA) a long-term strategic direction for its current and future human spaceflight programs, supported by robotic systems, and came about in response to a major review of the national space program following the loss of the Space Shuttle Columbia in 2003.3 In addition to these hardware tasks the Vision calls for a return to the Moon, first by robotic spacecraft and then by humans, with the goal of living and working there for increasing periods of time. Several activities on the Moon are specified, but in particular, the development and use of lunar resources is emphasized.4 The clear implication of the Vision is that we will learn to live and work on the Moon to use it productively but also to prepare for journeys to Mars and other destinations.

2NC/1NR Extensions: Inherency

___ Extend 1NC #1, the Cremins and Spudis in 2007 evidence. Former President Bush passed the Moon Vision policy, which directed the government to begin extracting mineral resources from the moon. This evidence is conclusive about current federal policy and written by a NASA expert and a leading physics professor in the field, so you should prefer it over their think tank advocates.

____Our Inherency arguments prove that the Status Quo is already solving for their Harms and they have no advantages to weigh against our impacts.

1NC Frontline: Harms [Economy] (1/3)

1. Their evidence is talking about different things: the AUSTIN evidence is about oil prices, but Helium-3 would only be used in electricity and not cars. There is no internal link from lunar minerals to gas price relief.

2. High energy prices are inevitable in the short-term because reactors that can use Helium-3 are still 50 years away.

WIRED, 2006
[John Lasker, Staff Writer; "Race to the Moon for Nuclear Fuel," 12/15, http://www.wired.com/science/space/news/2006/12/72276]

While still theoretical, nuclear fusion is touted as a safer, more sustainable way to generate nuclear energy: Fusion plants produce much less radioactive waste, especially if powered by helium-3. But experts say commercial-sized fusion reactors are at least 50 years away.

3. Helium-3 isn't cost effective, and can't produce the energy Earth requires.

WIRED, 2006
[John Lasker, Staff Writer; "Race to the Moon for Nuclear Fuel," 12/15, http://www.wired.com/science/space/news/2006/12/72276]

Jim Benson, founder of space contractor SpaceDev, which helped build SpaceShipOne's engine and is a subcontractor of the Missile Defense Agency, said mining the moon for helium-3 doesn't pass the "net energy analysis" test. It would require more energy to retrieve helium-3 and bring it back than it would yield. Just, sending mining equipment to the moon, and then returning processed helium-3 back to earth, would cost billions in rocket fuel, said Benson. "We just don't have a need for helium-3," he said. "It's not practical."

1NC Frontline: Harms [Economy] (2/3)

4. The warrants in their JAKHU AND BUZDUGAN evidence are too big for the Aff to solve: companies aren't going to the Moon because the cost of launching spaceships is too high, and this will still be true even if they can claim property rights once they get to the Moon. If the companies can't afford to launch a ship, they will never be able to claim property.

5. Helium-3 is a bad power source because the reactions are too slow and we don't know for sure we can find it.

CLOSE, theoretical physicist at Oxford University, 2007 [Frank, theoretical physicist at the University of Oxford, "Fears over Factoids," 8/03; http://physicsworld.com/cws/article/indepth/30679]

Given that the amount of helium-3 available on Earth is trifling, it has been proposed that we should go to the Moon to mine the isotope, which is produced in the Sun and might be blown onto the lunar surface via the solar wind. Apart from not even knowing for certain if there is any helium-3 on the Moon, there are two main problems with this idea – one obvious and one intriguingly subtle. The first problem is that, in a tokamak [a type of fusion reactor device], deuterium [heavy hydrogen, the other key ingredient in creating fusion reactions] reacts up to 100 times more slowly with helium-3 than it does with tritium [the main alternative to helium-3]. This is because fusion has to overcome the electrical repulsion between the protons in the fuel, which is much higher for deuterium– helium-3 reactions (the nuclei have one and two protons, respectively) than it is for deuterium– tritium reactions (one proton each).

1NC Frontline: Harms [Economy] (3/3)

6. The economy has added safeguards to prevent energy price spikes from causing a collapse, and the best models prove that the modern economy is resilient in the context of energy.

DHAWAN AND JESKE, 2006

[Rajeev, director of the Economic Forecasting Center and an associate professor of managerial sciences at the J. Mack Robinson College of Business at Georgia State University; and Karsten, research economist in the macropolicy section of the Atlanta Fed's research department and a visiting professor of economics at Emory University; "How Resilient Is the Modern Economy to Energy Price Shocks?" *Economic Review*, Third Quarter; http://www.frbatlanta.org/filelegacydocs/erq306_jeske.pdf]

So what do these results mean in regard to the question posed in the article's title? In the context of our model, the economy today is far more resilient to energy price hikes than it was before 1985. Even a major energy price hike—caused by, say, a two-standard-deviation shock to the energy price process in equation (1)—represents a drag of a mere 0.8 percentage points in the second year of the impact in the modern era (defined as 1985 to 2005). If the negative correlation observed in the 1970s had prevailed, this price hike would have caused a precipitous 4.8 percent drop in output. We can also use the model to determine the marginal impact energy prices had on growth between 1970 and 2005. In other words, how have the "observed" energy price shocks between 1971 and 2005 affected output growth in these thirty-five years? To answer this question, we generate a total impulse response function, that is, not with one single shock but with the thirty-five energy price shocks εp, t one after the other, as derived from our ARMA(1,1) estimation. Consequently, the impact of energy price changes in each year is the impact of the current year shock in addition to the impact from all lagged shocks. In this simulation we assume that specification B for the technology process prevails, that is, the pre-1985 era, when there is a negative spillover from energy price shocks to the technology. After 1985 technology is unaffected by energy prices because the indicator variable in the regression equation (10) is zero. Figure 5 plots the standardized energy price shocks εp, t and their marginal impact on output growth rates predicted by the model. Evidently, energy price hikes had very adverse effects on growth in 1974, 1979, and 1980, knocking multiple percentage points off output growth rates. For example, energy price shocks reduced output growth in 1974 by an estimated 6.6 percent, meaning that in the absence of energy price shocks, output growth would have been more than 6 percent instead of the actual 0.5 percent decline. Likewise, in the recession year 1980, the actual output drop was 0.2 percent. The model simulation reveals that the growth rate that year would have been 3.2 percentage points higher, well outside of recession territory, if there had been no energy price shocks. After 1985, however, energy price shocks had a much smaller effect on output growth rates. The simulation implies that energy prices did not play any role in the 1991 and 2001 recessions. The most recent run-up in energy prices, while quite dramatic, with three positive energy shocks in a row from 2003 to 2005, did not cause an obvious reduction in real GDP growth. The cumulative impact of energy price shocks on 2005 growth has been a mere 0.5 percentage points. The energy shock in 1980 (and 1979), about equal in magnitude to those observed in 2003 or 2005, did far more damage, as discussed previously.

2NC/1NR Extensions: Harms [Economy] – Extension to 1NC #1: "Plan Can't Solve Oil Prices"

___ Extend the 1NC #1, their evidence is about oil and not electricity. Helium-3 won't be used to run automobiles, which their own evidence says is where consumers are feeling economic pressure. This means there is a warrant for the economy collapsing that the aff can't solve for, which means all of their impacts are inevitable.

2NC/1NR Extensions: Harms [Economy] 1NC #2: "Helium-3 Fusion Years Away"

____ Extend the 1NC #2, the WIRED 2006 evidence. There are no reactors on Earth that can turn Helium-3 into energy, and there won't be any built for at least 50 years. This means the aff cannot solve high energy prices in the short-term, so either the economy will collapse before new reactors can be built or there is no risk of the economy ever collapsing.

2NC/1NR Extensions: Harms [Economy] 1NC #3: "Helium-3 Mining Not Cost-Effective"

____ Extend the 1NC #3, the WIRED 2006 evidence. Helium-3 does not create net energy gains because it requires more energy to get it back from the Moon than it will produce. This means the United States will still need to purchase energy at high prices before we can produce any, so the economy will still collapse.

____And, Helium-3 reactions will fail: Either small amounts of Helium-3 are used and the result is the same as status quo energy reactions, or large amounts are used and there are no reactors on Earth powerful enough to sustain the reaction.

CLOSE, 2007
[Frank, theoretical physicist at the University of Oxford, "Fears over Factoids," 8/03; http://physicsworld.com/cws/article/indepth/30679]

Clearly, deuterium–helium-3 is a poor fusion process, but the irony is much greater as I shall now reveal. A tokomak [a type of fusion reactor device] is not like a particle accelerator where counter-rotating beams of deuterium [heavy hydrogen, the other key ingredient in creating fusion reactions], and helium-3 collide and fuse. Instead, all of the nuclei in the fuel mingle together, which means that two deuterium nuclei can rapidly fuse to give a tritium [the main alternative to helium-3] nucleus and proton. The tritium can now fuse with the deuterium – again much faster than the deuterium can with helium-3 – to yield helium-4 and a neutron. So by bringing helium-3 from the Moon, all we will end up doing is create a deuterium– tritium fusion machine, which is the very thing the helium aficionados wanted to avoid! Undeterred, some of these people even suggest that two helium-3 nuclei could be made to fuse with each other to produce deuterium, an alpha particle and energy. Unfortunately, this reaction occurs even more slowly than deuterium–tritium fusion and the fuel would have to be heated to impractically high temperatures that would be beyond the reach of a tokomak. And as not even the upcoming International Thermonuclear Experimental Reactor (ITER) will be able to generate electricity from the latter reaction, the lunar-helium-3 story – like the LHC as an Armageddon machine – is, to my mind, moonshine.

2NC/1NR Extensions: Harms [Economy] 1NC #4: "Launch Costs Too High"

____ Extend the 1NC #4, launch costs are currently deterring companies from investing in lunar mining. Companies have to pay to launch shuttles before they are able to claim property rights, so if this is the biggest deterrent then it will still deter companies from launching even after the plan is passed. This means companies will still choose not to mine on the Moon, and no new energy sources will be brought back to Earth.

2NC/1NR Extensions: Harms [Economy] 1NC #5: "Launch Costs Too High"

____ Extend the 1NC #5, the Close evidence is written by an Oxford professor and says the moon might not even have Helium-3 and even if it does, it's 100 times slower and less efficient than current techniques.

2NC/1NR Extensions: Harms [Economy] 1NC #6: "Economy Resilient to Energy Prices"

____ Extend the 1NC #6, the DHAWAN AND JESKE 2006 evidence. The United States economy has safeguards and policies that protect against the impact of high energy prices. This means that, even if prices spike, the economy will not collapse like it did in the 1970s.

1NC Frontline: Solvency (1/2)

1. Turn: International Law

A) Ignoring international law to unilaterally establish property rights on the moon will cause a war with China.

BREARLEY, 2006
[Andrew, University of Southampton; "Mining the Moon" *Astropolitics,* v.4 n.1]

Given the relative power that the US can exercise in space in comparison to other states, it is conceivable that it could make the decision to simply ignore legal questions concerning the rights to use lunar resources. As the US has not signed nor ratified the Moon Agreement, there is no legal restraint preventing it from ignoring that particular treaty. Given the preponderance of power that the US possesses, it could choose as well not to be bound by the provisions of the OST. Alternatively, if the Chinese program proceeds rapidly, China could attempt to utilize the Moon without reference to other states. Clearly, these scenarios lead to a conflict in space, which the space treaties intended to avoid. If it is assumed that the space powers continue in their wish to avoid the potential of such conflict, then resolving the legal uncertainties becomes an important policy objective.

B) A U.S./China conflict will cause global nuclear war.

JOHNSON, 2001
[Chalmers, author of more than a dozen books; "Time to Bring the Troops Home," *The Nation,* 4/26, http://www.thenation.com/article/time-bring-troops-home]

China is another matter. No sane figure in the Pentagon wants a war with China, and all serious US militarists know that China's minuscule nuclear capacity is not offensive but a deterrent against the overwhelming US power arrayed against it (twenty archaic Chinese warheads versus more than 7,000 US warheads). Taiwan, whose status constitutes the still incomplete last act of the Chinese civil war, remains the most dangerous place on earth. Much as the 1914 assassination of the Austrian crown prince in Sarajevo led to a war that no one wanted, a misstep in Taiwan by any side could bring the United States and China into a conflict that neither wants. Such a war would bankrupt the United States, deeply divide Japan and probably end in a Chinese victory, given that China is the world's most populous country and would be defending itself against a foreign aggressor. More seriously, it could easily escalate into a nuclear holocaust.

2. Companies do not have the basic infrastructure to get to the Moon.

JOBES, 2005
[Douglas, president of the Space Settlement Institute; "Lunar Land Claims Recognition: Designing the Ultimate Incentive for Space Infrastructure Development," *Space Times*, May, http://www.space-settlement-institute.org/Articles/LCRSpaceTimesMay2005.pdf]

Besides the much-discussed issue of high launch costs, there is another big obstacle to overcome on the way to opening space to entrepreneurialism: the lack of basic space infrastructure. The launch vehicles, cargo transporters, orbital facilities, refueling stations, lunar surface facilities, and so forth on which businesses will depend are the missing pieces of the puzzle. There are business models that potentially would be very profitable if only the space infrastructure was there to support them.

1NC Frontline: Solvency (2/2)

3. NASA is not capable of implementing new lunar missions; without a complete restructuring, the plan will fail.

SCHMITT, 2003
[Harrison, CHAIRMAN INTERLUNE-INTERMARS INITIATIVE, INC; "Testimony of Hon. Harrison H. Schmitt: Senate Hearing on "Lunar Exploration"," 11/06, http://www.spaceref.com/news/viewsr.html?pid=10924]

It is doubtful that the United States or any government will initiate or sustain a return of humans to the Moon absent a comparable set of circumstances as those facing the Congress and Presidents Eisenhower, Kennedy, and Johnson in the late 1950s and throughout 1960s. Huge unfunded "entitlement" liabilities and a lack of sustained media and therefore public interest will prevent the long-term commitment of resources and attention that such an effort requires. Even if tax-based funding commitments could be guaranteed, it is not a foregone conclusion that the competent and disciplined management system necessary to work in deep space would be created and sustained. If Government were to lead a return to deep space, the NASA of today is probably not the agency to undertake a significant new program to return humans to deep space, particularly the Moon and then to Mars. NASA today lacks the critical mass of youthful energy and imagination required for work in deep space. It also has become too bureaucratic and too risk-adverse. Either a new agency would needed to implement such a program or NASA would need to be totally restructured using the lessons of what has worked and has not worked since it was created 45 years ago. Of particular importance would be for most of the agency to be made up of engineers and technicians in their 20s and managers in their 30s, the re-institution of design engineering activities in parallel with those of contractors, and the streamlining of management responsibility. The existing NASA also would need to undergo a major restructuring and streamlining of its program management, risk management, and financial management structures. Such total restructuring would be necessary to re-create the competence and discipline necessary to operate successfully in the much higher risk and more complex deep space environment relative to that in near-earth orbit.

2NC/1NR Extensions: Solvency 1NC #1: "International Law Conflict with China"

____ Extend the 1NC #1, the China war turn. The BREARLEY 2006 evidence says that by acting unilaterally and having the United States federal government administer property rights for every country in the world without adhering to international law, the plan would anger other countries like China who also want to develop the Moon. Our JOHNSON 2001 evidence says this causes conflict that escalates to nuclear war, which outweighs the affirmative on magnitude because China would use all of its nuclear weapons to defend its sovereignty.

2NC/1NR Extensions: Solvency 1NC #2: "No Moon Infrastructure"

____ Extend the 1NC #2, the JOBES 2005 evidence. Companies do not have the infrastructure necessary to build mining settlements on the Moon. Even if Helium-3 is awesome and companies want to mine it, it is impossible to transport it without any infrastructure. This means the plan does not create a Helium-3 market because the minerals never leave the lunar surface.

____And, here's more evidence that the U.S. doesn't have the capabilities to launch lunar mining settlements. If other countries aren't on board, then the plan can't solve.

JOBES AND WASSER, 2008

[Douglas, president of the Space Settlement Institute; and Alan, Chairman of The Space Settlement Institute and a former CEO of the National Space Society, former member of the AIAA Space Colonization Technical Committee, former member of the Board of Directors of ProSpace, and a former Senior Associate of the Space Studies Institute; "SPACE SETTLEMENTS, PROPERTY RIGHTS, AND INTERNATIONAL LAW: COULD A LUNAR SETTLEMENT CLAIM THE LUNAR REAL ESTATE IT NEEDS TO SURVIVE?," *Journal of Air Law and Commerce*, Winter, 73 J. Air L. & Com. 37, lexis-nexis]

Any effort to establish a human space settlement is almost certainly going to be a multi-national effort. No U.S. company could build a Lunar settlement alone. n65 Participation by international companies will be a requirement in practice and could be made part of the law. n66 Financially, building a settlement will be so expensive that it will have to be financed and owned by [*53] stockholders from many different countries. n67 The Settlement would have to use rockets and other components built in many countries, be inhabited by the citizens of many other countries, and would almost certainly launch from someplace outside the U.S., such as Kazakhstan or the Kourou launch pad in French Guiana. n68

2NC/1NR Extensions: Solvency 1NC #3: "NASA Ineffective"

____Extend the 1NC #3, the SCHMITT 2003 evidence: NASA is a bureaucratic nightmare and is too inefficient to successfully establish a lunar mining rights regime. This means rights will not be properly granted or administered, so companies will still be too confused about lunar mining to invest heavily in expensive projects. Their evidence says that legal confusion deters new investment, so no Helium-3 will be mined.

1NC Frontline: Add-on Advantage [Space Militarization]

1. Their PR NEWSWIRE evidence is all rhetoric with no real warrants. It doesn't say that all hospitals will be blown up or offer any reason a full-scale war would take place without Russia or the US realizing its miscalculation.

2. Helium-3 won't cause an arms race because other countries will not be interested in deploying space weapons

HITCHENS, 2003
[Theresa, vice president of the Center for Defense Information; "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

As noted, there is also the question of intent. It is not obvious that any nation has any intention, or even incentive, to launch a war in space. Instead, most countries, including China and Russia, have been urging a global ban on weapons in space. Many experts, including a number of Air Force strategists, persuasively argue a U.S. move to put offensive weapons in space could have the perverse effect of creating a new threat because other countries would feel compelled to follow suit.26

3. There is no such thing as an accidental launch because nuclear decision makers will be cautious and won't launch on false alarms.

QUINLAN, 2009
[Michael, Former Permanent Under-Secretary of State in UK Ministry of Defense; *Thinking about Nuclear Weapons: Principles, Problems, Prospects*; pp. 68-69]

Similar considerations apply to the hypothesis of nuclear war being mistakenly triggered by false alarm. Critics again point to the fact, as it is understood, of numerous occasions when initial steps in alert sequences for US nuclear forces were embarked upon, or at least called for, by, indicators mistaken or misconstrued. In none of these instances, it is accepted, did matters get at all near to nuclear launch--extraordinary good fortune again, critics have suggested. But the rival and more logical inference from hundreds of events stretching over sixty years of experience presents itself once more: that the probability of initial misinterpretation leading far towards mistaken launch is remote. Precisely because any nuclear-weapon possessor recognizes the vast gravity of any launch, release sequences have many steps, and human decision is repeatedly interposed as well as capping the sequences. To convey that because a first step was prompted the world somehow came close to accidental nuclear war is wild hyperbole, rather like asserting, when a tennis champion has lost his opening service game, that he was nearly beaten in straight sets. History anyway scarcely offers any ready example of major war started by accident even before the nuclear revolution imposed an order-of-magnitude increase in caution. It was occasionally conjectured that nuclear war might be triggered by the real but accidental or unauthorized launch of a strategic nuclear-weapon delivery system in the direction of a potential adversary. No such launch is known to have occurred in over sixty years. The probability of it is therefore very low. But even if it did happen, the further hypothesis of it initiating a general nuclear exchange is far-fetched. It fails to consider the real situation of decision-makers as pages 63-4 have brought out. The notion that cosmic holocaust might be mistakenly precipitated in this way belongs to science fiction.

2NC/1NR Extensions: Add-on Advantage [Space Militarization]
1NC #1: "Accidental War Impact Exaggerated"

____ Extend the #1, their impact is all rhetoric. Accidental nuclear launches will not escalate to extinction because the blast site will be limited and medical care will still exist. This means there is a low magnitude for their impacts because an accident is a one-shot event and not a full exchange of weapons.

2NC/1NR Extensions: Add-on Advantage [Space Militarization]
1NC #2: "No Space Arms Race"

____ Extend the #2, the HITCHENS 2003 evidence. They have to win that other countries will deploy space weapons in order to win that accidental launch happens, but other countries do not want to deploy space weapons until the United States does. A Helium-3 market will not overcome their hesitation, which means an accidental war is impossible.

2NC/1NR Extensions: Add-on Advantage [Space Militarization]
1NC #3 "No Accidental Nuclear War"

____ Extend the #3, the QUINLAN 2009 evidence. Accidents will never happen because policymakers are extremely careful about nuclear weapons and will make sure they gather all the information before choosing to launch. This means there is a very low probability for this scenario.

____And, nuclear weapons are not kept on high-alert, but instead are designed to give policymakers as much time as possible to gather information before launching.

FORD, 2008
[Christopher, Senior Fellow and Director of the Center for Technology and Global Security at the Hudson Institute; "Dilemmas of Nuclear Force "De-Alerting"; Presented to the International Peace Institute Policy Forum, 2010/07, http://www.hudson.org/files/documents/De-Alerting%20FINAL2%20%282%29.pdf]

It is not true that current forces are bound to destabilizing "hair-trigger" launch assumptions, though for deterrent purposes U.S. and Russian forces likely both go to considerable trouble to maintain the option of launching at least some forces immediately. Rather, nuclear force postures aim to provide national leaders with as much information and decision-making time – and therefore flexibility – as possible in all circumstances. This includes also trying to ensure the option of riding out an attack while retaining a credible second-strike retaliatory force, which is quite the opposite of a launch-on-warning posture.

1NC Frontline: Add-on Advantage [Russia Resource War] (1/2)

1. Treat all of their claims with extreme skepticism because their authors are unqualified authors from sources like the World Socialist Website and biased right-wing authors from the Heritage Fouccation. The Cold War ended peacefully, and if there was no escalation to war when the U.S. and the Soviet Union were official enemies then there is no probability for conflict when the two are allies.

2. Russia will cooperate with the United States on energy, even if resources like oil are finite.

ALEKPEROV, 2005
[Vagit, President of Lukoil; "US - Russia: Large Prospects Of Energy Cooperation," 4/27, http://www.america-russia.net/eng/business/85122765]

Over the last few years, the political, business and cultural contacts between Russia and the USA have become much more active. Our countries are in a state of continuous dialogue. While protecting their national interests, the two countries are, at the same time, actively developing their bilateral cooperation. Russia and the USA are the oldest oil powers. Despite obvious differences, both the Russian and the American oil schools enjoy recognition the world over. Russian-American cooperation in the energy sphere started developing actively on an intergovernmental level at the beginning of this decade. The political basis for the cooperation was provided by the creation of the global antiterrorist coalition, while the economic basis was the USA's desire to diversify imports and Russia's desire to diversify exports of energy raw materials. It is the high status of the participants that contributes much to the success of the Russian-American dialogue in the energy sphere. Specifically, the cooperation between our countries in the energy sphere is included on the agenda of the meetings between Vladimir Putin and George Bush. The development of Russian-American energy cooperation has become particularly important against the background of the global competition between the major consumers of hydrocarbons, i.e., the United States and the countries of the Asian region. This competition in the sphere of oil can be seen in the growth of world production and refining capacities. Last summer, OPEC's idle production capacity fell to its lowest level in recent decades, i.e., to 500 thousand barrels a day. At the same time, capacity loading at refineries reached 95% in Europe and 96% in the USA.

1NC Frontline: Add-on Advantage [Russia Resource War] (2/2)

3. Russia doesn't have funding or technology to mine Helium-3 from the Moon, their announcements are pure speculation aimed at convincing private companies to purchase new spaceships.

OBERG, 2006
[James, 22-year veteran of NASA mission control; "Moonscam: Russians try to sell the Moon for foreign cash"; *Space Review*, 2/06, http://www.thespacereview.com/article/551/1]

With NASA's return to the Moon plans struggling with severe budget constraints, advocates of expanded human spaceflight both inside the agency and outside it have been encouraged by a blitz of publicity from Russia concerning their own plans to build a Moon base in the next ten to fifteen years. The vision of the 1960's "Moon Race" and the astronomical funding levels it engendered is bound to cheer up today's spaceflight advocates. At a seminar on space research at Moscow's Bauman State Technological University on January 25, a leading Russian space official proclaimed that a moon base could solve the world's energy crisis by mining the isotope helium-3, potentially a valuable fuel for nuclear fusion power plants. "We are planning to build a permanent base on the moon by 2015 and by 2020 we can begin the industrial-scale delivery… of the rare isotope helium-3," Nikolay Sevastianov announced. Sevastianov and other experts are first and foremost spaceship salesmen, not spaceship buyers. What they are announcing is their willingness to carry out the described mission, if somebody else steps up and pays for it. Sevastianov, the recently-appointed head of the Energia Rocket and Space Corporation (the firm that builds and operates all of Russia's human space vehicles), claimed that one ton of helium-3 could produce as much energy as 14 million tons of oil. "Ten tons of helium-3 would be enough to meet the yearly energy needs of Russia," he added. "There are practically no reserves of helium on the Earth. On the Moon, there are between 1 million and 500 million tons, according to various estimates," he said, enough for the entire planet's energy needs for a thousand years. "We are optimistic about a complex for transportation which can be created by 2015, and a complex for extracting helium-3 on the Moon can be built by 2020," Sevastianov told "Russia TV" reporter Aleksandr Rogatkin in a program aired January 29. But exultation may be premature. The first thing an observer must notice about this chorus of bold Moon talk is its source. Sevastianov and other experts are first and foremost spaceship salesmen, not spaceship buyers. What they are announcing is their willingness to carry out the described mission, if somebody else steps up and pays for it. An Associated Press story prudently pointed out that "Sevastianov's statement appeared to be part of Energia's publicity campaign aimed at attracting government funding for the development of a next-generation spacecraft." The story continued with commendable caution: "Not everyone is sold on the promise of helium-3: A workable fusion reactor is still decades away, and researchers say that the technology for using helium-3 is more difficult than the technology for other potential fusion fuels that would be more abundant on Earth. Even if the technique for helium-3-based fusion were perfected, mining the material on the moon and bringing it to Earth may not make economic sense, skeptics say." At the Bauman seminar, held annually in honor of Soviet space program founder Sergey Korolyov (1906–1966), one of Korolyov's surviving colleagues urged support for the proposals. "Our state must develop a state program for lunar exploration," Boris Chertok told a television reporter. "We must start thinking as early as today what energy will be used for producing electricity for our distant descendants. We must not use up everything and leave them unable to survive." Adding in a reference to the ongoing record cold snap in Russia, Chertok continued: "The poor chaps should not freeze." Franchising Russian spacecraft Seeking private funding for major new space projects is actually a standard Russian practice. In the past two years, many innovative space vehicles have been touted in Russia. Their common feature is a lack of substantial Russian federal funding. Instead, space agency and industry officials have been instructed to talk up the virtues of this new hardware and find foreign partners willing to foot most of the bill.

2NC/1NR Extensions: Add-on Advantage [Russia Resource War]
1NC #1 "Authors Unqualified – No Energy War with Russia"

____ Extend the #1, their evidence is unqualified. Schwarz works for the World Socialist Web Site. Cohen is a partisan conservative mouthpiece at the Heritage Foundation, which is biased in its view of Russia, and the evidence is from 1996, over 15 years ago and describing a different world – it's so old that it talks about Saddam Hussein and Iraq being influenced by a return of Soviet Russia. Prefer our qualified evidence, which is more recent and is describing today's Russia, which is integrated to the international energy economy and cooperates with the US on multiple issues, like the war on terror in the Middle East.

2NC/1NR Extensions: Add-on Advantage [Russia Resource War]
1NC #2 "Russia Cooperates on Energy"

____ Extend the #2, the ALEKPEROV 2005 evidence. Russia is not an enemy of the United States, and they need cooperation on energy issues in order for their economy to grow. Even with oil, which is a finite resource and critical to Russian finances, the government has chosen to work with the United States. There is no chance they would choose to start a global conflict over Helium-3, which the Aff claims is almost infinite.

2NC/1NR Extensions: Add-on Advantage [Russia Resource War]
1NC #3 "Russia Can't Mine Moon"

____ Extend the #3, the OBERG 2006 evidence. Russia doesn't have the technology or funding necessary to mine Helium-3 from the Moon. The Aff's evidence is only public statements made in order to convince private companies to purchase spaceships from the government. This takes out the entire advantage because if Russia can't mine Helium-3 then they cannot start a conflict over energy prices.

Space-based Missile Defense Affirmative – Table of Contents

2AC Answers to Negative On-Case Arguments

Background Notes: Space-based Missile Defense

Missile Defense: Very basically, a Missile Defense system is any technology used to target and destroy enemy missiles before they can reach their target. It is very, very difficult to hit a missile out of the air because of how quickly missiles fly, so countries have attempted to put Missile Defense systems in 3 main locations:

a) Ground-based: Anti-missile devices can be launched from the ground, a tank, or the back of a truck. While cheap, it is hard to succeed with ground-based systems because they have to start very close to the missile they are aiming at (which would probably mean putting the system in another country's territory).

b) Sea-based: Submarines and Aircraft Carriers can carry Missile Defense systems, which allow them to be moved around to any part of any ocean in the world. These systems are more mobile than ground-based, but still cannot be placed very close to targets that are far from the ocean. Current sea-based Missile Defense includes the Navy's Aegis system, which uses radar to shoot down missiles post-boost phase and prior to re-entry.

c) Space-based: A laser or missile launched from outer space has a much better chance of hitting its target because a satellite can be moved directly above any location on Earth. This means the anti-missile weapon can be fired while the missile is just starting to launch, and it will have a shorter path to get to it. Only space-based Missile Defense can reasonably target a missile that is still in the Boost-phase (explained below).

Ballistic Missiles: Missiles can fly to reach their targets in many different ways. The missiles you commonly see on television flying from a jet or a tank are only meant to fly for a very short distance, which means they can carry all the fuel they need for their engine systems on the missile. For much longer flights (for example, from the United States to Russia), too much fuel would be required to keep it on the missile. Ballistic missiles are designed to launch into space, then orbit the Earth briefly (using gravity and orbital physics to maintain flight) until they turn and re-enter the atmosphere. This means the missiles only need enough fuel to get out of the atmosphere, and thus they are cheaper and more dangerous than alternatives that need planes or a launching site close to the target.

Ballistic missiles fly in 3 "phases:"

a) Boost phase: This is the time between when the missile is launched (typically from a silo in the ground) until it is out of the atmosphere and in space. Because this is the period when the missile is burning fuel, it looks like a rocket and is easily targetable during this very brief period.

b) Mid-phase: This is when the missile is orbiting the Earth above the atmosphere. No fuel is being burned and gravity is keeping the missile heading toward the target, so it is able to release decoys (fake objects that look like missiles) that can distract missile defense systems.

c) Terminal phase: This is where the missile re-enters the atmosphere above its target and descends back to the ground before exploding. A little fuel is used, but mostly the flight-path relies on gravity here. Missiles descend very quickly, so it is extremely hard to target and attack a missile in this period.

Proliferation: Proliferation is the spread of weapons to countries that didn't have them before. Most commonly, it refers to countries developing the technology to fire new, more powerful missiles or to getting access to nuclear, chemical, or biological weapons.

Missile Defense 1AC (1/10)

Contention 1 is Inherency: The United States federal government has no plans to expand status quo missile defense systems into outer space.

A. President Obama has put arms control obligations above national security and has called for any space-based missile defense system to be canceled.

SPRING, 2010

[Baker, F.M. Kirby Research Fellow in National Security Policy at the Heritage Foundation; "Obama's National Space Policy: Subordinating National Security to Arms Control," WebMemo #2950, 7/06, http://www.heritage.org/Research/Reports/2010/07/Obamas-National-Space-Policy-Subordinating-National-Security-to-Arms-Control]

A close examination of the White House's National Space Policy[1] released on June 28 reveals that national security is subordinated to policies for seeking cooperation, transparency, and most of all, arms control agreements regarding space systems and operations. Putting arms control at the center of the National Space Policy carries the direct risk of the U.S. losing its military and intelligence advantages in space and increasing the effectiveness of the "anti-access" strategies of U.S. adversaries. Further, Congress—and the Senate in particular—needs to keep a close watch on the Obama Administration's space arms control initiatives. The Obama Administration will most certainly be tempted to pursue this arms control agenda in ways that effectively circumvent the Senate's constitutional role in consenting to the ratification of international agreements that should be concluded as treaties. National Security in Space The national security aspects of the National Space Policy make up only a portion of the document. This is appropriate. Clearly, policies related to civil and commercial space activities play an essential role in the broader policy. What is inappropriate is that the national security requirements are not identified as the most important aspects of the policy and that the provisions that are related to national security—specifically regarding military and intelligence capabilities—are given a lower priority than pursuing international cooperation, transparency, and arms control. Specifically, the aspects of the National Space Policy that are relevant to national security start with the following: Expanding international cooperation; Increasing transparency; Directing the Secretary of Defense to develop international space object databases to support collision avoidance initiatives; and Increasing the resilience of U.S. space-based systems and networks. Only later are specific national security guidelines provided, the responsibilities for which are divided between the Secretary of Defense and the Director of National Intelligence. They include: Developing, acquiring, and operating space systems to support national security; Ensuring the survivability of national security space systems and networks; Reinvigorating the national security space industrial base; Improving "mission assurance" for national security space; Developing "space situational awareness" (SSA) capabilities; and Responding to changes in the threat environment. The Dangerous Implications of Misplaced Priorities As inappropriate as it is for President Obama to downplay the importance of national security in the National Space Policy, it is not surprising. During his presidential campaign, Obama famously promised not to "weaponize" space. Given that space has been weaponized since the dawn of the space age, his promise clearly meant that under his leadership the U.S. would move toward de-weaponizing and de-militarizing its uses of space. Such a policy, unfortunately, will force the U.S. in the direction of giving up its dominant position in terms of military and intelligence space capabilities, which provides the U.S. with enormous advantages over the enemy in the conduct and support of military operations. The National Space Policy shows that President Obama intends to use the tools of transparency, cooperation, and space arms control to fulfill this ill-advised campaign promise. This intention is made all the more clear by his decision last year to agree to a negotiating agenda at the United Nations Conference on Disarmament that includes an item on space

[This evidence continues on the next page…]

Missile Defense 1AC (2/10)

[Spring evidence continues with no text deleted…]

arms control. Accordingly, the National Space Policy states, "The United States will consider proposals and concepts for arms control measures if they are equitable, effectively verifiable, and enhance the national security of United States and its allies." The logic of putting a higher priority on de-weaponizing space and achieving that end through arms control points in the direction of very dangerous outcomes for the U.S. For example: The Obama Administration has touted its new Phased Adaptive Approach (PAA) to provide defenses against missile attack, particularly to Europe. The PAA is centered on fielding the existing Aegis-based missile defense system and supporting it with other elements of the broader ballistic missile defense system, first at sea and later on land, and improving it over time. The problem is that the Aegis-based system, particularly when provided off-board sensor data and command-and-control support, has a proven space weapons capability. This was demonstrated in a February 2008 operation using the system to intercept and destroy an out-of-control U.S. satellite. Under the new National Space Policy, the PAA (phase adaptive approach) system will at a minimum have to be "dumbed down" or perhaps cancelled entirely. The National Space Policy itself endorses enhancing SSA (space situational awareness) capabilities. SSA (space situational awareness) capabilities—given their inherent capacity to detect, track, and categorize space objects—are essential enablers of anti-satellite (ASAT) weapons. But the National Space Policy adopts the principle that purposeful interference with space systems is an infringement of a nation's rights. This statement of principle constitutes a call for a ban on anti-satellite weapons systems or the ability to conduct anti-satellite weapon operations. Thus, this goal will prevent maintaining, let alone enhancing, SSA (space situational awareness) capabilities. Ultimately, it will require that SSA (space situational awareness) capabilities be curtailed dramatically.

B. The U.S. has deployed land- and sea-based missile defense systems, but these are not enough to stop new threats. Only adding a space-based system can solve.

CNS NEWS, 2008
[Kevin Mooney, Staff Writer; "Space-Based Missile Defense Needed to Counter Global Threats, Experts Say," 9/23, http://www.cnsnews.com/node/36145]

Only a space-based missile defense system capable of intercepting and destroying incoming warheads in the "boost phase" (shortly after they are launched) can adequately protect America from emerging global threats, national security experts told a forum hosted the Heritage Foundation on Tuesday, Sept. 16, 2008. The ground- and sea-based systems deployed by the U.S. over the past few years are a promising start that can help guard against limited strikes from rogue powers such as North Korea and Iran, the Bush administration maintains. However, the existing system is not equipped to handle the more sophisticated weaponry and countermeasures that Russia and China are now developing, warned Amb. Hank Cooper, chairman of the missile defense research organization High Frontier. Moreover, rogue states like Iran "who know how to play the game" also are testing new missile technology that could be deployed against the U.S. in unconventional ways, Cooper suggested. One nightmare scenario involves a ship-borne Scud missile that could be used to launch and explode a nuclear weapon in the atmosphere over the U.S., creating an electromagnetic pulse that would fry electronics, he warned.

Missile Defense 1AC (3/10)

Contention 2 is the Harms: Rogue nations are quickly proliferating weapons of mass destruction, and this greatly increases the risk of nuclear war.

A. Nuclear weapons proliferation is inevitable, and we can't track it because weapons programs are hidden behind energy rhetoric.

WASHINGTON POST, 2008
[Joby Warrick, Staff Writer; "Spread of Nuclear Capability Is Feared," 5/12, http://www.washingtonpost.com/wp-dyn/content/article/2008/05/11/AR2008051102212_pf.html]

At least 40 developing countries from the Persian Gulf region to Latin America have recently approached U.N. officials here to signal interest in starting nuclear power programs, a trend that concerned proliferation experts say could provide the building blocks of nuclear arsenals in some of those nations. At least half a dozen countries have also said in the past four years that they are specifically planning to conduct enrichment or reprocessing of nuclear fuel, a prospect that could dramatically expand the global supply of plutonium and enriched uranium, according to U.S. and international nuclear officials and arms-control experts. Much of the new interest is driven by economic considerations, particularly the soaring cost of fossil fuels. But for some Middle Eastern states with ready access to huge stocks of oil or natural gas, such as Kuwait, Saudi Arabia and the United Arab Emirates, the investment in nuclear power appears to be linked partly to concerns about a future regional arms race stoked in part by Iran's alleged interest in such an arsenal, the officials said. "We are concerned that some countries are moving down the nuclear [weapons] path in reaction to the Iranians," a senior U.S. government official who tracks the spread of nuclear technology said in an interview. He declined to speak on the record because of diplomatic sensitivities. "The big question is: At what point do you reach the nuclear tipping point, when enough countries go nuclear that others decide they must do so, too?" Although the United Arab Emirates has a proven oil reserve of 100 billion barrels, the world's sixth-largest, in January it signed a deal with a French company to build two nuclear reactors. Wealthy neighbors Kuwait and Bahrain are also planning nuclear plants, as are Libya, Algeria and Morocco in North Africa and the kingdom of Jordan. Even Yemen, one of the poorest countries in the Arab world, last year announced plans to purchase a nuclear reactor, which it says is needed to produce electricity; it is one of 11 Middle Eastern states now engaged in starting or expanding nuclear power programs. Meanwhile, two of Iran's biggest rivals in the region, Turkey and Egypt, are moving forward with ambitious nuclear projects. Both countries abandoned any pursuit of nuclear power decades ago but are now on course to develop seven nuclear power plants -- four in Egypt and three in Turkey -- over the next decade. Egypt's ambassador to the United States, Nabil Fahmy, told a recent gathering of Middle Eastern and nonproliferation experts that his country's decision was unrelated to Iran's nuclear activities. But he acknowledged that commercial nuclear power "does give you technology and knowledge," and he warned that a nuclear arms race may be inevitable unless the region's leaders agree to ban such weapons. "We continue to take the high road, but there isn't much oxygen there, and it is very lonely," Fahmy told the gathering in Washington at the Woodrow Wilson International Center for Scholars. He added a prediction: "Without a comprehensive nuclear accord, you will have a proliferation problem in the Middle East, and it will be even worse in 10 years than it is today." Many countries involved in nuclear expansion have stressed their peaceful intentions. Some, such as the United Arab Emirates and Bahrain, publicly vowed never to pursue uranium enrichment or fuel reprocessing -- technologies that can be used to create fissile materials for nuclear weapons. But some arms-control experts say the sudden interest cannot be fully explained by rising oil prices. "This is not primarily about nuclear energy. It's a hedge against Iran," said Ploughshares Fund president Joseph Cirincione, an expert on nuclear policy and author of "Bomb Scare: The History and Future of Nuclear

[This evidence continues on the next page…]

Missile Defense 1AC (4/10)

[Washington Post evidence continues with no text deleted…]

Weapons." "They're starting their engines. It takes decades to build a nuclear infrastructure, and they're beginning to do it now. They're saying, 'If there's going to be an arms race, we're going to be in it.' " '90 Percent' Is Deterrence Although U.S. intelligence agencies have concluded that Iran halted its research into making nuclear weapons five years ago, the Islamic republic still seeks to make enriched uranium with centrifuges at its vast underground facility at Natanz. It is now operating about 3,000 centrifuges and plans to increase the number to 50,000. While Iran insists that the uranium will be used only to make electricity, the United States and its European allies have sought to dissuade Tehran from pursuing the technology by pushing ever-tougher sanctions through the U.N. Security Council. Iran's neighbors, convinced that a nuclear-armed Tehran is now likely, are keeping their own options open, nuclear experts say. Mohammed ElBaradei, the director general of the U.N.'s International Atomic Energy Agency and a winner with the International Atomic Energy Agency [IAEA – international nuclear watchdog organization reporting to UN] of the 2005 Nobel Peace Prize for his work preventing the spread of nuclear weapons, has likened the pursuit of "latent" nuclear capability to buying an insurance policy. "You don't really even need to have a nuclear weapon," ElBaradei said at a recent international conference of security officials in Munich. "It's enough to buy yourself an insurance policy by developing the capability, and then sit on it. Let's not kid ourselves: Ninety percent of it is insurance, a deterrence." The Middle East's renewed interest in nuclear power is part of a global trend that began around 2004, as prices for fossil fuels began to rise. Before that, commercial nuclear development had remained relatively flat since 1986, when a massive fire at the Chernobyl nuclear plant in Ukraine widely spread radioactive contamination in history's worst commercial nuclear power accident. But now, with oil supplies tightening and prices soaring, nuclear power is being viewed in a different light, said Alan McDonald, an IAEA [International Atomic Energy Agency – international nuclear watchdog organization reporting to UN] official who coordinates the agency's programs on nuclear energy. McDonald said he thinks there is a logical economic argument for developing a domestic nuclear industry, even if a nation's oil reserves are measured by the tanker-load. "Why would these Gulf states want to go nuclear? Because they know their oil will only become more valuable as global demand increases," McDonald said. "It may be more cost-effective to sell oil to Americans driving SUVs than to burn it domestically." The IAEA [International Atomic Energy Agency – international nuclear watchdog organization reporting to UN] officially encourages commercial nuclear development under policies backed by successive U.S. administrations since the 1950s. It also provides technical and legal assistance to any country that wants a nuclear power plant. But IAEA [International Atomic Energy Agency – international nuclear watchdog organization reporting to UN] officials say they have never previously seen such widespread interest in starting a domestic nuclear power industry. While officials declined to detail their correspondence with specific countries, the list of the newly interested includes several African countries, such as Nigeria and Namibia, and at least half a dozen former Soviet republics that are embracing new Western designs to replace less-reliable Soviet nuclear plants. Programs Can Be Hidden Nuclear weapons experts say commercial nuclear power plants, by themselves, pose relatively little proliferation risk, although they are frequently mentioned as possible targets for terrorist attacks. But nuclear power can give a country the technological expertise and infrastructure that could become the foundation for a clandestine weapons program. Such covert programs can be successfully hidden for years, as was demonstrated in recent months by U.S. and Israeli allegations that Syria was building a secret plutonium production reactor near the desert town of Al Kibar. Plutonium is an efficient fuel for nuclear explosions, as well as for power generation. Both India and Pakistan built nuclear devices using an industrial infrastructure built ostensibly for nuclear power. Taiwan and South Korea conducted weapons research under cover of civil power programs but halted the work after being confronted by the United States.

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B. In addition to nuclear materials, countries are also getting access to ballistic missiles and the technology needed to launch them globally.

PFALTZGRAF AND VAN CLEAVE, 2009
[Dr. Robert, Shelby Cullom Davis Professor of International Security Studies The Fletcher School, Tufts University and President Institute for Foreign Policy Analysis; and Dr. William, Professor Emeritus Department of Defense and Strategic Studies Missouri State University; "Missile Defense, The Space Relationship, and the 21st Century," Independent Working Group, http://www.ifpa.org/pdf/IWG2009.pdf]

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.

Missile Defense 1AC (6/10)

C. This proliferation brings pressure and irrationality to policymaking, resulting in nuclear war.

UTGOFF, 2002

[Victor, Deputy Director for Strategy, Forces and Resources at the Institute for Defense Analyses; "Proliferation, Missile Defense and American Ambitions," *Survival*, Summer, v. 44, n. 2]

If leaders are willing to engage in conflict with nuclear-armed nations, use of nuclear weapons in any particular instance may not be likely, but its probability would still be dangerously significant. In particular, human nature suggests that the threat of retaliation with nuclear weapons is not a reliable guarantee against a disastrous first use of these weapons. While national leaders and their advisors everywhere are usually talented and experienced people, even their most important decisions cannot be counted on to be the product of well-informed and thorough assessments of all options from all relevant points of view. This is especially so when the stakes are so large as to defy assessment and there are substantial pressures to act quickly, as could be expected in intense and fast-moving crises between nuclear-armed states.6 Instead, like other human beings, national leaders can be seduced by wishful thinking. They can misinterpret the words or actions of opposing leaders. Their advisors may produce answers that they think the leader wants to hear, or coalesce around what they know is an inferior decision because the group urgently needs the confidence or the sharing of responsibility that results from settling on something. Moreover, leaders may not recognise clearly where their personal or party interests diverge from those of their citizens. Under great stress, human beings can lose their ability to think carefully. They can refuse to believe that the worst could really happen, oversimplify the problem at hand, think in terms of simplistic analogies and play hunches. The intuitive rules for how individuals should respond to insults or signs of weakness in an opponent may too readily suggest a rash course of action. Anger, fear, greed, ambition and pride can all lead to bad decisions. The desire for a decisive solution to the problem at hand may lead to an unnecessarily extreme course of action. We can almost hear the kinds of words that could flow from discussions in nuclear crises or war. 'These people are not willing to die for this interest'. 'No sane person would actually use such weapons'. 'Perhaps the opponent will back down if we show him we mean business by demonstrating a willingness to use nuclear weapons'. 'If I don't hit them back really hard, I am going to be driven from office, if not killed'. Whether right or wrong, in the stressful atmosphere of a nuclear crisis or war, such words from others, or silently from within, might resonate too readily with a harried leader. Thus, both history and human nature suggest that nuclear deterrence can be expected to fail from time to time, and we are fortunate it has not happened yet. But the threat of nuclear war is not just a matter of a few weapons being used. It could get much worse. Once a conflict reaches the point where nuclear weapons are employed, the stresses felt by the leaderships would rise enormously. These stresses can be expected to further degrade their decision-making. The pressures to force the enemy to stop fighting or to surrender could argue for more forceful and decisive military action, which might be the right thing to do in the circumstances, but maybe not. And the horrors of the carnage already suffered may be seen as justification for visiting the most devastating punishment possible on the enemy.7 Again, history demonstrates how intense conflict can lead the combatants to escalate violence to the maximum possible levels. In the Second World War, early promises not to bomb cities soon gave way to essentially indiscriminate bombing of civilians. The war between Iran and Iraq during the 1980s led to the use of chemical weapons on both sides and exchanges of missiles against each other's cities. And more recently, violence in the Middle East escalated in a few months from rocks and small arms to heavy weapons on one side, and from police actions to air strikes and armoured attacks on the other. Escalation of violence is also basic human nature. Once the violence starts, retaliatory exchanges of violent acts can escalate to levels unimagined by the participants beforehand.8 Intense and blinding anger is a common response to fear or humiliation or abuse. And such anger can lead us to impose on our opponents whatever levels of violence are readily accessible. In sum, widespread proliferation is likely to lead to an occasional shoot-out with nuclear weapons, and that such shoot-outs will have a substantial probability of escalating to the maximum destruction possible with the weapons at hand. Unless nuclear proliferation is stopped, we are headed toward a world that will mirror the American Wild West of the late 1800s. With most, if not all, nations wearing nuclear 'six-shooters' on their hips, the world may even be a more polite place than it is today, but every once in a while we will all gather on a hill to bury the bodies of dead cities or even whole nations.

Missile Defense 1AC (7/10)

D. Current missile defense systems are Earth-based, and this makes them too immobile to handle missile threats.

LAMBAKIS, 2007
[Steven, national security and international affairs analyst specializing in space power and policy studies, and fellow at the National Institute for Public Policy; "Missile Defense From Space," *Policy Review*, 2/01, n. 141, http://www.hoover.org/publications/policy-review/article/6124]

The system being deployed today is fixed firmly to Earth. Whether they are sea-based or land-based weapons, or even the boost-engagement Airborne Laser, we are essentially talking about terrestrial platforms for basing weapons. As we move into the future, there are plans to make those platforms, the sensors and interceptors, more mobile. Why? Because greater mobility can provide greater flexibility for dealing with unpredicted threats. Mobility also allows a commander to concentrate his forces or disperse them as the requirements of the battlefield demand. It matters where we locate sensors and interceptors. It is important to put sensors close to the threat, because they will be in position to provide critical cueing and tracking data early in a ballistic missile's flight. These data can help enlarge the engagement battle space. To perform boost-phase intercept from the ground or sea, the weapons platforms must be very near the target launch site. These terrestrial boost-phase weapons can defend many targets around the globe by covering a single launch site. The disadvantage of such basing, a disadvantage that is mitigated somewhat with a mobile platform like the Airborne Laser, is that the threat launch site or region must be predicted. Terrestrial-based weapons that engage in space, in the middle or midcourse of a missile's or warhead's flight, offer perhaps the greatest flexibility in terms of addressing possible flight azimuths, trajectories, and launch points. While ground-based midcourse interceptors may have to be oriented to large threat regions, they can defend against multiple launch points. Conversely, ground interceptors that are near the target can defend only a small area, but they can potentially protect that point from launches anywhere in the world. Yet it is simply unaffordable to do a point defense for every place you want to defend in the United States, every place that U.S. forces go, or everywhere that our allies are. The ability to do area defense — to defend against multiple launch points as opposed to doing point defense of a very limited area — is fundamental to successful missile defense. Political, strategic, and technological uncertainties could change the missile defense scenario by causing a shift in the threat from one region to another. Given that it takes years to field, test, and make operational new fixed interceptor and sensor sites, a shift in the threat could leave the nation vulnerable. Because many of the interceptors and sensors in the current system are fixed to geographic points, we are limited in our ability to defend the homeland, for example, against missiles launched from surprise locations such as a ship off our shoreline. We also might face an adversary tomorrow that deploys tens or even hundreds of ballistic missiles or one that has more sophisticated countermeasure and reentry technologies. Those, too, would be expected to stress the current system, which is designed at the moment to deal with more limited threats. Planned transportable land-based and mobile sea-based and airborne systems also suffer limitations. The need to base sensors and interceptors forward, closer to threat launch sites, in order to enlarge the engagement battle space makes our security dependent on political decisions by foreign governments. Projected boost defense systems, which may be deployed to the periphery or littoral of an adversary, would have very limited or no utility against a ballistic missile launched from several hundred miles inside a threat country's border. The inability to engage a missile in boost means we would be left with only midcourse or terminal intercept possibilities, if those are available, and this removes a layer from the effectiveness calculations.

Missile Defense 1AC (8/10)

Thus, we offer the following PLAN:

The United States federal government should substantially increase funding for the implementation of a space-based missile defense system.

Missile Defense 1AC (9/10)

Contention 3 is Solvency: Only a space-based missile defense system can detonate missiles early enough to stop them from reaching their targets.

A. Putting interceptors in space creates flexibility and accurate satellite imagery that allows us to take-out enemy missiles.

LAMBAKIS, 2007
[Steven, national security and international affairs analyst specializing in space power and policy studies, and fellow at the National Institute for Public Policy; "Missile Defense From Space," *Policy Review*, 2/01, n. 141, http://www.hoover.org/publications/policy-review/article/6124]

Today we base missile-defense weapons on Earth, yet most engagements actually take place high above the Earth's surface, in space — unless, of course, those engagements occur very early in boost or late in terminal. Putting interceptors in space to engage ballistic missiles could offer efficiencies that go a long way towards improving national defense, protecting more areas around the world, and reacting more effectively to threat surprises. The Exoatmospheric Kill Vehicle (ekv), deployed on top of a long-range ground-based interceptor in Alaska and California, is really a euphemism for "space weapon." Space is the only environment in which the ekv (Exoatmospheric Kill Vehicle) will operate. In order to perform the missile defense mission, it must be boosted into space where it is "based" for a short time and operates semi-autonomously to put itself onto a collision path with a hostile warhead. In other words, the ekv (Exoatmospheric Kill Vehicle) is a "space weapon" that just happens to spend most of its time on the ground. The Standard Missile–3 interceptor, while it is carried on Aegis ballistic missile defense ships, also executes the intercept endgame in space against short- to medium-range ballistic missiles using a sensor-propulsion package designed to collide with the target. Thus, despite the fact that space is the recognized battleground in many missile defense engagements, we are deploying "space weapons" that are restricted to terrestrial launching just prior to operation. They must fight a space war from Earth. So, in a sense, these terrestrial-based interceptors are out of position before the battle even begins. At the very least, they are not in the most advantageous position to accomplish the mission for which they were designed. Before we can even begin the launch sequence, battle managers must wait for the attacker to make his move. The attacker has a head start and the ability to pre-position before the defender can get to the point where he must engage, especially if we are talking about engagement in the midcourse phase of flight. These engagements take place over a matter of minutes, of course, so any time wasted getting into position could lead to a failed intercept and possibly devastation for a city. By not basing interceptors in space, by not pre-positioning assets in the environment where we know intercepts will take place, the defense is surrendering a fundamental positional advantage. On this point, there is relevance in Carl von Clausewitz's observation that a "benefit [of defensive action], one that arises solely from the nature of war, derives from the advantage of position, which tends to favor the defense."9 To give up this advantage is detrimental to the cause. While space assets generally follow predictable orbital paths, they do provide a unique form of mobility — they can be present and persistent over many places on the globe. Indeed, in 2007, the Missile Defense Agency will begin demonstrations with two satellites hosting sensors designed to provide very fine surveillance and

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Missile Defense 1AC (10/10)

[Lambakis evidence continues with no text deleted…]

tracking data on in-flight ballistic missiles and payloads. A constellation of these satellites would become the sensor backbone of a global missile defense capability and would make possible the global mission endorsed by the Bush administration: the protection of the United States, its deployed forces, and allies and friends. Similarly, a space-based interceptor layer would enable a global on-call missile defense capability and a timely response to rapidly evolving threats, even threats emanating from unpredicted locations with very different azimuths [locations in the sky] from those we plan to be able to defeat today.10 A space-defense capability also would allow the country to engage longer-range threats originating from deep within the interior of a threat country. It is also known that enemies of the United States can put a nuclear weapon over U.S. territory using a ballistic missile. The detonation of this weapon at a high altitude could unleash an electromagnetic pulse that would wipe out satellite and airborne navigation, intelligence, and communications systems and impede any U.S. military response to the aggression. Such a pulse of energy would disable or destroy the unprotected technological infrastructure of a region or the nation. According to the Electromagnetic Pulse Attack Threat Commission, "a regional or national recovery would be long and difficult and would seriously degrade the safety and overall viability of our nation. . . . [A]t some point the degradation of infrastructure could have irreversible effects on the country's ability to support its population." Space-based interceptors may be the only effective way to counter this threat and mitigate the effects of an electromagnetic pulse resulting from the intercept. Engaging the missile close to its launch point would release the resulting explosion of gamma rays closer to the attacker's territory. Relying on an intercept in space, in the midcourse of a missile's flight, risks damaging unprotected satellites (i.e., just about all commercial and civilian satellites), regardless of who owns them. Because the missile defense system is "layered" and will have multiple elements working together synergistically, sharing information, sharing existing sensors, communicating as a single system worldwide, even a small constellation of space-based interceptor platforms would allow the entire system to work more efficiently. The massive constellations projected back in the heady days of the Strategic Defense Initiative, in other words, do not seem to be necessary, especially when the targeted adversaries have very limited ballistic missile inventories. By attacking even just a portion of the threat missiles in boost and midcourse, the space layer has the effect of thinning out the number of attacking missiles so that the other elements of the system, which are based on the ground or at sea (midcourse and terminal systems), can be more effective.

1AC Add-on Advantage: U.S. Military Power

A. U.S. satellites are vulnerable, and other countries already have the ability to strike them.

GOUVEIA, 2005
[William Jr, "An Assessment of Anti-Satellite Capabilities and their Strategic Implications," *Astropolitics,* v.3 n.2]

Precision munitions miss their targets, inadvertently destroying mosques and hospitals. Companies of tanks lose their way in the desert, bypassing their objectives and stumbling into ambushes. Special forces teams deployed into enemy territory cannot communicate to coordinate their extraction. Meanwhile, at CENTCOM [US military Central Command] headquarters, strategic operational and intelligence communications are rendered inoperable and commanders lose battlespace awareness. This scenario may be far fetched, but it illustrates the reduced effectiveness of American forces if they are denied access to the satellite architectures upon which they heavily rely. The success of space-based communications, navigation and reconnaissance programs – in both the commercial and military arenas – presents a significant vulnerability. Intuitively, as the economic importance and military indispensability of space systems grows, so will their attractiveness as targets. Successful attacks against the ground-based infrastructure, communications capabilities or space-based vehicles of satellite architectures could be extremely effective against selected critical satellites, such as reconnaissance satellites which are small in number, extremely costly and difficult to replace quickly. Although causing such disruption would involve significant operational challenges, economic costs and diplomatic risks, it is well within the realm of technological possibility. This essay shall describe the current capabilities of anti-satellite (ASAT) technology, assess its military impact and consider its broader policy and security implications.

B. Successful defense of space assets is critical to every aspect of U.S. military power.

GOUVEIA, 2005
[William Jr, "An Assessment of Anti-Satellite Capabilities and their Strategic Implications," *Astropolitics,* v.3 n.2]

The American military's dominance in space is unchallenged; however, its dependence on space is also unrivalled.1 Space operations play an integral role in increasing the effectiveness of American and allied air, land and sea forces. Specifically, the space forces of the Department of Defense (DoD) provide the following capabilities:2 . Missile warning satellites of the Defense Support Program provide both ICBM and Theater Ballistic Missile warning to political and military leaders. . Communication satellites such as MILSTAR provide constant global connectivity with deployed forces. . Navigation satellites, specifically the Global Positioning System (GPS) constellation, provide precise navigation and timing support to coordinate the positioning and maneuver of military forces and munitions. . Weather satellites of the Defense Meteorological Satellite Program collect and distribute global weather data. . Intelligence satellites provide imagery and signals intelligence about global threats to warfighters and policy-makers. Without these capabilities, the United States would also lack critical information for command and control, battlespace awareness, targeting, mission planning, battle damage assessment, precision strike and force protection.

1AC Add-on Advantage: Terrorism

A. Terrorists can launch devastating missile strikes from boats offshore, and only missile defense can stop them.

PFALTZGRAF AND VAN CLEAVE, 2009
[Dr. Robert, Shelby Cullom Davis Professor of International Security Studies The Fletcher School, Tufts University and President Institute for Foreign Policy Analysis; and Dr. William, Professor Emeritus Department of Defense and Strategic Studies Missouri State University; "Missile Defense, The Space Relationship, and the 21st Century," Independent Working Group, http://www.ifpa.org/pdf/IWG2009.pdf]

Moreover, many states, as well as terrorist groups, could launch short-range missiles from ships off American coasts. We currently have no missile defense capable of destroying such missiles. The devastation caused by short-range missiles such as Scuds armed with a nuclear warhead would be far greater than the 9/11 attacks. A comprehensive approach to homeland security, in which missile defense and efforts to identify, destroy, or change such regimes are priorities, is therefore needed.

B. This causes retaliation and global nuclear war.

SPEICE, 2006
[Patrick, JD Candidate; "Negligence and nuclear nonproliferation: eliminating the current liability barrier to bilateral U.S.-Russian nonproliferation assistance programs," *William and Mary Law Review*, February, 47 Wm and Mary L. Rev. 1427, lexis-nexis]

Terrorist groups could acquire a nuclear weapon by a number of methods, including "steal[ing] one intact from the stockpile of a country possessing such weapons, or ... [being] sold or given one by [*1438] such a country, or [buying or stealing] one from another subnational group that had obtained it in one of these ways." 40 Equally threatening, however, is the risk that terrorists will steal or purchase fissile material and construct a nuclear device on their own. Very little material is necessary to construct a highly destructive nuclear weapon. 41 Although nuclear devices are extraordinarily complex, the technical barriers to constructing a workable weapon are not significant. 42 Moreover, the sheer number of methods that could be used to deliver a nuclear device into the United States makes it incredibly likely that terrorists could successfully employ a nuclear weapon once it was built. 43 Accordingly, supply-side controls that are aimed at preventing terrorists from acquiring nuclear material in the first place are the most effective means of countering the risk of nuclear terrorism. 44 Moreover, the end of the Cold War eliminated the rationale for maintaining a large military-industrial complex in Russia, and the nuclear cities were closed. 45 This resulted in at least 35,000 nuclear scientists becoming unemployed in an economy that was collapsing. 46 Although the economy has stabilized somewhat, there [*1439] are still at least 20,000 former scientists who are unemployed or underpaid and who are too young to retire, 47 raising the chilling prospect that these scientists will be tempted to sell their nuclear knowledge, or steal nuclear material to sell, to states or terrorist organizations with nuclear ambitions. 48 The potential consequences of the unchecked spread of nuclear knowledge and material to terrorist groups that seek to cause mass destruction in the United States are truly horrifying. A terrorist attack with a nuclear weapon would be devastating in terms of immediate human and economic losses. n49 Moreover, there would be immense political pressure in the United States to discover the perpetrators and retaliate with nuclear weapons, massively increasing the number of casualties and potentially triggering a full-scale nuclear conflict. N50 In addition to the threat posed by terrorists, leakage of nuclear knowledge and material from Russia will reduce the barriers that states with nuclear ambitions face and may trigger widespread proliferation of nuclear weapons. n51 This proliferation will increase the risk of nuclear attacks against the United States [*1440] or its allies by hostile states, n52 as well as increase the likelihood that regional conflicts will draw in the United States and escalate to the use of nuclear weapons.

2AC Harms [Ballistic Missile Proliferation]: Answers To 1NC#1: "Prolif Exaggerated"

They say proliferation is exaggerated, but…

____Extend the 1AC WASHINGTON POST evidence: Numerous countries, including India and Pakistan, have proliferated nuclear weapons under the cover of energy development, and many of the countries pursuing nuclear power have no need for a new energy program.

____Iran and North Korea prove that countries will quickly and secretly develop ballistic missiles – we can't detect their launch now

NOBLE, 2008
[Michael, United States Air Force, "Export Controls and United States Space Power," *Astropolitics,* v.6 n.3]

Contemporary concerns are the cases of Iran and North Korea. With the persistent threat of nuclear WMD, and the opacity and inflammatory nature of these regimes, the Iranian and North Korean threats are one rational for U.S. missile defense. An orbital launch from either "rogue" state would be an event of extreme concern for the U.S. To date, neither state has achieved successful orbital launch, yet both are working toward realizing indigenous launch capability. The Iranians intend to build and launch five spacecraft by 2010.18 The Iranians achieved a significant milestone with the February 2008 launch of their Shahab-3B test rocket from a missile base in the Semnan Desert. The payload achieved at least a 70 to 100 mile altitude, but did not reach orbital velocity.19 The North Koreans claimed to have orbited a satellite, Kwangmyongsong-1, on 31 August 1998. This test satellite purportedly was transmitting the melody of the "immortal revolutionary hymns" including the "Song of General Kim Jong II." USAF Space Command was not able to detect the North Korean satellite and the launch is generally believed to have failed.20 Since then, the most notable demonstration of North Korean launch technology occurred with their ballistic missile test in July 2006.21

2AC Harms [Ballistic Missile Proliferation]: Answers To 1NC #2: "Prolif Decreasing"

They say proliferation is decreasing, but …

____This evidence is outdated. In the last 10 years, North Korea, Iran, India and Pakistan have all developed ballistic missiles and more are trying in secret. Our 1AC Washington Post evidence is seven years more recent and quotes their author, Cirincione, who says Iran has changed the whole equation and jump-started an arms race in the Middle East.

____Rogue states and terrorists are rapidly proliferating weapons of mass destruction.

MILLER, 2004
[Eric, International Affairs Analyst with National Institute of Public Policy, "GLOBAL STRIKE CAPABILITIES: THE BALLISTIC MISSILE OPTION" *Astropolitics,* v.2 n.1]

While the threat of global annihilation subsided after the collapse of the Soviet Union, the United States still faces a highly unpredictable security environment. Regional powers and non-state actors, such as vast terrorist networks, wield increasingly lethal weapons and now dominate US defense policy horizons. This trend is driven by the ongoing proliferation of weapons of mass destruction (WMD) and ballistic missile technology.1 Recent developments in North Korea and Iran serve as a reminder of the extent to which some countries will go to acquire WMD, especially nuclear weapons, despite international pressure. As President George W. Bush noted: Some states, including several that have supported and continue to support terrorism, already possess WMD and are seeking even greater capabilities, as tools of coercion and intimidation. For them, these are not weapons of last resort, but militarily useful weapons of choice intended to overcome our nation's advantages in conventional forces and to deter us from responding to aggression against our friends and allies in regions of vital interest. In addition, terrorist groups are seeking to acquire WMD with the stated purpose of killing large numbers of our people – without compunction and without warning.2 Moreover, the Bush administration is concerned that 'rogue' regimes and other proliferators may share military and WMD technology with non-state actors bent on harming the United States. Speaking at West Point in June 2002, President Bush summarized this concern: The gravest danger to freedom lies at the perilous crossroads of radicalism and technology. When the spread of chemical and biological and nuclear weapons, along with ballistic missile technology – when that occurs, even weak states and small groups could attain a catastrophic power to strike great powers.3 These concerns are exacerbated since traditional state challengers and non-state actors are becoming better armed in all respects.4 Mass media, worldwide telecommunications, ease of international travel, a globalized financial system and accessibility to high technology have enhanced state powers. All of this suggests that while the US military remains dominant, the US homeland, its allies and its vital interests still face grave threats.

2AC Harms [Ballistic Missile Proliferation]: Answers To 1NC #3: "Prolif Slow"

They say proliferation is slow, but …

____We have to err on the side of missile defense, because poor intelligence means rapid proliferation and threats will emerge before we can respond to them in time

LAMBAKIS, 2007
[Steven, national security and international affairs analyst specializing in space power and policy studies, and fellow at the National Institute for Public Policy; "Missile Defense From Space," *Policy Review*, 2/01, n. 141, http://www.hoover.org/publications/policy-review/article/6124]

The ballistic missile threat to the United States, its deployed forces, and allies and friends has been well defined.6 This is a threat we downplay at our peril. Nations such as North Korea and Iran — which also have significant programs to develop nuclear, biological, and chemical weapons — as well as nonstate groups can pose significant, even catastrophic, dangers to the U.S. homeland, our troops, and our allies. Russia and China, two militarily powerful nations in transition, have advanced ballistic missile modernization and countermeasure programs. Indeed, despite the reality that trade relations with China continue to expand, its rapid military modernization represents a potentially serious threat. Whether these nations become deadly adversaries hinges on nothing more than a political change of heart in their respective capitals. The intelligence community's ability to provide timely and accurate estimates of ballistic missile threats is, by many measures, poor. Our leaders have been consistently surprised by foreign ballistic missile developments. Shortened development timelines and the ability to move or import operational missiles, buy components, and hire missile experts from abroad mean the United States may have little or no warning before it is threatened or attacked. There is no escaping the uncertainty we face.

2AC Add-On Advantage [U.S. Military Power]: Answers To – 1NC #1: "Other Countries Won't Attack Satellites"

They say other countries won't attack our satellites, but …

____ 1. Extend the GOUVEIA and PFALTGRAF AND VAN CLEAVE evidence: other countries are rapidly proliferating weapons that can destroy U.S. satellites, which would cripple our ability to effectively project power globally.

____ 2. China is covertly developing offensive space capabilities.

LELE, 2005
[Ajey, Institute for Defence Studies and Analyses, New Delhi, India, "CHINA: A GROWING MILITARY SPACE POWER," *Astropolitics,* v.3 n.1]

China is investing vast sums in space technologies overtly for civilian purposes and covertly for military purposes. Many of the current technologies used for space exploration and utilisation are similar to those necessary to place nuclear warheads accurately on targets using ballistic missiles. The PRC is increasingly turning towards utilising its space technology to further its own military interests. According to one Chinese official, other nations may bully the Chinese state in the absence of considerable space, scientific and technological strength4 so, therefore, China needs to remain proactive in the space technology arena.

_____ 3. An asymmetrical attack on U.S. satellites is the most likely precursor to major war.

HUSKISSON, 2007
[Darren, United States Strategic Command, "Protecting the Space Network and the Future of Self-Defense" *Astropolitics,* v.5 n.2]

There is no question that the United States (U.S.) reliance on space services, combined with the inherent vulnerability of on-orbit assets and the space network as a whole, makes it likely that U.S. interests in space will be targeted in the event of a conflict. Such conflicts could include a large-scale military confrontation with a nation such as China, limited hostilities with a smaller nation such as Iran, or even hostilities in which the U.S is not directly involved but merely providing space support to a belligerent. Regardless of the nature of the conflict, the protection of the space network is a critical mission for the U.S. military.

2AC Add-On Advantage [U.S. Military Power]: Answers To 1NC #2: "Plan Leads to Anti-Satellite Weapons" (1/2)

They say plan leads to anti-satellite weapons, but …

____ 1. Extend the CNS News 1AC evidence: countries are looking to exploit our missile defense now, only space-based missile defense deters them.

____ 2. Missile defense doesn't cause proliferation, it solves it

PFALTZGRAF AND VAN CLEAVE, 2009
[Dr. Robert, Shelby Cullom Davis Professor of International Security Studies The Fletcher School, Tufts University and President Institute for Foreign Policy Analysis; and Dr. William, Professor Emeritus Department of Defense and Strategic Studies Missouri State University; "Missile Defense, The Space Relationship, and the 21st Century," Independent Working Group, http://www.ifpa.org/pdf/IWG2009.pdf]

To begin with, arms races stem from competition for offensive weapons and while it is true that some arms races are designed in part to overcome someone's defenses, the converse that the absence of defenses breeds the absence of offensive weapons is without historical basis. Indeed, this proposition is supported by irrefutable evidence that the United States never has had missile defenses for its population, much less its military installations (save for selective use of limited "point" defense, such as the Patriot). But that reality has not prevented either nuclear proliferation or nuclear arms buildups; it has in all probability been the reverse. The evidence also is clear that the past 40 years, most especially the last decade, have seen relentless buildups and bold moves to spread the use of nuclear and other weapons of mass destruction, as witness evolving events in Russia, China, North Korea, and Iran (discussed elsewhere in this report). One of the few times there has been a significant slowing of momentum was in the brief period 1985-93, which was the height of missile defense development in the United States. In other words, if anything, a credible missile defense – even in development stage – is much more likely to help slow an arms race and discourage proliferation because it raises the costs and lowers the chances of success for aggressor nations or terrorist groups to try to find ways to overwhelm an effective missile defense system with their offensive weapons. In this sense it can become a deterrent and thus contribute to stability. Arguably, there is some evidence of this likelihood, in that at least some of the reasons for the Soviet Union's collapse was due to an inability to keep up with U.S. technological developments in this field. Even as the USSR was scaling itself down, it was engaging in ways to share missile defense technology and use – an effort that was discontinued by the U.S. government after 1993.10 To close the loop in this logic train: if America has never had missile defense, why have the Soviet/Russian and Chinese nuclear arms buildups continued unabated over these many years, as has the growth of proliferation? According to the MAD culture, one would have thought arms races and proliferation would have long since slowed – thus making a case based on fact that America indeed should continue to forego missile defense. But there is no fact to substantiate such a claim. To the contrary, while certainly some arms control initiatives have proved useful – paradoxically because of U.S. arms buildups during the Cold War11 – if history is any example, effective missile defense capabilities could actually help to strengthen and enhance responsible arms control efforts, rather than to foster arms races and proliferation, as opponents so vigorously maintain.12

2AC Add-On Advantage [U.S. Military Power]: Answers To 1NC #2: "Plan Leads to Anti-Satellite Weapons" (2/2)

____ 3. Several nations have the ability to dominate space now. The U.S. has to get there first to shut out rival nations.

DOLMAN, 2003
[Everett Carl, Associate Professor at the U.S. Air Force's School of Advanced Airpower Studies; "Space Power and US Hegemony: Maintaining a Liberal World Order in the 21st Century," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

The important factor here is that once a state has established weapons in space capable of shooting down rockets and launch vehicles in boost, no other state can put weapons there. Total domination of space is effected. Fears of an arms race in space are eliminated. Only in the situation where more than one side can place weapons into space is an arms race possible (e.g. the Cold War). This is because both sides will be attempting to fill and dominate the position before the other, taking advantage of orbital placement to acquire tactical superiority over the process. Where such an indeterminate outcome is possible, both sides have an incentive to create legal and international restraints that make it difficult for either side to engage in such an activity. If, as is the case today (though for how long is unknown), only the United States has the capacity to place weapons into space quickly enough to gain an insurmountable edge on its potential rivals, then a window of opportunity exists to seize this vital territory without significantly countering space opposition or competition. Once in place, the entry cost for an opponent to attempt to vie for space dominance is too high.

2AC Add-On Advantage [U.S. Leadership]: Answers To 1NC #3: "No Space Leadership Needed"

They say we don't need US space dominance, but …

____ 1. Extend the 1AC Lambakis evidence – only space-based missile defense allows us any chance to respond to the multiple nuclear threats we face.

____ 2. New military doctrine puts emphasis on space operations. This makes the U.S. military uniquely reliant on controlling space.

DOLMAN, 2003
[Everett Carl, Associate Professor at the U.S. Air Force's School of Advanced Airpower Studies; "Space Power and US Hegemony: Maintaining a Liberal World Order in the 21st Century," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

Arthur C. Clarke called the 1991 Persian Gulf War 'the world's first satellite war.'10 The critical roles of outer space assets were featured throughout that conflict, and with its successful performance, space warfare has emerged from its embryonic stage and is now fully in its infancy. From early warning and detection of missile and force movements to target planning and battle damage assessment, space-based intelligence gathering assets proved themselves to be legitimate combat force multipliers. The most surprising and enduring contributions evident in the expanded military role of outer space technology, however, may have come from the previously under-appreciated value of navigation, communications, and weather prediction satellites. In the post-Cold War era, downsizing of traditional military forces continues, access to customary forward basing is increasingly withdrawn, high-technology Command, Control, Communications, and Intelligence (C3I) and mission support is integrated into routine operating procedures, and reliance on intelligence forecasting for optimal troop deployments is emphasized. In this transitional environment, employment of space systems for all levels of inter-state conflict is likely to increase significantly.11 The United States' reliance on military space support is greater than that for any other nation. Should it be denied access to space, the United States would be unable to conduct coordinated, large-scale offensive military operations abroad, and the security and economic well-being of the United States and its allies would be directly threatened.12 And the United States is vulnerable to a wide array of anti-space hostilities. These include anti-satellite attack, physical destruction of space support centers, electromagnetic attack (jamming) and information attack (hacking). So potentially vulnerable are its space systems that the authors of the Space Commission Report suggest a 'Pearl Harbor' in space scenario is possible in the near future.13 This vulnerability has prompted several analysts to decry any attempt at weaponizing space.14 Doing so would signal weakness to potential enemies, and would encourage them to build anti-space capabilities.15 Restraint, they assert, would signal that no need to build such capabilities exists.

2AC Solvency: Answers To 1NC #1: "Takes Too Long to Deploy"

They say space missile defense takes too long, but …

____New radar technology allows for already-proven pieces to be used, minimizing deployment time.

SPRING, 2011
[Baker, F.M. Kirby Research Fellow in National Security Policy at the Heritage Foundation; "Sea-Based Missile Defense Test Success a Major Step Forward," *Hawaii Reporter*, 4/18, http://www.hawaiireporter.com/sea-based-missile-defense-test-success-a-major-step-forward/123]

In the wee hours of the morning of April 15, the U.S. Navy conducted a successful test of its Aegis ballistic missile defense system. The test marks a major milestone in U.S. missile defense capabilities because it signals that the Aegis system's existing interceptor, the Standard Missile-3 Block IA (SM-3 IA), likely has an inherent capability to counter strategic missiles. This is because the target missile destroyed in this intercept test, which is of intermediate range, has characteristics that are not that different from strategic missiles. On this basis, the U.S. may be able to accelerate the fielding of sea-based missile defenses, as well as their land-based counterpart (called Aegis Ashore), for countering strategic missiles well in advance of the current 2020 target date. The LV-2 target missile, which has a range of between 1,864 miles and 3,418 miles, was launched from Kwajalein Atoll in the Marshall Islands. The USS O'Kane, a navy destroyer, launched the SM-3 IA interceptor from a location west of Hawaii. The interceptor was launched approximately 11 minutes after the launch of the target. The interceptor destroyed the target at a point in space over the Pacific Ocean by direct impact. The key to the success of this test was that multiple sensors—including the Space Tracking and Surveillance Satellites (STSS), the AN/TPY-2 X-ban forward-deployed ground-based radar based on Wake Island, and the O'Kane's own radar—all contributed data to the 3.6.1 version of the Aegis Weapons System in order to develop a firing solution. This permitted the O'Kane, for the first time in a ballistic missile intercept test using this version of the Aegis Weapons System, to launch its interceptor on the basis of remote data. It is hard to overemphasize the great advancement for missile defense that this "launch on remote" capability represents. It is also important to understand the nature of the LV-2 target missile used in this test. The LV-2 target uses the first- and second-stage rocket motors of the Trident I (C4) sea-launched ballistic missile (SLBM). For the purposes of arms control, the Trident I SLBM has been categorized as a strategic missile. Until now, the Obama Administration has assumed that it would require the development and deployment of a new version of the SM-3 interceptor, called the Block IIB, to obtain the capability to use the Aegis ballistic missile defense system to counter strategic missiles. The SM-3 IIB is not projected to be available until 2020. The success of this test shows that there is an alternative path to achieving a defense against strategic missiles using the Aegis system at an earlier date. Missile defense supporters have been pointing out that the Aegis ballistic missile defense program could be made even more capable for some time. Accordingly, Congress can use this alternative path to making the Aegis ballistic missile defense system as capable as it can be by directing the missile defense program to take several steps. The first is to continue to refine U.S. space capabilities to support ballistic missile defense. The Space Tracking and Surveillance Satellties has demonstrated the ability to track ballistic missiles in flight from launch to impact, or "birth to death" tracking. Congress should make sure that limits are not placed on U.S. space-based capabilities because of misguided complaints about "weaponizing" space.

2AC Solvency: Answers To 1NC #2: "Too Impractical" (1/2)

They say plan is impractical, but …

____Extend the 1AC LAMBAKIS evidence: Space weapons are flexible and provide mobility options which increase deterrence.

____Missile Defense works by creating uncertainty in the minds of enemies; they can't be sure that the system will fail, which means they will be too afraid to test it.

LAMBAKIS, 2007
[Steven, national security and international affairs analyst specializing in space power and policy studies, and fellow at the National Institute for Public Policy; "Missile Defense From Space," *Policy Review*, 2/01, n. 141, http://www.hoover.org/publications/policy-review/article/6124]

The policy benefits of a space-based missile defense layer are straightforward. A more effective missile defense system that fully leverages space would provide a true on-call global defensive capability, and this could lead to increased stability in the world. Defenses deter attacks by reducing confidence in the success of any attack. The more effective the missile defense system is, the greater will be its deterrence value, and the less likely will we be to have to use it at all.

____Controlling space first allows the U.S. to militarily and diplomatically deter other nations from acting aggressively.

DOLMAN, 2003
[Everett Carl, Associate Professor at the U.S. Air Force's School of Advanced Airpower Studies; "Space Power and US Hegemony: Maintaining a Liberal World Order in the 21st Century," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

Space has the unique capacity of being the "unflankable" high ground. So tactically advantageous is the high ground position that has both line of site over and defensive domination of the battlefield that commanders have always sought it. Space control is not only tactically advantageous on the battlefield, it is strategically so in diplomacy. The entity in control of space has real-time presence and persistence over the globe.39 So strong is the fortified position at the top of the Earth's gravity well that should any nation seize it, it could effectively deny access to space to any other state that should attempt to put assets there. A simple argument could be made that the United States has an imperative to seize control of space on this point alone, to prevent a dangerous enemy from taking it, but such a case could be made for any state that desired domination over the world. My point is that not only is the United States the sole country with the capacity to seize space (currently), it is the only great power that has a history of benign intervention and overall disdain of empire that it is morally important it do so before any state bent on world domination and oppression can.

2AC Solvency: Answers To 1NC #2: "Too Impractical" (2/2)

____Deterrence means we don't need the system to work perfectly, because nobody will be willing to test us.

DOLMAN, 2003
[Everett Carl, Associate Professor at the U.S. Air Force's School of Advanced Airpower Studies; "Space Power and US Hegemony: Maintaining a Liberal World Order in the 21st Century," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

And so it would. Complete domination of space would give the United States such an advantage on the terrestrial battlefield that no state could openly challenge it. Traditional war would be effectively over. An idealist vision would be secured by realist means. Strategic dominance of space would further force the United States to maintain the industrial and technical capacity to keep it at the forefront of hegemony for the foreseeable future. Nontraditional war, especially terrorism, would not be over, but it could very well be mitigated.42 The current dominant use of space for military matters is in the areas of observation and monitoring. These are the tools of effective police organizations, and have already been adapted in counter-terrorism plans. The details would be worked out in time, but the strategy clearly has benefits for the United States and the world. The moral argument has many levels, and stems from both the high ground and modified sanctuary theses (accepted here) that the weaponization of space is inevitable. The operational level contradiction is quite simply that it is unconscionable to assign the military services the task of controlling space, and then deny the best means to do it. To the military, it is the equivalent of sending a soldier into combat without a rifle. At the strategic level it thwarts the gloomier predictions of the awful result of space weaponization by preempting the process. Most theorists who lament the coming inevitability of space militarization do so on some variation of the notion that once one state puts weapons into space, other states will rush to do the same, creating a space-weapons race that has no productive purpose and only a violent end. Other assumptions are generally along the line that conflict and bloody war must eventually reach the cosmos, and delaying or holding off that eventuality is the best we can hope for. By seizing the initiative and securing low-Earth orbit now, while the United States is unchallenged in space, both those assumptions are revealed as faulty. The ability to shoot down from space any attempt by another nation to place military assets in space, or to readily engage and destroy terrestrial anti-satellite weapon capacity, makes the possibility of large scale space war and or military space races less likely, not more. Why would a state expend the effort to compete in space with a power 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 either scenario seems remote. To be sure, 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, nonarbitrary, and efficient, other states would quickly realize no need to develop space military forces. It would serve to discourage competing states from fielding opposing systems much in the same fashion that the Global Positioning System (GPS) succeeded in forestalling the fielding of rival navigation systems. In time, United States control of low-Earth orbit could be viewed as a global asset and a public good.

2AC Solvency: Answers To 1NC #3: "Space Laser Doesn't Exist"

They say space lasers don't exist, but …

____This evidence assumes only one type of laser weapon. There are other ways to intercept in orbit, such as Kinetic Weapons or Directed Energy weapons. Extend the 1AC LAMBAKIS evidence, that missile defense systems are technologically feasible now.

____Recent tests prove Missile Defense can target fast missiles in orbit and destroy them.

BELJAC, 2008
[Marko, a Foreign Policy In Focus contributor, teaches at the University of Melbourne; "Arms Race in Space," 3/28, http://www.fpif.org/articles/arms_race_in_space]

Washington's anti-satellite missile test must complicate matters for strategic planners in Canberra because an Australian SM-3 capability was sold on the basis that it would have no strategic effect on China. But "the shot" has blown apart this rhetoric. Moreover it is also the case that the SM-3 will have more advanced capabilities in future such as a larger kill vehicle and faster boosters which means that it can reach even higher altitudes. Anybody who knows the minutiae of strategic arms control from the Cold War knows that one of the key characteristics of a strategic missile, as opposed to a shorter range missile, is its boost phase velocity. Strategic missiles are faster than their lower range siblings. What is also of interest here is that the USA 193 satellite was in a very low orbit, just near the atmosphere, when impacted and its flight profile resembled the trajectory of a strategic nuclear re-entry vehicle launched from an inter-continental ballistic missile like those in the hands of Russia and China. "The shot" acts as a convenient way to test the interception capabilities of the SM-3 against inter-continental missiles without the appearance of doing so.

2AC Solvency: Answers To 1NC #4: "Russia Accidental War"

They say plan leads to accidental war with Russia, but …

____ 1. If we win deterrence, there is no internal link because Russia would be too scared to develop counter-weapons. Without space-based weapons to fire, there won't be an accidental escalation.

____ 2. Current ground-based defenses require choosing sides with other countries to place interceptors, and this causes huge backlash. Space-based defenses reassure our allies.

DOLMAN, 2003
[Everett Carl, Associate Professor at the U.S. Air Force's School of Advanced Airpower Studies; "Space Power and US Hegemony: Maintaining a Liberal World Order in the 21st Century," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

Without question, from military applications and strategic perspectives, spacebased Ballistic Missile Defense systems are superior to terrestrial (ground, sea, or air) based ones. They also have exceptional political advantages. Any Ballistic Missile Defense system will receive criticism from potential adversaries, as is evident with the routine vocal opposition that comes from Russia and China to any proposed Theater Missile Defense system. Because of criticism and retaliatory threats made by the opposing states, domestic and allied support has been hesitant and unsure. If the state is willing to deploy Ballistic Missile Defense anyway, by using a space-based system instead of a ground-based one it should be able to gradually regain widespread popular support. One of the advantages of the mobile Theater Missile Defense system, say its advocates, is that it could be dispatched to threatened areas as needed. True enough, but imagine the problems associated with some possible deployments – to Israel, say, or to Taiwan. As much as the United States would insist that the deployment was for defensive purposes only, it would be a clear and possibly inflammatory sign of preference for one side over the other. A space-based system would forever be on alert, and would avoid the political problems of terrestrial basing altogether. The United States would not have to physically deploy to the threatened territory to be able to intercept and destroy hostile missile activity – regardless of the side that launches first. United States impartiality could be asserted and maintained. Retaliations, too, could be controlled. While a United States Theater Missile Defense battery in Israel could conceivably shoot down an incoming ballistic missile from Iraq, what would prevent the Israeli's from shooting back in anger? The United States would need to deploy the system in both states. Eventually, they would have to be deployed in all states, and any hope of countering the space-based system with a fiscal restraint argument would be lost. Moreover, the human operators of the Theater Missile Defense battery would be at risk. Their capture or casualties in their ranks could force the United State to get directly involved in the conflict. Knowing this, they could be particularly desirable targets for either side. In other instances, the United States might not have the time to deploy a Theater Missile Defense battery to a hostile theater, or may be politically unable to do so. The case of an Indian-Pakistan or an Iraq-Iran exchange comes readily to mind.

Space-based Missile Defense Negative – Table of Contents

1NC Frontline: Harms [Ballistic Missile Proliferation]

1. Their scenario is exaggerated. The WASHINGTON POST evidence says that lots of countries are developing nuclear power, but is only speculative about which countries might be interested in weapons. Even if every country in this evidence had the bombs, they have no evidence that these countries have missiles that can strike the United States or would want to use weapons offensively.

2. Trends prove that ballistic missile arsenals are getting smaller.

CIRINCIONE, 2001
[Joseph, Director, Non-Proliferation Project Carnegie Endowment for International Peace; "The Ballistic Missile Threat;" 6/08; http://www.carnegieendowment.org/publications/index.cfm?fa=view&id=737]

The number of countries trying or threatening to develop long-range ballistic missiles has not changed greatly in 15 years, and by some indications may be considered smaller than in the past. The nations now attempting to perfect long-range missiles are also smaller, poorer and less technologically advanced than were the nations with missile programs 15 years ago. We now worry primarily about five nations, in addition to Russia and China: North Korea, Iran, Iraq, India and Pakistan. Fifteen years ago, North Korea was not a concern, but India, Brazil, Argentina, Egypt, South Africa, Iraq, and perhaps Libya were all involved in programs to develop medium- or long-range missiles. Brazil, Argentina, Egypt, and South Africa have since terminated such efforts.21 Libya no longer has a viable development program for medium-range missiles, but is reportedly interested in purchasing Nodongs from North Korea. Israel retains the capability to develop long-range missiles, but is not considered a threat to the United States nor a likely exporter of missile technology.

3. Proliferation is slow enough to prevent conflict because only a few countries are willing to develop weapons.

TEPPERMAN, 2009
[Jonathon; assistant managing editor of Newsweek "Why Obama should Learn to Love the Bomb" 8/29, http://www.newsweek.com/2009/08/28/why-obama-should-learn-to-love-the-bomb.html]

The risk of an arms race--with, say, other Persian Gulf states rushing to build a bomb after Iran got one--is a bit harder to dispel. Once again, however, history is instructive. "In 64 years, the most nuclear-weapons states we've ever had is 12," says Waltz [Kenneth – emeritus Political Science Professor at University of California and Research Scholar at Columbia]. "Now with North Korea we're at nine. That's not proliferation; that's spread at glacial pace." Nuclear weapons are so controversial and expensive that only countries that deem them absolutely critical to their survival go through the extreme trouble of acquiring them. That's why South Africa, Ukraine, Belarus, and Kazakhstan voluntarily gave theirs up in the early '90s, and why other countries like Brazil and Argentina dropped nascent programs. This doesn't guarantee that one or more of Iran's neighbors--Egypt or Saudi Arabia, say--might not still go for the bomb if Iran manages to build one. But the risks of a rapid spread are low, especially given Secretary of State Hillary Clinton's recent suggestion that the United States would extend a nuclear umbrella over the region, as Washington has over South Korea and Japan, if Iran does complete a bomb. If one or two Gulf states nonetheless decided to pursue their own weapon, that still might not be so disastrous, given the way that bombs tend to mellow behavior.

2NC/1NR Extensions: Harms [Ballistic Missile Proliferation] 1NC #1: "Prolif Exaggerated"

____ Extend the 1NC #1, their internal links are exaggerated. The only thing they have proven is that countries are building nuclear power plants. Their evidence is speculative that countries want nuclear weapons, and doesn't even come close to saying countries are building weapons. This means the probability of proliferation is low. Their evidence says the primary motivation for proliferation is deterring other nations, not that they'd get used to start nuclear wars.

____And, here's more evidence that the ballistic missile threat is exaggerated. It will be a long time before any rogue states have missiles, and we would have warning time to respond. This evidence is written by the author quoted in their Washington Post 1AC evidence about proliferation.

CIRINCIONE, 2001

[Joseph, Director, Non-Proliferation Project Carnegie Endowment for International Peace; "The Ballistic Missile Threat;" 6/08; http://www.carnegieendowment.org/publications/index.cfm?fa=view&id=737]

These key findings are overshadowed, however, by the dire warnings that dominate the assessments and the resulting news headlines. The assessments contribute to an exaggerated sense of the missile threat by focusing only on programs in these few developing nations, then magnifying the apparent dangers by adopting a series of worst-case assumptions. The most extreme example of this narrow methodological approach is found in the 1998 Report of the Commission to Assess the Ballistic Missile Threat to the United States, chaired by former Secretary of Defense Donald Rumsfeld. The commission concluded that North Korea, Iran and Iraq could develop ballistic missiles with biological or nuclear warheads that would "inflict major destruction on the United States within about five years of a decision to acquire such a capability…During several of those years, the United States might not be aware that such a decision had been made." 10 The commission made headlines with its claim that these and other nations could deploy an operational ICBM with "little or no warning." The Commission's conclusion implied that: - an economically and technologically retrograde nation could create sophisticated weapons systems in about the same time as a developed nation; - the developmental process in such a country would be an almost uninterrupted series of "best case" successes; - no exogenous events (e.g., intelligence leaks, test explosions, economic collapse) would intervene to delay or derail the development program; - the political relationship between these nations and the West would remain confrontational or worse over the next decade; and - the U.S. would experience an almost uninterrupted series of "worst case" political, military and intelligence failures. All intelligence estimates before the Rumsfeld report had concluded that it would be 10 to 15 years before any nation other than China or Russia could develop a missile capable of carrying a nuclear warhead to the continental United States, and that we would have ample warning time. An expert panel appointed by the Republican Congressional leadership and chaired by Robert Gates, the former director of the CIA [and Secretary of Defense under Bush and Obama] under President George Bush, reaffirmed the soundness of these findings in December 1996, concluding, "the case [for ample warning time] is even stronger than was presented in the estimate." 11

2NC/1NR Extensions: Harms [Ballistic Missile Proliferation] 1NC #2: "Prolif Decreasing"

____ Extend the 1NC #2, the CIRINCIONE 2001 evidence, which is written by the author quoted in their Washington Post 1AC evidence about proliferation. More than 15 years of recent history proves that countries are not developing ballistic missiles, and the ones that we thought were ended up giving up. This means there won't be any new wars because countries don't have the technology to launch nuclear bombs.

____And, here's more evidence that the overall proliferation of ballistic missiles is slowing.

CIRINCIONE, 2001
[Joseph, Director, Non-Proliferation Project Carnegie Endowment for International Peace; "The Ballistic Missile Threat;" 6/08; http://www.carnegieendowment.org/publications/index.cfm?fa=view&id=737]

A very different - and more accurate - threat assessment emerges if, rather than focusing only on the possible threat from three nations, a net assessment is performed of developments in global ballistic missile arsenals over the past 15 years. It then becomes clear that the ballistic missile threat is confined, limited and changing relatively slow. A close analysis of the global ballistic missile threat reveals several important trends.

2NC/1NR Extensions: Harms [Ballistic Missile Proliferation] 1NC #3: "Prolif Slow"

____ Extend the 1NC #3, the TEPPERMAN 2009 evidence. Only a handful of countries have ever gone to the trouble of acquiring nuclear weapons, and most countries that try end up giving up. Because it takes a long time, proliferation is stable and won't cause wars. This means the probability of war is extremely low, and if it does happen it will only involve a small number of countries.

1NC Frontline: Solvency (1/3)

1. The timeframe for their solvency is extremely long-term. The United States has been testing missile defense since Reagan's Star Wars system in the 80's and still doesn't have a working model. Building a complex weapon system would take decades, and there is no deterrent value until the system is in the sky.

2. Space weapons won't be effective: they are too vulnerable and predictable.

HITCHENS, 2008
[Theresa, vice president of the Center for Defense Information; "Space Wars - Coming to the Sky Near You?" *Scientific American*; 2/18; http://www.sciam.com/article.cfm?id=space-wars-coming-to-the-sky-near-you]

Basing weapons in orbit also presents difficult technical obstacles. They would be just as vulnerable as satellites are to all kinds of outside agents: space debris, projectiles, electromagnetic signals, even natural micrometeoroids. Shielding space weapons against such threats would also be impractical, mostly because shielding is bulky and adds mass, thereby greatly increasing launch costs. Orbital weapons would be mostly autonomous mechanisms, which would make operational errors and failures likely. The paths of objects in orbit are relatively easy to predict, which would make hiding large weapons problematic. And because satellites in low Earth orbit are overhead for only a few minutes at a time, keeping one of them constantly in range would require many weapons.

1NC Frontline: Solvency (2/3)

3. Any laser capable of shooting down a missile will be too large and require too much energy to deploy in space.

SPACY, 2003
[William II, career Air Force officer; "Assessing the Military Utility of Space-Based Weapons," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

The main problem with making a laser into a weapon is generating a reliable, high-power beam with good beam quality. If you want to shoot down a ballistic missile from orbit, the role most often discussed for lasers,7 you need to deliver enough energy to fatally weaken the missile's skin. This may require as little as 1 KJ/cm2 for unprotected liquid propellant missiles, but the more robust construction of solid fuel missiles, or countermeasures such as ablative coatings, may raise this level as high as 30 KJ/cm2.8 Richard Garwin, a physicist at IBM's Watson Lab and consultant for Los Alamos Science Lab, calculates that for a missile hardness of 20 KJ/cm2, a laser must focus a 25 megawatt beam into a spot 1 meter in area for 6 to 7 seconds if it is to deliver energy to the target fast enough to burn through the casing.9 It is reasonable to assume that if the U.S. starts testing and deploying space-based laser weapons, then potential adversaries will modify their missiles in order to make them less vulnerable. For this reason10a laser capable of producing a 25 MW, beam and focusing it into a spot of 1 m2 at a range of 3,000 km for 7 seconds forms the baseline for discussion in this paper.11 Engineering Challenges Providing a 25 megawatt laser can even be built, the components needed to generate the beam will have to be huge. To date, the most powerful continuous wave lasers created by the United States generate only 1-2 megawatts. While one design (the Alpha laser) is said to be scalable to greater power levels, doing so would require massive space structures. The lasing chamber of the Alpha laser (the chamber that produces the beam) is over 2 meters long and produces a "megawatt power" beam. 12 If we interpret this to be 1-2 megawatts and assume that the laser is linearly scalable, then the chamber needed to generate a 25 MW beam would have to be 25-50 meters (82-164 ft) long.13 One problem is that the laser is probably not linearly scalable; while another is that the highest power level achievable may be considerably less than 25 megawatts.

1NC Frontline: Solvency (3/3)

4. Turn: a) Space weapons would increase tensions and suspicion between the U.S. and Russia, and this causes accidental nuclear war.

GRAHAM, 2005
[Thomas Jr, former special representative of the president for arms control, nonproliferation, and disarmament at Arms Control Association; "Space Weapons and the Risk of Accidental Nuclear War" *Arms Control Today*; Dec; http://www.armscontrol.org/act/2005_12/Dec-spaceweapons]

The United States and Russia maintain thousands of nuclear warheads on long-range ballistic missiles on 15-minute alert. Once launched, they cannot be recalled, and they will strike their targets in roughly 30 minutes. Fifteen years after the end of the Cold War, the chance of an accidental nuclear exchange has far from decreased. Yet, the United States may be contemplating further exacerbating this threat by deploying missile interceptors in space. Both the United States and Russia rely on space-based systems to provide early warning of a nuclear attack. If deployed, however, U.S. space-based missile defense interceptors could eliminate the Russian early warning satellites quickly and without warning. So, just the existence of U.S. space weapons could make Russia's strategic trigger fingers itchy. The potential protection space-based defenses might offer the United States is swamped therefore by their potential cost: a failure of or false signal from a component of the Russian early warning system could lead to a disastrous reaction and accidental nuclear war. There is no conceivable missile defense, space-based or not, that would offer protection in the event that the Russian nuclear arsenal was launched at the United States. Nor are the Russians or other countries likely to stand still and watch the United States construct space-based defenses. These states are likely to respond by developing advanced anti-satellite weapon systems.[1] These weapons, in turn, would endanger U.S. early warning systems, impair valuable U.S. weapons intelligence efforts, and increase the jitteriness of U.S. officials.

b) An accidental nuclear launch causes retaliation and takes out medical facilities, causing extinction.

PR NEWSWIRE, 1998
[Beth Israel Deaconess Medical Center; "NEJM Study Warns of Increasing Risk of Accidental Nuclear Attack," 4/29]

An 'accidental' nuclear attack would create a public health disaster of an unprecedented scale, according to more than 70 articles and speeches on the subject, cited by the authors and written by leading nuclear war experts, public health officials, international peace organizations, and legislators. Furthermore, retired General Lee Butler, Commander from 1991-1994 of all U.S. Strategic Forces under former Chairman of the Joint Chiefs of Staff, General Colin Powell, has warned that from his experience in many "war games" it is plausible that such an attack could provoke a nuclear counterattack that could trigger full-scale nuclear war with billions of casualties worldwide. The authors describe the immediate effects of an "accidental" launch from a single Russian submarine that would kill at least six to eight million people in firestorms in eight major U.S. cities. With hospitals destroyed and medical personnel killed, and with major communications and transportation networks disrupted, the delivery of emergency care would be all but impossible, according to Forrow and his colleagues.

2NC/1NR Extensions: Solvency 1NC #1: "Takes Too Long"

____ Extend the 1NC #1, the Aff has a long timeframe. Missile defense systems have been tested for 30 years with no solid results, so it will take decades before the plan gets implemented. If they win that countries are proliferating now, then that proliferation will be complete before the United States develops the ability to deter other countries so their impacts are inevitable.

____And, here's evidence that predictions of technological advance are too optimistic. We won't have working lasers for decades.

HITCHENS, 2008
[Theresa, vice president of the Center for Defense Information; "Space Wars - Coming to the Sky Near You?" *Scientific American*; 2/18; http://www.sciam.com/article.cfm?id=space-wars-coming-to-the-sky-near-you]

Yet despite decades of work, battle-ready versions of directed-energy weapons still seem far away. An air force planning document, for instance, predicted in 2003 that a ground-based weapon able to "propagate laser beams through the atmosphere to [stun or kill low Earth orbit] satellites" could be available between 2015 and 2030. Given the current state of research, even those dates seem optimistic.

____And, here's more evidence that space-based missile defense will go over-budget and take forever to build.

COYLE AND RHINELANDER, 2004
[Philip, Center for Defense Information, Washington, DC; John, Shaw-Pittman, Washington, DC; "Space Weapons: Alternatives for Today" *Astropolitics,* v.2 n.2]

Currently no area of defense development and acquisition is having more problems than space. For example, the Air Force's Evolved Expendable Launch Vehicle (EELV), a program intended to able to launch satellites into space more cheaply, is far behind schedule and over budget. Last January the Pentagon notified Congress that the EELV program was in breach of the Nunn-McCurdy law that requires Congressional notification whenever a program is expected to overrun more than 15 per cent. But the EELV program is not overrunning by just 15 per cent; rather it is expected to be over budget by 50 per cent.7 Similarly the space-based elements of missile defense are behind schedule and over budget also. This includes the spacebased infrared satellite systems, space based interceptorRS-High and space based interceptorRS-Low (the latter is now called the Space Tracking and Surveillance System, or STSS, not to be confused with the Space-based Surveillance System described earlier). space based interceptorRS-High has fallen years behind schedule and its cost estimate has increased from $4.1 billion to $9.6 billion with no satellites as yet launched.8

2NC/1NR Extensions: Solvency 1NC #2: "Too Impractical"

____ Extend the 1NC #2, the HITCHENS 2008 evidence. Space-based weapons have fixed orbits which makes them predictable. If enemies know where the satellites are going to be at what time, they can program their launches to avoid interception. This means that strikes will avoid our missile defenses.

2NC/1NR Extensions: Solvency 1NC #3: "Lasers Don't Exist" (1/2)

____ Extend the 1NC #3, the SPACY 2003 evidence. Missile defense is impossible to deploy in space because it would be too big to launch. In order to be powerful enough to shoot down a missile, any effective laser would have to be bigger than anything that has ever been created on Earth. The United States doesn't have the capability to launch something that large.

____And, here's more evidence that any system capable of shooting down missiles would be too heavy to launch.

UNION OF CONCERNED SCIENTISTS, 2011
["Space Based Missile Defense," May, http://www.ucsusa.org/assets/documents/nwgs/space-based-md-factsheet-5-6-11.pdf]

A space-based boost-phase defense is intended to intercept attacking missiles during the first few minutes of their flight, while the missiles' engines are still burning. To reach attacking missiles during this very short time, space based interceptors must be stationed in low-altitude orbits. However, in these orbits space based interceptors move rapidly with respect to the ground and cannot stay over any one location on Earth. To keep at least one interceptor within reach of a given missile launch site at all times therefore requires many space based interceptors in orbit. A 2003 American Physical Society study showed that many hundreds or thousands of space based interceptors would be required to provide limited coverage against ballistic missiles launched from areas of concern. This estimate is consistent with the size of the space layer in the Global Protection Against Limited Strikes (GPALS) missile defense system, which was proposed (but not built) by the George H.W. Bush administration in the early 1990s. GPALS called for 1,000 to 5,000 space based interceptors. Doubling the number of missiles that such a defense could engage would require doubling the size of the entire constellation of space based interceptors. Moreover, given the technology expected for the next decade, each space based interceptor would weigh up to a ton or more. As a result, deploying such a system would be enormously expensive and actually would exceed U.S. launch capabilities. Additionally, such a system would raise significant issues for crowding and traffic management in space.

2NC/1NR Extensions: Solvency 1NC #3: "Lasers Don't Exist" (2/2)

____And, even if we can launch the weapons they still won't work because they require too much fuel.

HITCHENS, 2003
[Theresa, vice president of the Center for Defense Information; "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

Indeed, the technical barriers to development and deployment of space-based weapons cannot be overestimated, even for the U.S. military. There are serious, fundamental obstacles to the development of both kinetic kill weapons and lasers both for use against targets in space and terrestrial targets – not to mention the question of the staggering costs associated with launch and maintaining systems on orbit. Problems with lasers include power generation requirements adding to size, the need for large quantities of chemical fuel and refueling requirements, and the physics of propagating and stabilizing beams across long distances or through the atmosphere. Space-based kinetic energy weapons have their own issues, including achieving proper orbital trajectories and velocities, the need to carry massive amounts of propellant, and concern about damage to own forces from debris resulting from killing an enemy satellite. Space-based weapons also have the problem of vulnerability, for example, predictable orbits and the difficulty of regeneration.

2NC/1NR Extensions: Solvency 1NC #4: "Russia Accidental War"

____ Extend the 1NC #4, the Accidental War turn. Our GRAHAM 2005 evidence says that space-based missile defense will make Russian policymakers paranoid because they won't be able to rely on their early-warning systems. An inevitable false alarm will have to be taken seriously, and the immediate response will be to launch nuclear weapons in self-defense. The PR NEWSWIRE 1998 evidence says that accidental launches cause nuclear retaliation that destroys the entire world. This outweighs the Aff on magnitude because the U.S. and Russia have the world's largest nuclear arsenals.

1NC Frontline: Add-on Advantage [U.S. Military Power] (1/2)

1. No country has both the technology and the motivation to attack, and the most likely anti-satellite threat is hacking, not missiles.

HITCHENS, 2003
[Theresa, vice president of the Center for Defense Information; "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

However, vulnerabilities do not necessarily result in threats. In order to threaten U.S. space assets, military or commercial, a potential adversary must have both technological capabilities and intent to use them in a hostile manner. There is little hard evidence that any other country or hostile non-state actor possesses either the technology or the intention to seriously threaten U.S. military or commercial operations in space – nor is there much evidence of serious pursuit of space-based weapons by potentially hostile actors. Currently, the simplest ways to attack satellites and satellite-based systems involve ground-based operations against ground facilities, and disruption of computerized downlinks. Hacking and jamming also are the least expensive options for anyone interested in disrupting space-based networks, because they do not require putting anything into orbit. The high cost of space launch (ranging between $5,000 and $10,000 per pound) is not a trivial matter, even for space-faring nations such as Russia and China, much less for 'rogue' states such as North Korea or non-state actors.

2. Turn – plan leads to anti-satellite weapons – status quo solves best for reassuring China and Russia

GOUVEIA, 2005
[William Jr, "An Assessment of Anti-Satellite Capabilities and their Strategic Implications," *Astropolitics,* v.3 n.2]

Dissuading potential adversaries from developing anti-satellite weapon technology can only be accomplished if the United States does not deploy space-based weapons. As a Cato Institute brief states To be sure, not deploying weapons in space is no guarantee that potentially hostile nations (such as China) will not develop and deploy anti-satellite weapons. However, it is virtually certain that deploying U.S. weapons in space will lead to the development and deployment of anti-satellite weapons to counter such weapons.48 The United States must choose between dominance and reassurance. Because of the threat of asymmetric attacks on satellite capabilities, dominance would be very hard to achieve and would have many adverse effects. The best way to protect America's space-related economic and military functions, therefore, is to avoid anti-satellite weapons and space-based weapons altogether. By avoiding space-based weapons, the United States can assure China and Russia that its need for missile defense is predicated on the threat posed by the proliferation of missile technologies by rogue states.

1NC Frontline: Add-on Advantage [U.S. Military Power] (2/2)

3. Dominating land, air and sea is enough for military superiority.

SPRING, 2007
[Baker, F.M. Kirby Research Fellow in National Security Policy at the Heritage Foundation; "How Congress Should Interpret the New Space Policy Directive to Provide for National Security," Backgrounder #1998, 1/19, http://www.heritage.org/Research/Reports/2007/01/How-Congress-Should-Interpret-the-New-Space-Policy-Directive-to-Provide-for-National-Security]

First and foremost, space is a place. It is part of the geographic constant for which militaries have had to account from the beginning of warfare. On the other hand, space is distinct from the other three geographic domains. Key among these distinctive features is that space is the most remote and inaccessible of the four geographic domains for human activity, including warfare. The four domains, therefore, are best seen as a hierarchy, starting with land as the most accessible. Sea is the second most accessible. Air is third. In this context, military activities in space should be pur-sued, first and foremost, to achieve a decisive mili-tary advantage in the other domains farther down the hierarchy. There is little military justification for going to space when the same decisive advantage can be obtained in a more accessible domain.

2NC/1NR Extensions: Add-on Advantage [U.S. Military Power]
1NC #1: "Other Countries Won't Attack Satellites"

____ Extend the #1, the HITCHENS 2003 evidence. Other countries don't have the technology to attack our satellites, even if we don't deploy missile defense. Intent doesn't matter if an attack is impossible, so our leadership will continue.

____And, there won't be a threat to U.S. satellites for decades.

HITCHENS, 2003
[Theresa, vice president of the Center for Defense Information; "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

While it is true that other countries are pursuing both space assets and counter-space options, there is some reason to question whether the current threat assessment is justified. Leaving aside the question of the ballistic missile threat, it is unclear what real threats to U.S. space assets exist today or will exist in the near and medium term. Proponents of weaponizing space usually cite the emergence of an acute threat in the 2020 time frame or beyond; the Space Commission report puts the possible development of hostile anti-satellite systems at decades away.

____And, here's more evidence that countries will turn to hacking before physically attacking satellites.

HITCHENS, 2003
[Theresa, vice president of the Center for Defense Information; "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

It is true that the incidences of computer hacking against U.S. military, financial and industrial networks continues to rise and that several countries including China are known to be exploring information warfare capabilities. Many countries already have developed military electronic jamming systems, and that technology is becoming widely available even on the commercial market. It is obvious that the United States must ensure the integrity of its increasingly important space networks, and find ways to defense against threats to space assets. Still, there is little reason to believe that it is necessary for the U.S. to put weapons in space to do so. Space warfare proponents are making a suspect leap in logic in arguing that space-based weapons are, or will soon be, required to protect the ability of the United States to operate freely in space. One could argue much more rationally that what is needed most urgently is to find ways to prevent computer network intrusion; to ensure redundant capabilities both at the system and subsystem level, including the ability to rapidly replace satellites on orbit; to improve security of ground facilities (perhaps moving to underground facilities); and to harden electronic components on particularly important satellites.

2NC/1NR Extensions: Add-on Advantage [U.S. Military Power]
1NC #2: "Plan Leads to Anti-Satellite Weapons"

____ Extend the #2, the GOUVEIA 2005 evidence. Not deploying missile defense is a better safeguard for U.S. leadership than deploying it because rather than responding to the plan with anti-satellite weapons in space, the status quo would reassure our allies that we are a benign power rather than an aggressive one. Other countries will not attack if they do not feel threatened by the U.S.

2NC/1NR Extensions: Add-on Advantage [U.S. Leadership] 1NC #3: "Space Leadership Not Needed"

_____ Extend the #3, the Spring evidence. Establishing space-based missile defense takes decades and trillions of dollars without providing any additional security to emerging threats that exist in the world now. Military dominance in space isn't needed since we have air, land, and sea dominance and far superior technology to deter and respond to nuclear weapons than any other nation. This should remain our focus rather than doing the affirmative plan.

1NC Frontline: Add-on Advantage [Terrorism]

1. Terrorists won't use ballistic missiles because it is cheaper to use other methods.

INSTITUTE FOR POLICY STUDIES, 2006
[Frida Berrigan and William D. Hartung; "Missile Defense Program Wasteful and Unnecessary" 7/14, http://www.ips-dc.org/articles/missile_defense_program_wasteful_and_unnecessary]

Even if it could work, missile defense is irrelevant to the war on terrorism. A terrorist group intent on attacking the United States with a nuclear, chemical or biological weapon would find it cheaper and easier to load the weapon onto a ship, or make it in the United States. It is highly unlikely that terrorists would use a ballistic missile.

2. Orbital differences mean only 1 or 2 interceptors would ever be in the right place and these would be easily bypassed.

UNION OF CONCERNED SCIENTISTS, 2011
["Space Based Missile Defense," May, http://www.ucsusa.org/assets/documents/nwgs/space-based-md-factsheet-5-6-11.pdf]

Yet even if such a large system were built and the technology worked perfectly, it would not provide a reliable defense, for two reasons. First, even if the constellation of hundreds to thousands of interceptors described above were in place, only one or two space based interceptors would be in position to reach any given launching missile in time to destroy it. Consequently, the defense could be overwhelmed by simultaneously launching multiple missiles from one location. Second, the system could not protect itself from attacks intended to remove interceptors. Because space based interceptors would be in low-altitude orbits they could easily be detected and tracked from the ground; an adversary would know their current and future locations. As a result, any space based interceptor would be vulnerable to attack by inexpensive short- or medium-range missiles. These missiles would burn out at too low an altitude to be intercepted by the space based interceptor, but they could loft homing anti-satellite weapons at it. By destroying relatively few space based interceptors in this way, an attacker could create a gap in the defense through which it subsequently could launch its long-range missiles. In short, a defense based on deploying hundreds or thousands of space based interceptors at enormous cost could be defeated by a handful of enemy missiles.

2NC/1NR Extensions: Add-on Advantage [Terrorism] #1

____ Extend the 1NC #3, the INSTITUTE FOR POLICY STUDIES 2006 evidence. Terrorists won't use ballistic missiles because they are too expensive to build and launch. If terrorists really want to attack the United States, they will sneak bombs onto ships or smuggle them into the country. Missile defense can't stop either of these, so their impacts are inevitable.

2NC/1NR Extensions: Add-on Advantage [Terrorism] #2

____ Extend #2, the UNION OF CONCERNED SCIENTISTS 11evidence. It only takes a handful of weapons to bypass space-based missile defense systems because any given satellite can only cover a little of the Earth at any time and the United States wouldn't deploy enough to cover everything all the time. This means determined terrorists would overload our capacity to stop the missiles, and the short range that a shore-line boat would provide would not give us enough time to react.

Colonization Affirmative – Table of Contents

2AC Answers to Negative On-Case Arguments

Background Notes: Colonization Affirmative

Apollo Program: NASA's Apollo Program was the initial set of missions designed to put humans on the Moon (and explore space more generally). Details about every Apollo mission can be found here: http://nssdc.gsfc.nasa.gov/planetary/lunar/apollo.html

"The Apollo program was designed to land humans on the Moon and bring them safely back to Earth. Six of the missions (Apollos 11, 12, 14, 15, 16, and 17) achieved this goal. Apollos 7 and 9 were Earth orbiting missions to test the Command and Lunar Modules, and did not return lunar data. Apollos 8 and 10 tested various components while orbiting the Moon, and returned photography of the lunar surface. Apollo 13 did not land on the Moon due to a malfunction, but also returned photographs. The six missions that landed on the Moon returned a wealth of scientific data and almost 400 kilograms of lunar samples. Experiments included soil mechanics, meteoroids, seismic, heat flow, lunar ranging, magnetic fields, and solar wind experiments."

Constellation Program: NASA's modern version of Apollo, the Constellation Program was designed to put humans back into space in order to explore and to learn how to function in non-Earth atmospheres. The program ran from 2005-2010, when President Obama announced he was cancelling it.

Colonization 1AC (1/11)

Contention 1 is Inherency: The United States federal government is not currently developing plans to explore and colonize other planets.

A. Federal programs to explore Deep Space and colonize other planets have been shelved and abandoned.

SCHMITT, 2010
[Harrison, CHAIRMAN INTERLUNE-INTERMARS INITIATIVE, INC; "Obama space policy cedes Moon to China, Space Station to Russia and Liberty to the Ages," 2/06, http://www.freerepublic.com/focus/f-news/2445788/posts]

With a new Cold War looming before us, involving the global ambitions and geopolitical challenge of the national socialist regime in China, President George W. Bush put America back on a course to maintain space dominance. What became the Constellation Program comprised his January 14, 2004 vision of returning Americans and their partners to deep space by putting astronauts back on the Moon, going on to Mars, and ultimately venturing beyond. Unfortunately, like all Administrations since Eisenhower and Kennedy, the Bush Administration lost perspective about space. Inadequate budget proposals and lack of Congressional leadership and funding during Constellation's formative years undercut Administrator Michael Griffin's effort to implement the Program after 2004. Delays due to this under-funding have rippled through national space capabilities until we must retire the Space Shuttle without replacement access to space. Now, we must pay at least $50 million per seat for the Russians to ferry Americans and others to the International Space Station. How the mighty have fallen. Not only did Constellation never received the Administration's promised funding, but the Bush Administration and Congress required NASA 1) to continue the construction of the International Space Station (badly under-budgeted by former NASA Administrator O'Keefe, the OMB, and ultimately by the Congress), 2) to accommodate numerous major over-runs in the science programs (largely protected from major revision or cancellation by narrow Congressional interests), 3) to manage the Agency without hire and fire authority (particularly devastating to the essential hiring of young engineers), and 4) to assimilate, through added delays, the redirection and inflation-related costs of several Continuing Resolutions. Instead of fixing this situation, the current Administration let go Administrator Griffin, the best engineering Administrator in NASA's history, and now has cancelled Constellation. As a consequence, long-term access of American astronauts to space rests on the untested success of a plan for the commercial , space launch sector to meet the increasingly risk adverse demands of space flight. Histories of nations tell us that an aggressive program to return Americans permanently to deep space must form an essential component of national policy. Americans would find it unacceptable, as well as devastating to liberty, if we abandon leadership in space to the Chinese, Europe, or any other nation or group of nations. Potentially equally devastating to billions of people would be loss of freedom's access to the energy resources of the Moon as fossil fuels diminish and populations and demand increase.

Colonization 1AC (2/11)

Contention 2 is Harms: Human extinction is inevitable if Earth is the only planet where we can live.

A. Unforeseen asteroid collisions will destroy human ability to live on Earth. Colonizing new planets is critical to extend the human race.

CREMINS AND SPUDIS, 2007
[Thomas, National Aeronautics and Space Administration; and Paul, Johns Hopkins University Applied Physics Laboratory; "Viewpoint: The Strategic Context of the Moon Echoes of the Past, Symphony of the Future," *Astropolitics,* v.5 n.1]

The American civil space program had its origins in a race between ideological foes. But the race to the Moon did more than prove American technical skill and the power of a free society. An unexpected gift from Apollo was a wholly unexpected glimpse into our own future. From the chemical and physical evidence of impact, about which we learned from the lunar rocks, and the terrestrial fossil record, we discovered that large body collisions had occurred on the Earth in our distant past and will occur again in our future.33 Such catastrophes resulted in the widespread destruction of life, in some cases eliminating in an instant more than 90% of all living species. In short, we discovered that in the long run, species become extinct and that ultimately, life on Earth is in pril. Our new understanding of impact as a fundamental geological force leaves us only with the question of when, not if, the next large collision will occur. And "when" is something that we cannot predict beyond short-range timescales. Human culture is cumulative. Our civilization provides positive and beautiful things through music, art, and knowledge–it embodies the collected wisdom of all who have gone before us. Before passing the torch to our children, we should strive to create something of long-term value, something that will exist long after our time on this planet. The journey beyond Earth's shores marks the beginning of an unending journey for humanity. It is a fortunate gift of nature that we can leave this world at all. If Earth's gravity were a little bit greater, or if the chemical bonds of the molecules that make up rocket propellant were just a little bit stronger, we would not be able to achieve the speeds necessary to reach Earth orbit, the first step into the cosmos. The Vision for Space Exploration and its embrace by the U.S. Congress opens up the opportunity to extend human reach by developing new capabilities in space travel, such as the production of rocket propellant on the Moon to create the first "off-shore" refueling station in space. Returning to the Moon will facilitate that goal. There we will gain technical ability and learn how to use the abundant energy and material resources waiting on other worlds. With the knowledge of how to "live off the land" in space, we can move out into the universe, and ultimately populate one world after another. The significance of such a movement should not be underestimated. Alone among all known life forms, only humans have the potential capability to willfully extend our destinies. By establishing reservoirs of human culture off-planet, we are writing a wholly new and unprecedented chapter in the history of life. Space extends our reach and fulfills our need to explore the unknown. It is the fulfillment of our destiny.

Colonization 1AC (3/11)

B. And every day, conflicts happen that make extinction-causing nuclear war more likely and inevitable.

HELLMAN, 2001
[Martin, Professor of Electrical Engineering, Stanford University, and Fellow of the Institute of Electrical and Electronics Engineers ; "Nuclear War: Inevitable or Preventable?," http://www-ee.stanford.edu/~hellman/Breakthrough/book/chapters/hellman.html]

Every "small" war pulls the trigger in nuclear roulette. Because the US and the USSR back different sides, the conflict in Nicaragua has the potential for disaster. The Iran-Iraq war is another. Because Saudi Arabia provides Iraq with vital financial aid, Iran has threatened to cut off the flow of Saudi oil. Such action would be likely to bring American military action against Iran. This would be as unacceptable to the Soviets as it would be for America if the Soviets attacked Mexico. The USSR and Iran share a border. "Every 'small' war pulls the trigger in nuclear roulette." Every day in which a missile or computer system can fail also pulls the trigger in nuclear roulette. It has been established that on December 28, 1984, a Soviet cruise missile went off course and flew over Finland and Norway. The results of such an accident can be horrendous, particularly if it happens in a more populated part of Western Europe, in the Mideast, or during a time of tension. In 1979 and the first half of 1980, there were 3,703 low-level false alerts in the United States alone. A few were sufficiently serious to come within minutes of launching nuclear war. One false alert lasted for a full six minutes before the error was discovered - a dangerously long time considering that the flight time for some submarine-launched ballistic missiles is less than ten minutes.6 Because it takes time to detect a launch and orders must be given some minutes before retaliation can take place, the decision time is even shorter or nonexistent. Even events as dangerous as the Cuban missile crisis could be repeated. General Edward Meyer, former army Chief of Staff, reported that during his tenure, "a naval quarantine or blockade of both Nicaragua and Cuba" had been considered.7 Inevitability Every day, the United States depends on 30,000 nuclear weapons for its security. Every day, the Soviet Union depends on 20,000 nuclear weapons for its security. These weapons are ready for use. There are plans for how to use them, so every day there is a small probability they will be used. In the metaphor of nuclear roulette, every day, we pull the trigger of the many-chambered nuclear gun pointed at the head of civilization. Every day, there is a small chance that one of the forty conflicts going on in the world will escalate. With many of these wars touching upon the perceived vital interests of the major powers, with the experience of the past forty years in the Middle East, with the experience of the 1962 Cuban crisis, there is ample evidence that every war pulls the trigger. Every day, there is a small chance that a Third World hot spot will escalate and push the interlocking command and control systems of the US and the USSR into instability. There is an unhealthy parallel between today's military plans and those which catapulted Europe into World War I. Each time the far-flung military forces of the two great powers go on alert, the trigger is pulled in nuclear roulette. Every day, there is a small chance that failures in high technology military equipment will start an accidental nuclear war. Every computer error, every false alert, every test missile that goes off course, pulls the trigger. Every day, there is a small chance that a governmental or military group high up in either nation will succumb to group dynamics to such a degree that individual judgment will be lost and rash decisions made. Each time a team is called upon to decide how to respond to a provocative

[This evidence continues on the next page, with no text deleted...]

Colonization 1AC (4/11)

[The Hellman evidence continues with no text deleted…]

incident, each time warriors gather to decide what steps to take, the trigger is pulled. "Each of these probabilities, by itself, is small. But taken together over a year's time, they add up to a cumulative probability which is no longer small … Taken together over a century, they make nuclear war virtually inevitable." Each of the hundreds of thousands of people with responsibility for nuclear weapons who drinks or uses drugs adds a small increment to the chance for nuclear war. Each time a custodian of nuclear materials, or nuclear plans, or keys to a nuclear facility, uses alcohol or other drugs, the trigger is pulled. Every day, there is a small chance that terrorists or renegade governments will construct a nuclear weapon. The know-how, the materials, and the places where such construction can occur are scattered all over the globe. Fissionable material suitable for use in weapons is produced as an unwanted by-product at every civilian nuclear power plant in the world. More than 100,000 nuclear weapons could be built from the world's current nuclear wastes. Every coffee cup of fissionable material that a terrorist might obtain pulls the trigger in nuclear roulette.8 Each of these probabilities, by itself, is small. But taken together over a year's time, they add up to a cumulative probability which is no longer small. Taken together over a decade, the probability is significant. Taken together over a century, they make nuclear war virtually inevitable. We cannot continue on our present course forever.

C. Finally, killer viruses are coming because bioweapons labs can't be regulated and will eventually create an accidental virus that causes extinction on Earth.

THE TELEGRAPH, 2001
[Roger Highfield, science editor; "Colonies in space may be only hope, says Hawking," 10/15, http://www.telegraph.co.uk/news/uknews/1359562/Colonies-in-space-may-be-only-hope%2C-says-Hawking.html]

THE human race is likely to be wiped out by a doomsday virus before the Millennium is out, unless we set up colonies in space, Prof Stephen Hawking warns today. In an interview with The Telegraph, Prof Hawking, the world's best known cosmologist, says that biology, rather than physics, presents the biggest challenge to human survival. "Although September 11 was horrible, it didn't threaten the survival of the human race, like nuclear weapons do," said the Cambridge University scientist. "In the long term, I am more worried about biology. Nuclear weapons need large facilities, but genetic engineering can be done in a small lab. You can't regulate every lab in the world. The danger is that either by accident or design, we create a virus that destroys us. "I don't think the human race will survive the next thousand years, unless we spread into space. There are too many accidents that can befall life on a single planet. But I'm an optimist. We will reach out to the stars."

Colonization 1AC (5/11)

D. There are no alternative solutions on Earth. Remaining bound to a single planet renders us helpless to every possible disaster.

GANGALE, 2007
[Thomas, aerospace engineer and a former Air Force officer. He is currently the executive director at OPS-Alaska, a think tank based in Petaluma; "A Progressive Vision of Human Space Exploration--Important to California, a Leader in Aerospace and High Tech," 12/04, http://www.californiaprogressreport.com/site/node/3422/]

Developing a spacefaring culture is a matter of survival, not just to gain the ability to detect and deflect asteroids and comets on a collision course for Earth, but to escape the resource constraints of our limited planet. There are perhaps 30 years of petroleum left; let's hope that by the time it runs out, commercial fusion power (perhaps fueled by the Moon's helium-3) or solar power satellites are up and running, waiting for the baton to be passed. If not, the Great Machine on which Earth's billions depend could shudder to a halt. Given the global population of 800 million that a rudimentary industrial economy supported a couple of centuries ago, collapse of the Great Machine could mean death for ninety percent of Earth's population toward the middle of the 21st century, death by starvation, opportunistic diseases, and resource wars. I am not saying that the end of the world is nigh, nor am I saying that the only path to avoiding the Apocalypse leads into space, but I am saying that Earth-based solutions to the end of oil may not be entirely adequate. In space, there is the possibility of developing other options, and it would be wise to have them available should we need to exercise them. While the business case for space tourism pioneering cheap and large-scale spacelift capability is questionable, the case for keeping the Great Machine running is obvious.

Colonization 1AC (6/11)

E. And, technological cycles mean humanity only has one shot to survive – no future society will ever be able to explore and colonize outer space.

GANGALE, 2007
[Thomas, aerospace engineer and a former Air Force officer. He is currently the executive director at OPS-Alaska, a think tank based in Petaluma; "A Progressive Vision of Human Space Exploration--Important to California, a Leader in Aerospace and High Tech," 12/04, http://www.californiaprogressreport.com/site/node/3422/]

Civilizations have risen, fallen, and in time others have risen in their place, but this time the stakes are greater. If, for some reason, our technological civilization should collapse, either because of nuclear war, pandemic, climate change, cosmic impact, or resource depletion, we can never pass this way again. No previous culture has been the massive consumer of non-renewable resources that ours is. Each decade that passes, we must dig deeper and drill farther to extract the materials that fuel the Great Machine. The advance of technology continually extends our reach for these resources, but these advanced methods would be far beyond the grasp of a post-apocalyptic agrarian culture trying to make another go of it. What we think of as non-renewable resources actually are renewable, of course on a geologic time scale. Left to itself, the Earth would again form subterranean pools of petroleum. Another Industrial Revolution might be possible on this planet, but only for a species as far removed from us in the future as the trilobites are in our past. Our civilization has the one and only chance the human race will ever have to reach beyond this planet and establish itself elsewhere in the universe. If we miss this opportunity, our species will be bound to the Earth until we become extinct. If, on the other hand, we survive the various threats to the progress of technological civilization, we will see a branching of the human timeline. Humans will go to live and work indefinitely on orbiting space platforms, in lunar settlements, on Mars, and then out to the planet-sized moons of the gas giants. The process of inhabiting and thriving in ever more extreme environments is the natural extension of the coldward course of progress, the process by which humans left their tropical home-of-origin and ventured into the temperate and polar zones. The experience the solar system explorers, pioneers, and settlers will gain will pave the way to the stars and beyond. As visionary scientist Carl Sagan (1995) pointed out, this gets the human eggs out of the single basket in terms of any sort of catastrophic mass extinction event. It also gets our eggs out of the basket in terms of the natural processes of passive extinction, where we lose so much genetic vigor that we can no longer cope with our constantly changing single planetary environment. Because of the distances involved alone, not to mention the effects of wholly new planetary environments, in journeying outward we set in motion new speciation and differentiation of the Homo sapiens line. For our species to survive, we must diffuse into the cosmos. We must engage the grand environment, and who can say for how long our window of opportunity will remain open?

Colonization 1AC (7/11)

F. Even conservative estimates prove we outweigh any disad on magnitude: for every second we aren't colonizing space, we lose an almost infinite number of human lives.

BOSTRUM, 2003
[Nick, PhD from the London School of Economics, director of The Future of Humanity Institute at Oxford University; "Astronomical Waste: The Opportunity Cost of Delayed Technological Development," *Utilitas*, v.15, n. 3]

We can, however, get a lower bound more straightforwardly by simply counting the number or stars in our galactic supercluster and multiplying this number with the amount of computing power that the resources of each star could be used to generate using technologies for whose feasibility a strong case has already been made. We can then divide this total with the estimated amount of computing power needed to simulate one human life. As a rough approximation, let us say the Virgo Supercluster contains 10^13 stars. One estimate of the computing power extractable from a star and with an associated planet-sized computational structure, using advanced molecular nanotechnology[2], is 10^42 operations per second.[3] A typical estimate of the human brain's processing power is roughly 10^17 operations per second or less.[4] Not much more seems to be needed to simulate the relevant parts of the environment in sufficient detail to enable the simulated minds to have experiences indistinguishable from typical current human experiences.[5] Given these estimates, it follows that the potential for approximately 10^38 human lives is lost every century that colonization of our local supercluster is delayed; or equivalently, about 10^31 potential human lives per second. While this estimate is conservative in that it assumes only computational mechanisms whose implementation has been at least outlined in the literature, it is useful to have an even more conservative estimate that does not assume a non-biological instantiation of the potential persons. Suppose that about 10^10 biological humans could be sustained around an average star. Then the Virgo Supercluster could contain 10^23 biological humans. This corresponds to a loss of potential equal to about 10^14 potential human lives per second of delayed colonization. What matters for present purposes is not the exact numbers but the fact that they are huge. Even with the most conservative estimate, assuming a biological implementation of all persons, the potential for one hundred trillion potential human beings is lost for every second of postponement of colonization of our supercluster.[6]

Colonization 1AC (8/11)

Thus, we offer the following PLAN:

The United States federal government should fully fund a sustained human spaceflight mission to explore and colonize space objects beyond the Earth's mesosphere.

Colonization 1AC (9/11)

Contention 2 is Solvency: The plan is the only way to guarantee successful colonization of planets that can sustain human life.

A. Only the U.S. has the programs and technology in place to colonize space in the short-term.

GRABIANOWSKI, 2009
[Ed, writer for technology website i09; "How Close Are We To Colonizing Space?" 12/18, http://io9.com/5428896/how-close-are-we-to-colonizing-space]

Lunar Colonization. The best prospect for a human colony on the moon seems to be NASA's Constellation project. The Altair Lunar lander will be able to carry a crew of four astronauts to the moon and support them there for a seven-day mission. Alternately, it can descend robotically to the moon carrying critical infrastructure for a longer-term lunar outpost. When completed, that outpost will support a crew of four for up to 180 days. NASA has a slick interactive website that explains Constellation. A great deal of thought is being put into what astronauts will live in on the moon. The first moon base will likely be an inflatable dome. NASA has been testing such a design at McMurdo Station in Antarctica to see how it deals with extreme cold. Although there are no blizzards on the moon, the test will also prove whether or not the "lunar bounce house" is tough enough for a long-term mission. An inflatable habitat has the advantages of being light-weight and only requiring a few hours to set up. Beyond that preliminary outpost, lunar settlers will require something a bit more sturdy and permanent. Rigid, durable building materials are too heavy to send from the Earth's surface to the moon – it would be impossibly expensive. The best option, then, is to create building supplies from the raw materials already present on the moon. The recent discovery of a large amount of water on the moon makes the production of concrete using lunar regolith much more feasible, but even without water, it's possible. In 2007, a paper published in the Journal of Aerospace Engineering explained how the regolith could be processed into sulfur, which could then be mixed with regolith to make waterless concrete. They even examined the physical properties of said concrete, and proposed a cylindrical habitat structure. A more recent paper in the same journal studied potential lunar colonization in-depth, examining potential structural designs, insulation, power needs and other factors. If you're not willing to take the researchers' word for it, you could always study space architecture yourself. The University of Houston College of Architecture boats the Sasakawa International Center for Space Architecture (SICSAl). Students design and model space vehicles, orbital stations, and lunar and Martian habitats. Many of their designs come directly from NASA requests. While fun, it is a challenging curriculum, since designers must incorporate radiation shielding and variations in gravity, problems terrestrial architects rarely have to consider. Martian Colony. We're a long way from colonizing Mars – decades, at least. However, NASA's Constellation program does have a Martian outpost as its ultimate goal. Creating a colony on the moon will generate an enormous amount of data that will directly aid the quest to put humans on Mars.

Colonization 1AC (10/11)

B. Maintaining an off-planet sanctuary is critical to provide assistance and repopulation after an Earth disaster.

SHAPIRO, 2009
[Robert, Department of Chemistry, New York University, "New rationale for returning to the Moon? Protecting civilization with a sanctuary" *Space Policy*; v. 25]

In the case of a global catastrophe, in which a large fraction of the human population has been lost, and the survivors are suffering and disorganized, it is not immediately obvious to see how the existence of an intact copy of our cultural record and of preserved species on the Moon would be of help. However, the Phoenix Project report of the International Space University provides detailed suggestions about the manner in which a lunar sanctuary could aid recovery after a global catastrophe [18]. Advance preparations would be needed on Earth, as a form of civil defense against catastrophes. A widely distributed series of repositories would be constructed, equipped with preserved foods, medical supplies and other emergency items needed by a population in distress. Such repositories could even be the first resource in the case of local disasters such as earthquakes and hurricanes, if more immediate rescue was unavailable. But, in addition, they would provide radio equipment, simple computers and tutorials designed to allow untrained individuals to establish rudimentary communication with the lunar sanctuary. The equipment would be sustained by solar, wind, or even human power. The base could provide data and advice concerning longer-term survival needs, such as information about other survivors and places where larger depots of food could be found. When some measure of stability had returned, information about rudimentary agriculture and the possibility of restoring electrical power would be furnished. In some cases, advisors could return in person to aid in the recovery of civilization. The ultimate aim would be to restore a fully functional civilization on Earth, with all of the resources that were available before the catastrophe. An even more extreme case can be anticipated, involving the total or near-total destruction of the human population on Earth. Whatever the nature of the sterilizing catastrophe, after a few decades, or at worst, centuries, our planet would return to a state of habitability. Atmospheric ash and dust will settle, radioactivity will decay, and pathogens will lose virility or expire for lack of a suitable host. Earth would again become the most suitable place of residence in our Solar System for the bulk of humanity. The lunar base would then have the responsibility of repopulating the planet. For this reason, a sexual balance and a significant presence of younger people in the population in the sanctuary would be advisable.

Colonization 1AC (11/11)

C. Colonizing space is a prerequisite solving any global problem – it allows humanity to start over and erase the boundaries we have created on Earth.

ROGERS, 2006
[Thomas, The Sophron Foundation , "Magnifying our world: Why we must extend civilization to the Moon" *Space Policy*; v. 22]

In other words, considering the formation of a Moon– Earth world civilization, we should appreciate the fundamental infinite contrast between the two bodies: the Moon is a human tabula rasa—a blank space. There are no lingering hatreds or recollections of war, slavery or genocide, or religious persecution. There are no political or economic alliances; no political boundaries and, despite some legally baseless attempts to the contrary, no land ownership. There are no weapons of mass destruction there. And unlike today's Earth-confined world, there are no indigenous inhabitants there to confront arriving pioneers. We can, and should, take full, imaginative and sensitive advantage of such an extraordinary, indeed unique, circumstance not found in today's world. On the Moon we would not be spending as much effort in physical space exploration as, say, we would do on Mars. Rather, on the Moon we would be exploring how to restart civilization! And hopefully learning how to see that it is peaceful, and how to govern it effectively under the most favorable human institutional circumstances that be imagined.

2AC Harms: Answers To 1NC #1: "No Asteroid Extinction" (1/2)

They say asteroids aren't a risk, but…

____Extend the 1AC CREMINS AND SPUDIS evidence: history is filled with low-level asteroid collisions, and much larger planet-killers are coming. Eventually one will hit Earth, and crack the planet. Their evidence is from an unqualified local paper writer, and doesn't describe this mystery technology.

____Massive evidence proves that extinction-causing asteroid collisions are inevitable, and a space colonization program solves.

SEIGFRIED, 2003
[W.H., Program Manager of McDonnell Douglas SEI team, "Space Colonization—Benefits for the World," http://www.aiaa.org/participate/uploads/acf628b.pdf]

Over the last decade a large mass of evidence has been accumulated indicating that near-Earth-object (NEO) impact events constitute a real hazard to Earth. Congress held hearings on the phenomenon in 1998, and NASA created a small NEO program. Since 1988, a total (as of 7 August 2002) of some many thousand near-Earth objects (of which about 1,000 are larger that 1 km in diameter) have been catalogued that are potentially hazardous to Earth. New discoveries are accelerating. In just the last few months, a 2-mile-wide crater was discovered in Iraq dating from around 2000 to 3000 B.C. This impact was potentially responsible for the decline of several early civilizations. A similar crater was recently discovered in the North Sea. Major events have occurred twice in the last hundred years in remote areas where an object exploded near the Earth's surface bur did not impact (such as in Russia). If either of these events had occurred over a populated area the death toll would have been enormous. Our armed forces are concerned that an asteroid strike could be interpreted as a nuclear attack, thus triggering retaliation. What higher goals could Space Colonization have than in helping to prevent the destruction of human life and to ensure the future of civilization? The odds of an object 1 km in diameter impacting Earth in this century range between 1 in 1,500 and 1 in 5,000 depending on the assumptions made. A 1-km-diameter meteoroid impact would create a crater 5 miles wide. The death toll would depend on the impact point. A hit at Ground Zero in New York would kill millions of people and Manhattan Island (and much of the surrounding area) would disappear. The resulting disruption to the Earth's environment would be immeasurable by today's standards. A concerted Space Colonization impetus could provide platforms for early warning and could, potentially, aid in deflection of threatening objects. NEO detection and deflection is a goal that furthers international cooperation in space and Space Colonization. Many nations can contribute and the multiple dimensions of the challenge would allow participation in many ways—from telescopes for conducting surveys, to studies of lunar and other planet impacts, to journeys to the comets. The Moon is a natural laboratory for the study of impact events. A lunar colony would facilitate such study and could provide a base for defensive action. Lunar and Mars cyclers could be a part of Space Colonization that would provide survey sites and become bases for mining the NEOs as a resource base for space construction. The infrastructure of Space Colonization would serve a similar purpose to the solar system as did that of the United States Interstate Highway system or the flood control and land reclamation in the American West did for the United States development. In short, it would allow civilization to expand into the high frontier.

2AC Harms: Answers To 1NC #1: "No Asteroid Extinction" (2/2)

____Huge, planet-killing asteroids could strike with no warning and destroy the planet.

COLUMBUS DISPATCH, 2007
[Mike Lafferty, Staff Writer; "Scientists warn that world needs to keep an eye on asteroids," 2/27, http://www.dispatch.com/live/contentbe/dispatch/2007/02/27/20070227-D4-00.html]

About twice a year, an asteroid smashes into Earth's atmosphere with the force of a Hiroshima-size atomic blast. And those are small ones, scientists say; the space rocks vaporize before they can do any harm. When the big one hits, we won't be as fortunate. Researchers at the recent American Association for the Advancement of Science meeting warned that it is inevitable that an asteroid large enough to crack the atmosphere will hit the planet. When it does, it has the potential to be just as awful as the 6-mile-diameter rock that wiped out most life on the planet 65 million years ago. "There is a danger of an asteroid killing the Earth," said David Morrison, an astrobiologist at NASA's Ames Research Center in California. As for warning, we might have a few weeks. Or none at all. A rogue asteroid could easily blindside us by coming around the sun and approaching Earth with the sun behind it, obscuring views. "You wouldn't know it until the sky lit up and the impact shook the Earth," Morrison said. Although the chances of any single asteroid striking the globe are fairly remote, there are thousands of potential planet-killers lurking in the asteroid belt between Mars and Jupiter.

2AC Harms: Answers To 1NC #2: "No Disease Extinction"

They say disease won't cause extinction, but…

____Extend the 1AC TELEGRAPH evidence: famous scientists think killer diseases will inevitably get loose because bioweapons labs can't be regulated. Their evidence is about status quo viruses, not bioweapons that are specifically created to kill everyone.

____Space colonization allows the use of unique laboratory conditions that will cure diseases.

SEIGFRIED, 2003
[W.H., Program Manager of McDonnell Douglas SEI team, "Space Colonization—Benefits for the World," http://www.aiaa.org/participate/uploads/acf628b.pdf]

Many current human problems are the result of failures of the body's natural immune system. We can diagnose many of these problems and have made great strides in ameliorating the symptoms, but to date, understanding immune system function and enhancement is seminal. Both United States and Russian long-term space missions have induced similar red blood cell and immune system changes. Hematological and immunological changes observed during, or after, space missions have been quite consistent. Decreases in red cell mass were reported in Gemini, Apollo, Skylab and Soyuz, and Mir programs—probably due to diminished rates of erythrocyte production. Space flight at microgravity levels may produce changes in white blood cell morphology and a compromise of the immune system. Skylab studies indicated a decrease in the number of T lymphocytes and some impairment in their function. Certain United States and Russian findings suggest that space flight induces a transient impairment in immune system function at the cellular level. Space flight offers a clinical laboratory unlike any place on Earth that may lead to an improved understanding of the function of the human immune system. Perhaps cures of aging, HIV, and other immune function-related illnesses can result from a comprehensive approach to Space Colonization.

____We have to begin colonizing now. Economic and historical trends prove that if we delay the process, we'll never leave Earth.

CORDELL, 2008
[Dr. Bruce, Weizmann postdoctoral fellow at Caltech, ex-physics professor at the California State University; "NASA Programs and MEPs: A Brief 21stCenturyWaves Perspective," 5/11, http://21stcenturywaves.com/2008/05/11/nasa-programs-and-meps-a-brief-21stcenturywaves-perspective-2/]

Currently, the most important issue for humanity's future – within the next 5 – 10 years — is to resume the large-scale human expansion into space by achieving self-sufficient colonies (e.g. on the Moon) before 2025. This is serious business because such opportunities are not continuously available. Indeed, unless we breakout into space by 2025, the last 200 years of macroeconomic and macrohistorical experience teach that long-term trends in the economy, technology, and society will not be favorable again for human expansion until about 2071. This is especially sobering because attempting to estimate the geopolitical, technological, and/or economic state of the world that far into the future is essentially impossible, and therefore the next Maslow Window (2015 – 2025) is of inestimable importance.

2AC Harms: Answers To 1NC #3: "No Nuclear Extinction" (1/2)

They say war won't cause extinction, but…

____Extend the 1AC HELLMAN evidence: the existence of nuclear weapons makes their use inevitable because conflict or accidents can't be contained or deterred. A single launch will escalate, so their evidence about interdependence doesn't account for accidental scenarios.

____Competition and the drive for resources will cause multiple nuclear wars in the short-term.

CALDWELL, 2003
[Joseph, former Director of Research and Development and Principal Scientist, US Army Electronic Proving Ground's Electromagnetic Environmental Test Facility ; "The End of the World, and the New World Order," 3/06, http://www.foundationwebsite.org/TheEndOfTheWorld.htm]

It would appear that global nuclear war is inevitable, for several reasons. A major factor is the "politics of envy" – the desire for the "have-nots" of the world to destroy what the "haves" have. The gap between the industrialized "west" and the rest of the world is widening, and the hatred and envy are growing as the poorer nations realize that they will never catch up. Each year, millions more human beings are born into direst poverty, overcrowding, misery and hopelessness. The realization is dawning that it is global industrialization that is the root cause of human misery, and the motivation to bring that inhumane system to an end is growing as fast as the global human population. With the proliferation of plutonium from nuclear reactors, terrorists and rogue nations will soon have the capability to produce thousands of suitcase-sized nuclear bombs, and deliver them to any cities in the world. As mentioned earlier, no missiles or airplanes or submarines are required. Another reason why global nuclear war appears inevitable is the fact that nuclear war "dominates" all other proposed solutions as a means of stopping the ongoing species extinction. No other alternative accomplishes this. As long as this situation holds, it is just a matter of time until the global-nuclear-war solution is implemented, since continuing on the present course leads to a "dead" planet. It would appear that global nuclear war will happen very soon, for two main reasons, alluded to above. First, human poverty and misery are increasing at an incredible rate. There are now three billion more desperately poor people on the planet than there were just forty years ago. Despite decades of industrial development, the number of wretchedly poor people continues to soar. The pressure for war mounts as the population explodes. Second, war is motivated by resource scarcity -- the desire of one group to acquire the land, water, energy, or other resources possessed by another. With each passing year, crowding and misery increase, raising the motivation for war to higher levels. There is also a third factor motivating global war, and that involves timing. With the passage of time, less and less benefit accrues to the winner. If anyone is motivated to wage global nuclear war and has the means to do so, sooner is very likely better than later. If delayed too long, there may be nothing left to gain. With each passing year, the planet's biodiversity decreases, another two percent of the planet's remaining petroleum reserves are consumed, and the risk of biospheric extinction (e.g., from a greenhouse effect) increases.

2AC Harms: Answers To 1NC #3: "No Nuclear Extinction" (2/2)

____Resource shortages and population growth will inevitably lead to violent purges and wars that cause extinction.

ENGDAHL, 2006
[Sylvia, taught graduate courses on the Web for Connected Education, and winner of Newbery Honor for *Enchantress from the Stars*, "Space and Human Survival: My Views on the Importance of Colonizing Space," 11/02, http://www.sylviaengdahl.com/space/survival.htm]

The question of resources raises an even more crucial reason for expansion into space than the danger of Earth's destruction. It's obvious that this planet cannot support an expanding population forever. Most people who recognize this fact advocate population control to the extent of "zero population growth." I do not; I believe it would be fatal not only for the reason explained above, but because if it could be achieved it would result in stagnation. I do not want a world in which there can be no growth; growth leads to intellectual and artistic progress as well as to material survival. Furthermore, I do not believe it could be achieved. The built-in desire for personal descendants is too strong; that is why our species has survived this long, why it has spread throughout the entire world. Moreover, the biological response to threatened survival is to speed up reproduction, as we can see by the number of starving children in the world. If we tried to suppress population growth completely, we would have either immediate violent upheaval or a period of dictatorship followed by bloody revolution. Ultimately, we would reduce the population all right; we would decimate it. That may be "survival" but it's surely not the future we want. We do not want even the present restriction on resources. Currently, some nations live well while others are deprived, and it's asserted that even those with the best access to resources should stop using them up—the underdeveloped nations, under this philosophy, are not given the hope of a standard of living commensurate with the level our species has achieved. Will the Third World tolerate such a situation forever? I surely wouldn't blame them for not wanting to. And neither do I want the rest of the world reduced to a lower level of technology. Even if I had no other objection to such a trend, the plain fact is that a low level of technology cannot support the same size population as a high level; so if you want to cut back on technology, you have to either kill people outright or let them starve. And you certainly can't do anything toward extending the length of the human lifespan. This is the inevitable result of planning based on a single-planet environment.

2AC Harms: Answers To 1NC #4: "Ignore Improbable Extinction Scenarios" (1/2)

They say to ignore our scenarios for extinction, but …

___This begs the question. Our evidence is qualified and proves that there is a high probability for our extinction scenarios. Over 90% of species on Earth have gone extinct, and there is no reason to think humans won't also eventually die off. They have to win specific internal link take-outs before they can claim this evidence.

____Evaluate low-probability impacts when space colonization is in question, because the magnitude is incalculably high.

BOSTRUM, 2003
[Nick, PhD from the London School of Economics, director of The Future of Humanity Institute at Oxford University; "Astronomical Waste: The Opportunity Cost of Delayed Technological Development," *Utilitas*, v.15, n. 3]

The expected utility of a 1% chance of realizing an astronomically large good could still be astronomical. But just how good would it be for (some substantial subset of) currently living people to get access to astronomical amounts of resources? The answer is not obvious. On the one hand, one might reflect that in today's world, the marginal utility for an individual of material resources declines quite rapidly once his basic needs have been met. Bill Gates' level of well-being does not seem to dramatically exceed that of many a person of much more modest means. On the other hand, advanced technologies of the sorts that would most likely be deployed by the time we could colonize the local supercluster may well provide new ways of converting resources into well-being. In particular, material resources could be used to greatly expand our mental capacities and to indefinitely prolong our subjective lifespan. And it is by no means clear that the marginal utility of extended healthspan and increased mental powers must be sharply declining above some level. If there is no such decline in marginal utility, we have to conclude that the expected utility to current individuals of successful colonization of our supercluster is astronomically great, and this conclusion holds even if one gives a fairly low probability to that outcome. A long shot it may be, but for an expected utility maximizer, the benefit of living for perhaps billions of subjective years with greatly expanded capacities under fantastically favorable conditions could more than make up for the remote prospects of success.

2AC Harms: Answers To 1NC #4: "Ignore Improbable Extinction Scenarios" (2/2)

___The probability is 100% because taking advantage of the current window is necessary to avoid extinction.

JOBES AND WASSER, 2008

[Douglas, president of the Space Settlement Institute; and Alan, Chairman of The Space Settlement Institute and a former CEO of the National Space Society, former member of the AIAA Space Colonization Technical Committee, former member of the Board of Directors of ProSpace, and a former Senior Associate of the Space Studies Institute; "SPACE SETTLEMENTS, PROPERTY RIGHTS, AND INTERNATIONAL LAW: COULD A LUNAR SETTLEMENT CLAIM THE LUNAR REAL ESTATE IT NEEDS TO SURVIVE?," *Journal of Air Law and Commerce*, Winter, 73 J. Air L. & Com. 37, lexis-nexis]

HUMANITY'S SURVIVAL depends on moving out into the cosmos while the window of opportunity for doing so still exists. Besides helping to ensure the survival of humankind, the settling of space - including the establishment of permanent human settlements on the Moon and Mars - will bring incalculable economic and social benefits to all nations. The settlement of space would benefit all of humanity. It would open a new frontier, provide resources and room for growth of the human race without despoiling the Earth, energize our society, and as Dr. Stephen Hawking has pointed out, create a lifeboat for humanity that could survive even a planet-wide catastrophe. n1 But, as Dr. Lawrence Risley pointed out, "Exploration is not suicidal and it is usually not altruistic, rather it is a means to obtain wealth. There must be rewards for the risks being taken." n2

2AC Solvency: Answers To 1NC #1: "Pollute Other Planets" (1/2)

They say plan leads to polluting other planets, but…

____Non-unique: we have already landed on the Moon and left pollution, and there is debris orbiting the Earth. There is no reason why new pollution would be any worse than the status quo.

____Ethics are not an apriori voting issue. Their card says some groups have tried to create a new ethical framework for international law, not that good policies should be rejected because they might cause a little pollution. Our magnitude is infinite human lives, which outweighs this turn.

____Colonizing other planets will give us a new appreciation of natural environments that prevents pollution.

SAVAGE, 1994
[Marshall, Founder of the Living Universe Foundation, *The Millenial Project*; p. 267-8]

Prophets of doom are currently in fashion. Some of these Cassandras strike me as being decidedly anti-human. A few of them seem to think the world—even the universe—might be a better place without us. This is so wrong. Humans are the source of all light: poetry, music, art, love, laughter, hope, dreams; none of these would exist without us. Without us, the universe itself might not even exist. Reality may depend on our consciousness to perceive it and give it tangible form. Without us, all might be without form, and void; and darkness would remain upon the face of the deep. I believe that humans are good, and that more humans are better. True, a population explosion, within the confines of a single ecosphere, is certainly suicidal. But we need not remain restricted to our present land mass. We can expand. First, into the unsettled frontiers of the world's oceans. Then, into space. Once we are out of the bottle, we need never turn back. As we expand our presence in space, the importance of Earth as the tap-root and well-spring of all Life will become ever more compelling. Preserving and maximizing natural diversity and ecological complexity is sure to become one of mankind's top priorities. Within the next Millennium, we will come into an era when the Earth is actually benefited by the growing magnitude of man s powers. When we have entered such a phase, the continued growth of our species will become an unmitigated anti-disaster. Our maturing powers will allow us to repair the ravages of the past. We can restore our Mother planet to health and then protect her—forever.

2AC Solvency: Answers To 1NC #1: "Pollute Other Planets" (2/2)

____Expanding to colonize space is necessary to teach humanity about cooperation and our connected nature.

GANGALE, 2007
[Thomas, aerospace engineer and a former Air Force officer. He is currently the executive director at OPS-Alaska, a think tank based in Petaluma; "A Progressive Vision of Human Space Exploration--Important to California, a Leader in Aerospace and High Tech," 12/04, http://www.californiaprogressreport.com/site/node/3422/]

The most important thing that we discovered on the Moon was part of ourselves. In the few hours that a few of us spent on the Moon between 1969 and 1972, we became better Earthlings. As the poet Archibald MacLeish wrote, we were "riders on the Earth together." We realized that we were our brother's keeper, and we remembered that God had appointed us stewards of the Earth. And yet, a third of a century later, we must reflect on how pitifully less we have done with that revelation than we should have. It is high time that we journeyed outward to that distant perspective, to see again how close we really are to each other, and to relearn those lessons that have faded with the passing of a generation. There are new lessons to be learned on Mars. There are new poems waiting for us on Mars.

2AC Solvency: Answers To 1NC #2: "Takes Millions of Years"

They say colonizing space takes millions of years, but…

____This evidence assumes colonizing every planet in the Universe. In order to solve our Harms, we only need to colonize one planet so that humans will survive the destruction of Earth. It doesn't take very long to set up colonies on the Moon or Mars.

___The same technological principles that worked for Apollo will work to colonize new planets in a short time-frame.

ZUBRIN, 1996
[Robert, former Chairman of the National Space Society, President of the Mars Society; "The Promise of Mars," *Ad Astra*, May/June, http://www.nss.org/settlement/mars/zubrin-promise.html]

Some have said that a human mission to Mars is a venture for the far future, a task for "the next generation." Such a point of view has absolutely no basis in fact. On the contrary, the United States has in hand, today, all the technologies required for undertaking an aggressive, continuing program of human Mars exploration, with the first piloted mission reaching the red planet Mars within a decade. We do not need to build giant spaceships embodying futuristic technologies in order to go to Mars. We can reach the Red Planet with relatively small spacecraft launched directly to Mars by boosters embodying the same technology that carried astronauts to the Moon more than a quarter-century ago. The key to success comes from following a "travel light and live off the land" strategy similar to that which has well-served terrestrial explorers for centuries. The plan to approach the Red Planet in this way is called "Mars Direct."

2AC Solvency: Answers To 1NC #3: "Lack Knowledge and Will to Colonize"

They say we lack the knowledge and will to colonize space, but…

____Fiat solves this: we guarantee implementation of the plan, which means NASA will create the workforce necessary to colonize other planets.

____NASA is already developing technology to transport and support humans in outer space.

MOSKOWITZ, 2010
[Clara, staff writer for Space.com, "NASA's Far-Out New Plans" 2/01, http://www.space.com/7852-nasa-plans.html, 2/1]

One of the possible consequences of new commercial space vehicles and new propulsion mechanisms is the chance that human civilians could travel to space in large numbers for the first time. That means that space vacations and moon hotels may not be a mere pipe dream anymore. "I am excited to think that the development of commercial capabilities to send humans into low earth orbit will likely result in so many more earthlings being able to experience the transformative power of spaceflight," Apollo 11 astronaut Buzz Aldrin said in a statement. In his comments, Bolden echoed this sentiment. "Imagine enabling hundreds, even thousands of people to visit or live in low-Earth orbit, while NASA firmly focuses its gaze on the cosmic horizon beyond Earth," he said.

____The U.S. can colonize other planets with virtually no stress on our launch capacity.

ZUBRIN, 1996
[Robert, former Chairman of the National Space Society, President of the Mars Society; "The Promise of Mars," *Ad Astra*, May/June, http://www.nss.org/settlement/mars/zubrin-promise.html]

Thus every other year two heavy lift boosters are launched, one to land a crew, and the other to prepare a site for the next mission, for an average launch rate of just one booster per year to pursue a continuing program of Mars exploration. This is only about 10% of the U.S. launch capability, and is clearly affordable. In effect, this "live off the land" approach removes the manned Mars mission from the realm of mega-fantasy and reduces it to practice as a task of comparable difficulty to that faced in launching the Apollo missions to the Moon.

2AC Solvency: Answers To 1NC #4: "Mars Can't Be Colonized"

They say we can't colonize Mars, but…

____We can easily develop agriculture and life-support systems on Mars that are pressurized to provide Earth-like habitats.

ZUBRIN, 1996
[Robert, former Chairman of the National Space Society, President of the Mars Society; "The Promise of Mars," *Ad Astra*, May/June, http://www.nss.org/settlement/mars/zubrin-promise.html]

Over time, the base will transform itself into a small town. The high cost of transportation between Earth and Mars will provide a strong financial incentive to find astronauts willing to extend their surface stay beyond the basic one and a half year tour of duty, to four years, six years, and more. Experiments have already been done showing that plants can be grown in greenhouses filled with CO2, at Martian pressures; the Martian settlers will thus be able to set up large inflatable greenhouses to provide the food required to feed an expanding resident population. Mobile microwave units will be used to extract water from Mars' abundant permafrost, supporting such agriculture and making possible the manufacture of large amounts of brick and concrete, the key materials required to build large pressurized structures.

____Mars has minerals and water supplies that can support life.

DAVID, 2005
[Leonard, senior writer at Space.com, "Space Colonization: The Quiet Revolution" 2/23, http://www.space.com/813-space-colonization-quiet-revolution.html]

Mars is a planet that has many unusual and spectacular features that will draw people to it," McCullough told the STAIF gathering. "Being a planet rather than a moon, it has undergone many of the geological processes which have caused the formation of minerals on Earth," he said. That being the case, Mars is a user-friendly world, rife with many industrially useful minerals for construction and manufacturing purposes. It has a suite of "ates", "ites" and "ides" of common metals with common non metals, McCullough pointed out. The red planet is also wrapped in abundant carbon dioxide which will be fairly easy to condense, he said. Water availability on Mars is another huge plus. There is abundant evidence of past water activity on Mars. It should be present in permafrost at higher latitudes on the planet. It may also be present in hydrated minerals, McCullough stated. "The availability of water on Mars in significant quantities would once again simplify our projected industrial activities. This makes extensive bases leading to colonies more likely," McCullough concluded.

Colonization Negative – Table of Contents

1NC Frontline: Harms (1/3)

1. The risk of an asteroid collision is infinitesimally low because we can alter their course so they miss Earth.

COLUMBUS DISPATCH, 2007
[Mike Lafferty, Staff Writer; "Scientists warn that world needs to keep an eye on asteroids," 2/27, http://www.dispatch.com/live/contentbe/dispatch/2007/02/27/20070227-D4-00.html]

Scientists now say we have the technology to slightly alter the path of a planet-killer. The 2004 discovery of Apophis, a 1,200-foot-diameter asteroid that appeared headed for a collision with Earth in 2036, moved Morrison and other scientists to call for tracking smaller objects and initiating a plan to nudge stray asteroids into safe orbits. "This is not about science. This is about public safety," said former astronaut Russell Schweickart, who wants the United Nations to take the asteroid threat seriously. Three years ago, scientists said there was a 2.7 percent chance that Apophis will hit Earth. Now, astronomers say the asteroid probably will clear Earth with 20,000 miles to spare. Right now, they estimate the risk of collision is about 1 in 45,000. In 2029, Apophis will pass through an astronomical keyhole, a precise spot in space where gravitational forces could put it on a collision course.

2. Diseases won't cause extinction because they die too quickly and medicine will adapt.

POSNER, 2004
[Richard, senior lecturer at the University of Chicago Law School, *Catastrophe: Risk and Response*, p. 23-4]

Yet the fact that Homo sapiens has managed to survive every disease to assail it in the 200,000 years or so of its existence is a source of genuine comfort, at least if the focus is on extinction events. There have been enormously destructive plagues, such as the Black Death, smallpox, and now AIDS, but none has come close to destroying the entire human race. There is a biological reason. Natural selection favors germs of limited lethality; they are fitter in an evolutionary sense because their genes are more likely to be spread if the germs do not kill their hosts too quickly. The AIDS virus is an example of a lethal virus, wholly natural, that by lying dormant yet infectious in its host for years maximizes its spread. Yet there is no danger that AIDS will destroy the entire human race. The likelihood of a natural pandemic that would cause the extinction of the human race is probably even less today than in the past (except in prehistoric times, when people lived in small, scattered bands, which would have limited the spread of disease), despite wider human contacts that make it more difficult to localize an infectious disease. The reason is improvements in medical science. But the comfort is a small one. Pandemics can still impose enormous losses and resist prevention and cure: the lesson of the AIDS pandemic. And there is always a first time.

1NC Frontline: Harms (2/3)

3. Major war can only happen if the economy collapses or deterrence fails.

MANDELBAUM, 1998
[Michael, professor at the Nitze School of Advanced International Studies at Johns Hopkins University, "Is Major War Obsolete?" *Survival*, v.40, n.4]

Political, social and technological trends that began or have accelerated in the twentieth century have made major war obsolete by raising its costs while reducing the incentives for waging it. Major war is obsolete in the way that styles of dress are obsolete: it is something that is out of fashion and, while it could be revived, there is no present demand for it. Major war is obsolete in the way that slavery, duelling or foot-binding are obsolete: it is a social practice that was once considered normal, useful – even desirable – but that now seems odious.31 It is obsolete in the way that the central planning of economic activity is obsolete: it is a practice once regarded as a plausible, indeed a superior way of achieving a socially desirable goal, but that changing conditions have made ineffective at best, counter-productive at worst. It is possible that not only major war – protracted struggles among great powers with revolutionary consequences for international politics – but even modern war – the use of mechanised weapons in formal battles between the professional armed forces of sovereign states – is dying out. The toll that modern weapons extract and the diminishing benefits their use seems likely to bring, which are potent factors in the foreign policies of the great powers, must weigh on the calculations of the lesser ones as well.32 True, Washington is even now preparing to fight two modern wars. The precedents for the two 'major regional contingencies' that form the basis for post-Cold War US military planning are wars the US fought in Korea in the early 1950s and in the Persian Gulf in 1991. Not coincidentally, the regimes against which the US went to war on those occasions remain in power in both places. But neither North Korea's Kim Il Sung nor Iraq's Saddam Hussein believed, when they launched the attack that began each war, that it would lead to a military confrontation with the US, and it is unlikely that either regime is eager to repeat the experience. Warlessness may still be unknown on the Korean Peninsula and in the Middle East, but there is no reason to doubt that deterrence has put down roots in both places. Of the varieties of war, it is not the Second World War model that is growing in popularity. It is, rather, 'unconventional' conflicts, waged by irregular forces that attack civilian not military targets. Guerrillas, terrorists, members of private militias – even malevolent computer hackers – seem to be displacing the formally trained, well-equipped, publicly funded soldier who waged the twentieth century's wars. The practice of war, once the prerogative of the strong of the international system, is instead increasingly the tactic of the weak. Still, if major war is obsolete, or obsolescent, and modern war is in decline, neither is impossible. The impossibility of war has been confidently predicted in the past – before 1914, for example – and subsequent events have decisively falsified these predictions. This could happen again. The trends that have contributed to debellicisation are not as firmly entrenched in Russia or China as in the countries that were their adversaries during the Cold War. Even in the West, warlessness could erode: the barriers to war could weaken, for example, if democracy were to become less robust. Or, as the world moves away from the era of battles in the first half of the twentieth century, and the period of nuclear-induced anxiety punctuated by occasional crises in the second half, the memories and anticipations of destruction that helped to keep the world's mightiest military machines in check could fade. Or the obsolescence of modern war could be undercut by what bureaucracies call 'unk–unks' – unknown unknowns – things about which there is not merely uncertainty but a complete lack of awareness. Militant religious beliefs, messianic ideologies, conflicts over resources or other currently unforeseen causes of conflict may lurk over the horizon.

1NC Frontline: Harms (3/3)

4. Ignore their extinction scenarios if the probability is low. Probability is more important than magnitude.

HERBECK AND KATSULAS, 92
[Dale, Professor of Communication and Director of the Fulton Debating Society at Boston College; John, Debate Coach at Boston College; "The Use and Abuse of Risk Analysis in Policy Debate," Paper Presented at the 78th Annual Meeting of the Speech Communication Association Available Online via ERIC Number ED354559, p. 10-12]

First, and foremost, we need to realize that some risks are so trivial that they are simply not meaningful. This is not to argue that all low probability/high impact arguments should be ignored, but rather to suggest that there is a point beneath which probabilities are meaningless. The problem with low probability arguments in debate is that they have taken on a life of their own. Debate judges routinely accept minimal risks which would be summarily dismissed by business and political leaders. While it has been argued that our leaders should take these risks more seriously, we believe that many judges err in assessing any weight to such speculative arguments. The solution, of course, is to recognize that there is a line beyond which probability is not meaningfully evaluated. We do not believe it is possible to conclude, given current evidence and formats of debate, that a plan might cause a 1 in 10,000 increase in the risk of nuclear conflagration.17 Further, even if it were possible, we need to recognize that at some point a risk becomes so small that it should be ignored. As the Chicago Tribune aptly noted, we routinely dismiss the probability of grave impacts because they are not meaningful: It begins as soon as we awake. Turn on the light, and we risk electrocution; several hundred people are killed each year in accidents involving home wiring or appliances. Start downstairs to put on the coffee, and you're really asking for it; about 7,000 Americans die in home falls each year. Brush your teeth, and you may get cancer from the tap water. And so it. goes throughout the day -- commuting to work, breathing the air, working, having lunch, coming home, indulging in leisure time, going back to bed.18 Just as we ignore these risks in our own lives, we should be willing to ignore minimal risks in debates. Second, we must consider the increment of the risk. All too often, disadvantages claim that the plan will dramatically increase the risk of nuclear war. This might be true, and still not be compelling, if the original risk was itself insignificant. For example, it means Hale to double the probability of nuclear war if the original probability was only 1 in one million. To avoid this temptation, advocates should focus on the initial probability, and not on the marginal doubling of the risk claimed by the negative.

2NC/1NR Extension: Harms 1NC #1: "No Asteroid Extinction"

____Extend the 1NC #1 COLUMBUS DISPATCH 2007 evidence. There is no risk of asteroids causing extinction because we can track them and alter their paths to avoid a major collision.

____And, the government is already tracking asteroids, and none have come within 1 million miles of Earth.

COLUMBUS DISPATCH, 2007
[Mike Lafferty, Staff Writer; "Scientists warn that world needs to keep an eye on asteroids," 2/27, http://www.dispatch.com/live/contentbe/dispatch/2007/02/27/20070227-D4-00.html]

NASA, for example, is about 70 percent of the way through an effort to identify all near-Earth asteroids larger than about one-third of a mile in diameter. So far, 840 potentially dangerous asteroids have been named and charted. Comets also are a concern, but there are so many more asteroids that they get the most attention. The closeness of a "close encounter" is relative. There were close encounters on Feb. 1 and Feb. 7, although both asteroids passed about 1 million miles from Earth, according to spaceweather-.com.

____And, we can use spaceships to tow asteroids away from the Earth.

COLUMBUS DISPATCH, 2007
[Mike Lafferty, Staff Writer; "Scientists warn that world needs to keep an eye on asteroids," 2/27, http://www.dispatch.com/live/contentbe/dispatch/2007/02/27/20070227-D4-00.html]

That is why NASA researchers and others are working to identify potential killer asteroids early, said Edward Lu, of the Johnson Space Center. "It is possible to save the Earth from something like Apophis," he said. Blowing the asteroid up, like in the movie Armageddon, wouldn't work. That would produce even more out-of-control rocks, Lu said. Far better, he thinks, is to send a large probe to rendezvous with the asteroid. By parking near it, the spacecraft could exert enough gravity that its engines could be used to "tow" the asteroid. "You can pull an aircraft carrier with a tiny force if you pull long enough," Lu said. For Apophis, about 2,200 pounds of force constantly applied could shift the asteroid's course half the diameter of the Earth in about 12 days.

2NC/1NR Extension: Harms 1NC #2: "No Disease Extinction"

____Extend the 1NC #2 POSNER 2004 evidence. Diseases can't cause extinction because they will die off before they become too lethal. Any disease that could last long enough to spread to every human would obviously not be very lethal, and any disease that kills quickly would not be able to spread to everyone. Medicine has adapted to be able to stop every major disease.

2NC/1NR Extension: Harms #3: "No Nuclear Extinction"

____Extend the 1NC #3 MANDELBAUM 1998 evidence. Major war that could cause extinction is impossible in the status quo because economic factors and deterrence are preventing it. The only scenario where war is possible is with our disadvantages because these structural checks on conflict would no longer exist in the world of our impacts.

2NC/1NR Extension: Harms 1NC #4: "Ignore Improbable Extinction Scenarios"

____Extend the 1NC #4 HERBECK AND KATSULAS 92 evidence. You should disregard their extinction scenarios if the probability is low because there are thresholds below which risk no longer matters. It's theoretically possible that climbing out of bed in the morning will kill you, but that doesn't mean you should stay in bed all day. The probability of killer viruses, sudden and reasonless war, or asteroid collisions are so low that they should not be factored into your decision. You should prefer our disadvantages, which have reasonable internal links.

1NC Frontline: Solvency (1/3)

1. Turn: Pollution.

a) Human-focused missions inevitably pollute the planet they land on.

MACAULEY, 2007
[Molly, Research Director and Senior Fellow at Resources for the Future, specializing in space economics; "Environmentally Sustainable Human Space Activities: Can Challenges of Planetary Protection be Reconciled?," *Astropolitics,* v.5 n.3]

Human planetary activities introduce new concerns about safeguarding planetary environments. Humans add to bio-burden by way of the additional spacecraft, rovers, telecommunications life-support, and other infrastructure that a journey requires. An accident in which the integrity of spacesuits or other protective gear was to be breached is another source of contamination. Humans involved in long-duration stays may also require that the planetary environment be transformed to make it habitable.20 The Space Studies Board has pointed out: Human missions will inevitably introduce considerations that go beyond those covered by the forward contamination controls and policies discussed in [the Committee's] report, and are likely to include examination of COSPAR policies and questions about minimizing potential contamination that could be introduced through human operations, exploration, construction, sampling, and sequencing of activities. At present, there are no official COSPAR or NASA policies encompassing forward contamination of solar system bodies during human missions.21

b) The inevitability of polluting other planets makes the aff on-face unethical.

MACAULEY, 2007
[Molly, Research Director and Senior Fellow at Resources for the Future, specializing in space economics; "Environmentally Sustainable Human Space Activities: Can Challenges of Planetary Protection be Reconciled?," *Astropolitics,* v.5 n.3]

The first U.S. conference on contamination associated with spacecraft returning to Earth, held in 1964, convened representatives from NASA, the Department of Agriculture, the U.S. Army, the National Institutes of Health, and other government and academic organizations. The conference report emphasized the "moral" responsibility of protection and urged U.S. leadership towards that end.31 In the early 1970s, Sagan called for "ecologically responsible" unmanned planetary protection of celestial bodies.32 Discussion both related to and independent of these policies has occasionally suggested, or even urgently argued, that consideration is given to additional, or perhaps, alternative rationales for planetary protection. For example, Haynes, McKay, and Lupisella raise questions as to the ethics of contaminating the environments of space bodies.33 Lupisella discusses "potentially biologically or ecologically intrusive" missions to Mars and points out that "it is questionable whether and how far humans have the right to interfere with extraterrestrial organisms." He urges that an international discussion, perhaps through auspices of the United Nations, consider these issues. Lupisella notes that "moving away from the Western model of exploitation and colonization could be necessary."34 Haynes wonders whether the philosophic and ethical implications of possible life on Mars call into question the validity of homocentric or geocentric worldviews. He raises the possibility of a new, cosmocentric ethic.35

1NC Frontline: Solvency (2/3)

2. Traveling and colonizing will take millions of years.

PRANTZOS, 2000
[Nikos, nuclear astrophysicist in the Institut d'Astrophysique de Paris, *Our Cosmic Future*, p. 84]

Another important question is raised by the discussion in the last section, for reasons which will become clear in the rest of this chapter. If the human species ever masters the art of interstellar travel, either slow or rapid, how long will it take to expand across the whole Galaxy and settle in even the most distant regions? It is clearly difficult to give a reasonable answer to this question. A lower limit is imposed by the size of the Galaxy, which measures almost a hundred thousand light-years in diameter (see Fig. z.z) . Even using relativistic vehicles, cruising at nearly the speed of light, hundreds of thousands of years would be needed just to cross the Milky Way. In slow-moving world ships, with speeds of a few thousandths the speed of light, the time required to cross the Galaxy becomes hundreds of times greater again, of the order of ten million years. The time required to colonise would clearly be greater still.

3. The U.S. doesn't have the scientific or political willpower to successfully plan a colonization mission.

ROGERS, 2006
[Thomas, The Sophron Foundation , "Magnifying our world: Why we must extend civilization to the Moon" *Space Policy*; v. 22]

When it comes to imagining how to proceed with the kind of space exploration activity involving the Moon outlined here, the most important thing to appreciate is that neither NASA nor the USA in general is at all presently prepared to undertake such a programme (nor are other countries). The creation of a new Earth-related lunar civilization requires that brainpower, experiences and skills which do not exist in NASA all be involved in space-related studies and activities. The expertise required to conduct the requisite pioneering 'exploration' research includes purposeful political science, foreign affairs, economics, anthropology, history, law and sociology. None of these is in great evidence in current civil space ventures. Most space professionals and businesspeople are primarily concerned with the next experiment's approval or conduct, or the next launch, or the next budget hearing—5 years ahead is a long time, and 10–15 years almost 'off the charts'.

1NC Frontline: Solvency (3/3)

4. Mars is too cold for humans to colonize.

BELL, 2005
[Jeffrey, former NASA engineer and space scientist, "The Dream Palace Of The Space Cadets", *Space Daily*, 2011/24, http://www.spacedaily.com/news/oped-05zzb.html]

Unfortunately, the new generation of organizations like the Space Frontier Foundation and the Mars Society and even the staid National Space Society mostly lack something that the old L-5 Society and Space Studies Institute had: technical sophistication. Just look at Bob Zubrin's vision of Mars colonization. Nowhere in Zubrin's books is there the kind of detailed engineering design for Mars colonies that the O'Neillians produced for their L-5 colonies. The problems of sustaining human life on Mars are dismissed after superficial discussions devoid of any hard numbers. And there are obvious problems with colonizing Mars. The first one is that it gets incredibly cold there - probably down to -130C on winter nights. Every robot Mars probe has used small slugs of Pu-238 to keep its batteries from freezing at night. And there is air on Mars - not enough to breathe, but enough to conduct heat. The Martian regolith will not be the perfect insulator that the Moon's is. Thermal control on Mars will not be simply a matter of adding layers of aluminum foil to reflect the sun. Bases and rovers will need to be insulated and heated. And how do you keep a human in a spacesuit warm in this climate? And Mars has permafrost - at least in some places and those places are the ones to colonize. How do we keep the heat leaking out from our habitat or farm greenhouse into the ground from heating up the ice and melting or subliming it away? This is a severe problem in permafrost areas of the Earth - how bad will it be on Mars? Zubrin even proposes underground habitats. There will be indirect contact with the cold subsoil or bedrock which will suck heat out at a rapid rate.

2NC/1NR Extension: Solvency 1NC #1: "Pollute Other Planets" (1/2)

____Extend the 1NC #1 MACAULEY 2007 evidence, the Pollution turn. The plan would create massive pollution on other planets because colonization missions would not take environmental protection into account. This is unethical because it disturbs the habitats of non-human landforms and species, and is a reason to reject the Affirmative.

____And the link is guaranteed: Colonization missions will not take planetary conservation into account.

MACAULEY, 2007
[Molly, Research Director and Senior Fellow at Resources for the Future, specializing in space economics; "Environmentally Sustainable Human Space Activities: Can Challenges of Planetary Protection be Reconciled?," *Astropolitics,* v.5 n.3]

This article argues that ultimately, achieving balance in efforts to protect planets and other bodies will depend irrefutably on the goals of spacefaring nations. To take an extreme example discussed later in the article, suppose the goal is to settle other planets for the purpose of ensuring perpetuation of the human species in the expectation of a widespread terrestrial pandemic.6 In this case, safeguarding other planets to protect the scientific integrity of our search for life there—at present, the rationale for most planetary protection activities—will probably weigh very little if at all in the public mind. Instead, in such an extreme situation, a push to settle space could become quite popular, paced by the expected temporal proximity of the catastrophe with little regard for much else.

____And lunar pollution from initial colonization missions will destroy the Moon, turning the case.

HOEKZEMA, 2004
[Nick, Max Planck Institute for Aeronomy, "An Atmosphere for the Moon," Last modified: 6/29, http://www.mps.mpg.de/homes/hoekzema/katman/nick/work/moonat.htm]

It is possible that within one century Lunar based industries will dump much gas into the lunar environment. The oxygen output from a substantial mining industry could exceed 109--1010 kg per year. If a fusion industry becomes important, the output from a 32He mining industry could add up to 1010--1011 kg of hydrogen and helium, and 108--109 kg of heavier elements (mostly oxygen, carbon, nitrogen, and neon). Helium and hydrogen will readily escape into space; the gravitational force of the Moon being much too feeble to hold on to such light atoms. The heavier elements will stick to the Moon much longer. At present, particles reside only for very short periods of time in the extremely thin lunar atmosphere because they all interact with the solar wind within a few weeks. A less thin atmosphere could deflect the solar wind, its upper layers protecting the deeper layers from interactions; this would greatly enlarge the stability of the atmosphere. NASA scientist Richard Vondrak calculated that during a year only about 108 kg of atmospheric mass can be carried away by solar wind interactions. There is no other atmospheric loss mechanism that is important on a time-scale of years for gases heavier than helium; dumping 109 kg or more of heavy gases into the lunar environment will thus create a rapidly thickening atmosphere. If the

[This evidence continues on the next page, with no text deleted…]

2NC/1NR Extension: Solvency 1NC #1: "Pollute Other Planets" (2/2)

[The Hoekzema evidence continues with no text deleted…]

formation of a lunar atmosphere is unwanted, precautions must be taken. The undesirable furnaces could be placed in space, and heavy excess gases could be injected into the Moons crust, where they can react chemically and bind to the soil. If on the other hand the formation of an even thicker atmosphere is desired, a few nuclear bombs could be used to evaporate lunar rocks, which would free most of the oxygen in them. One percent of the US nuclear stockpile could set free as much as 1011 kg of oxygen. A 1011 kg Lunar Atmosphere • Will mainly consist of O2, but may contain important fractions of N2, CO2, and Ne if partly induced by 32He mining. • Will be partly ionized, even near the surface. • Will be stable for hundreds of years • Will have surface pressure about 10-2 Pa (=10-7 Atm), comparable to Earths atmosphere at an altitude of 100 km. • Will stop all micro meteorites, and most larger ones as well. • Will deflect the solar wind, stop almost all cosmic ray particles and roentgen photons, and will thus strongly reduce the radiation level at the Moons surface (now in the order of 10 REM/year, limit for nuclear workers is 5 REM/year) • Will stop deposition of 32He into the lunar surface. Deposition is a slow process and stopping it will only cause significant effects after thousands of years. • Apart from some aurora, it will be completely invisible to the naked eye. A Speculative Scenario: Relocating Ice-Dwarfs James Oberg: "Go to the outer solar system, get a small ice-dwarf and dump it onto the Moon. This will create a thick and moist atmosphere, from which the Moon can be truly Terra-formed." Of course this idea is pretty far over the top for the moment, but is it impossible? If so, why? Is it possible to move around ice-dwarfs with the techniques of the foreseeable future? To set the dimensions of this problem: could humanity ship Mount Everest to Latin America, or could it dump 10% of the Antarctic ice-cap onto the Sahara? Such would be difficult projects, but once properly motivated humans can achieve great enterprises. E.g., near the closing of the last century people discovered gold in a small mountain range somewhere in Southern Africa; within a few years the whole range was shoveled away and all that remained was a tremendously large hole. If a few thousand people can displace several cubic kilometers with not much more than shovels and their bare hands, one may expect that the organized power of Caterpillar, Boskalis, and Smit-Tak could move mildly larger objects like Mount Everest and major parts of the Antarctic ice-cap. But could such undertakings be performed in space? Not right now: of course not. However, if several trillion dollars were already spent on creating large space-based industries, the answer would be different. Of course it would be costly, and it could well take a hundred years or so to transfer the ice-dwarf, but with heavy industries already in space the mission wouldn't really be difficult, not even with present day technology. Chemistry of the Lunar Soil Is it wise to impact an ice-dwarf onto the Moon? I doubt it. A lunar oxygen atmosphere can exist for many centuries, but only if it is very thin and in the absence of water. What if this atmosphere were moist and oxygen rich? The upper few kilometers of the lunar surface contain several times 1018 kg of iron(II) which in the presence of water would readily react with oxygen to form iron(III). Such an amount of iron(II) could easily absorb all of the oxygen in the Earth atmosphere. A large fraction of the Moons crust consists of oxides of calcium, magnesium, and iron(II), which in the presence of water would react to form hydroxides that would (partly) dissolve in the forming seas to create a poisonously alkaline fluid, with pH 10--11. If enough oxygen were available to oxidize the dissolved iron(II)hydroxides, insoluble iron(III)hydroxides would precipitate on the sea floors and shores, creating vast quantities of slightly poisonous, orange mud. Such reactions would be violent and fast in the upper part of the crust, but their rate would decrease with increasing depth. The oxidizing, hydration, and other processes would continue for ages. In the meantime oxygen and other pressures would not be stable. Most of important all: the absorption of such enormous amounts of oxygen, water, by the upper part of the crust of the Moon would make the rocks expand by perhaps as much as ten percent or more. One can wonder if such expansion would be a tranquil process. It could create strong quakes for possibly many thousands of years.

2NC/1NR Extension: Solvency 1NC #2: "Takes Millions of Years"

____Extend the 1NC #2 PRANTZOS 2000 evidence. The Aff's timeframe is millions of years because that's how long it takes to transport people to new planets and develop sustainable colonies. Simply setting up a village on Mars isn't enough to solve their Harms because they have to make the human race sustainable in space, and this requires millions of people with industries and life-supports.

____Any colonization mission will require combining the human space travel power of the U.S. with the space robotics of Europe, but this cooperation takes decades to develop.

CASINI, 2006
[Silvano, Former Administrator, Italian Space Agency, "Dealing with the international implications of space exploration" *Space Policy*; v. 23]

As far as I know, the USA is the only country to have a manned space exploration policy, with a budget and a programme, the Moon being the first target. Other spacefaring countries have, or are defining, programmes based first on robotic explorations and later on human missions. This is, for instance, the case of ESA's Aurora programme, Mars being its first robotic target. The two situations are therefore not in step. This fact, by itself, introduces quite a degree of complexity: how do we match, between now and 2020, the American effort to assure the return of human beings to the Moon, and the European investments in robotic missions to study and understand the martian environment? It is certainly possible to square such a circle, given an appropriate sharing of responsibilities and the related returns from investments, and an adequate time basis. But only on a broad time basis will it be possible to blend US interests and needs (Moon first, Mars and other celestial bodies later) with those of Europe, not to mention those of China, India, Japan and Russia.

____The long timeframe for colonization adds geopolitical complexities that doom solvency.

CASINI, 2006
[Silvano, Former Administrator, Italian Space Agency, "Dealing with the international implications of space exploration" *Space Policy*; v. 23]

Unfortunately, if one considers an extended period of time, let's say up to 2035, other factors intervene to add complexity. Let me take Europe as an example. What will Europe be in 30 years from now: which constitution? Which member states? Which geopolitical posture? And therefore, which strategic and economic interests as far as space exploration is concerned? I believe that what I have just said about Europe is also applicable to some other countries. In such a moving scenario, how can a single country be expected to select and fix its targets and role in a global endeavour now? Moreover, aside from these geopolitical aspects, the considered period of time (extending well into the second half of the 21st century, to assure a true colonization of theMoon and Mars) will cover many and very different facets of the space exploration programme. For instance, the exploitation phases will be different from the exploration ones, in terms of industrial and commercial actors, and of applied technologies. Even the role of governments may therefore be different in those different situations. This means that bilateral or multilateral cooperative structures, within the global endeavour, might have to be periodically readjusted.

2NC/1NR Extension: Solvency 1NC #3: "Lack Knowledge and Will to Colonize"

____Extend the 1NC #3 ROGERS 2006 evidence. The U.S. doesn't have the industrial capacity to develop colonies in space because we can't manufacture the right technology. There is no scientific or political will to invest in the industries that would be crucial to colonize, which means the plan never gets implemented effectively.

____The U.S. industrial base can't support new space missions, and civilian investment is too low to reform.

PACE, 2009
[Scott, Space Policy Institute, George Washington University, "Challenges to US space sustainability" *Space Policy*; v. 25]

Underlying erosion of the space industrial base has further exacerbated the problems of cost growth and weak innovation. I am chagrined to recall that I helped write a report on the state of the US space industrial base for the National Space Council in 1992 and the concerns expressed then have only become more severe. With limited technology spending in the civil and military sectors, increasing reliance on global supply chains, and export controls that limit the size of addressable markets for space technologies, we should not be surprised by evaporation of the US space industrial base from the bottom up. Recent concern about counterfeit parts coming into the aerospace supply chain is just one more symptom of trends that the current economic turmoil will only worsen.

____The launch capacity doesn't exist to colonize other planets.

PRANTZOS, 2000
[Nikos, nuclear astrophysicist in the Institut d'Astrophysique de Paris, *Our Cosmic Future*, p. 84]

Not only science fiction readers, but also quite a few scientists are dreaming of ways to bring life to other planets in the Solar System, and in particular to Mars. Their motivation is certainly not a solution to overpopulation problems on Earth. Even though Mars has an area equal to all the land area on Earth, it would be impossible to transport any significant fraction of the population. In order to send a hundred million people (which constitutes a negligible fraction of the present population) , in let us say one century, three thousand departures would have to be organised each day. Therefore, the fascination for terraforming Mars is more closely related to the new frontier it represents. Conquest of such a frontier would help our civilisation to release its creative potential and find new vitality. Some have compared the situation with the American frontier, several centuries ago.

2NC/1NR Extension: Solvency 1NC #4: "Mars Can't Be Colonized"

____Extend the 1NC #5 BELL 2005 evidence. Mars can't be colonized because it's too cold. As the closest planet to Earth, Mars would have to be a test case for colonization, but humans can't survive in colonies there due to massive heat loss and freezing temperatures.

____Getting to Mars is impossible because of distance and radiation.

WILLIAMS, 2010
[Lynda, physics faculty member at Santa Rose Junior College, "Irrational Dreams of Space Colonization", *Peace Review: A Journal of Social Justice*, v. 22, n. 1, Spring]

A moon base is envisioned as serving as a launch pad for Martian expeditions, so the infeasibility of a lunar base may prohibit trips to Mars, unless they are launched directly from Earth or via an orbiting space station. Mars is, in its closest approach, 36 million miles from Earth and would require a nine-month journey with astronauts exposed to deadly solar cosmic rays. Providing sufficient shielding would require a spacecraft that weighs so much that it becomes prohibitive to carry enough fuel for a roundtrip. Either the astronauts get exposed to lethal doses on a roundtrip, or they make a safe one-way journey and never return. Regardless, it is unlikely that anyone would survive a trip to Mars. Whether or not people are willing to make that sacrifice for the sake of scientific exploration, human missions to Mars do not guarantee the survival of the species, but rather, only the death of any member who attempts the journey.

____Colonizing planets will take thousands of years and evolutions in technology.

ROBERTSON, 2006
[Donald, freelance journalist writing for Space.com, "Space Exploration," 3/06, http://www.space.com/spacenews/archive06/RobertsonOpEd_030606.html]

Two largely unquestioned assumptions long ago took root within the space community. As we prepare to voyage back to Earth's Moon and on to Mars, it is time to question them both. The first assumption is that exploring the Moon, Mars, or any part of the solar system, can be accomplished in a generation or two and with limited loss of life. The second is that we can use robots to successfully understand another world. Both assumptions are almost certainly wrong, yet many important elements of our civil space program are based on one or both of them being correct. To paraphrase Douglas Adams, even within the space community most people don't have a clue how "mind-boggingly big space really is." Most of the major worlds in the solar system have surface areas at least as large as terrestrial continents -- a few are much larger -- and every one of them is unremittingly hostile to human life. Learning to travel confidently through former President John F. Kennedy's "this new ocean" will be difficult, expensive, time-consuming and dangerous. Mr. Kennedy's rhetoric was more accurate than he probably knew. The only remotely comparable task humanity has faced was learning to travel across our world's oceans. We take trans-oceanic travel for granted, but getting from Neolithic boats to modern freighters cost humanity well over 10,000 years of hard work and uncounted lives. Even today, hundreds of people die in shipping accidents every year. We and our woefully inadequate chemical rockets are like Stone Age tribesfolk preparing to cast off in canoes, reaching for barely visible islands over a freezing, storm-tossed, North Atlantic.

China Cooperation Affirmative – Table of Contents

Background Notes: China Cooperation Affirmative

Anti-Satellite Weapon (ASAT): Any weapon used to destroy a satellite can be considered an anti-satellite weapon. The United States used a missile to destroy one of its own malfunctioning satellites in 2008, arguing that it needed to blow the satellite up to prevent it from losing control and falling over a city. In 2007, China destroyed a weather satellite in order to test their Anti-Satellite capabilities.

Navigation Satellite: Navigation satellites are used to pinpoint locations on Earth in order to guide human transportation. Currently, there are two primary navigation satellite "constellations" (a constellation is a group of satellites that work together for one purpose):

a) Global Positioning System (GPS): GPS is a navigation system developed by the United States, and used for both civilian and military navigation purposes. The same GPS satellites that you use for Google Maps are also used to tell U.S. missiles where their targets are.

b) Galileo: The European Union and the European Space Agency are cooperating with a few other countries, including China, to deploy their own navigation system called Galileo. While it will primarily be used for civilian projects, some are worried that this will lead to further European military programs.

Aerospace Industry: Aerospace is a broad term that includes most companies and government agencies involved in designing and building space-related technologies. This includes defense contractors, satellite manufacturers, computer companies, and many others.

Export Controls: The government has as interest in preventing valuable military technologies from being sold to other countries because it doesn't want those technologies being used to give someone else a military advantage. It is difficult to enforce this, however, because almost every technology can be used for both peaceful and military programs (this is called being a "dual-use" technology). To try to figure out which technologies are actually peaceful, the United States enforces a sorting system for every company that exports its products to other countries. Companies must apply for licenses where the government inspects the product and determines if it is safe to export, and then either allows the company to sell it or denies the license. For some background on export controls, the government has set up a "Frequently Asked Questions" website: http://www.bis.doc.gov/licensing/exportingbasics.htm

China Cooperation 1AC (1/14)

Contention 1 is Inherency: The United States is not cooperating with China on space policy.

A. Official U.S. policy is not to engage in bilateral space negotiations with China, even though China has attempted to cooperate on satellite construction.

SADEH, 2010
[Eligar, Astroconsulting International LLC, "Report: United States-China Space Dialogue Project," *Astropolitics,* v.8 n.1]

Other constraints on multilateral approaches deal with the commitment to such cooperation. Official U.S. national space policy, issued by the Bush administration in 2006, states that the United States will not engage in any new multilateral agreements on space. The perception is that multilateral agreements limit U.S. options in space, impacting operational flexibility. Yet, the Obama administration is in the process of reviewing national space policy, and there are indications that the current administration will endorse multilateral efforts directed at space governance, though this does not imply an endorsement of UN Conference on Disarmament efforts directed at Prevention of an Arms Race in Outer Space, which are led by China and Russia. Very often, multilateral space cooperation is based on "soft" policy and law to establish new norms of behavior. Thus, the commitments made by states are voluntary and do not carry the formal force of law. This allows states to deviate from agreements when national interests conflict. The Chinese present at the third workshop suggested the need for strategic dialogue on space. The second workshop pointed to the fact that China, as the inferior power, desires some strategic indication from U.S. leadership on the willingness to cooperate, or at least dialogue on meaningful cooperation. For defensive and military uses of space, there is clear intent on the part of China with indigenous program development in position, navigation, and timing (PNT) systems; telecommunications by communication satellite; intelligence, surveillance, and reconnaissance (ISR) systems; and international collaboration with similar system developments in Russia and Europe.3

China Cooperation 1AC (2/14)

Contention 2 is the Harms.

Scenario 1: Failure to cooperate with China will lead to a collapse in bilateral relations and war.

A. Obama has not engaged China on a specific project, and this is preventing us from working together as partners in space.

KULACKI, 2010
[Dr. Gregory, Senior Analyst & China Program Manager at Union of Concerned Scientists, "Potential for Cooperation with China" Presented at *Moving Ahead on Space Security,* 12/15]

The Obama administration seems reluctant to engage China on large or high profile projects in space. It strongly prefers to take small, incremental steps toward cooperation in space, as well as toward discussion of space security. Unfortunately, the Chinese leadership is unlikely to provide any incentives for its space professionals to engage the United States on such incremental steps. With nothing significant at stake, no one in China's space sector is likely to assign a high priority to these incremental efforts at engagement. Consequently, the Obama administration's overtures are passed down to the officials in China's space bureaucracy assigned to interact with foreign entities, who are often the least powerful, least informed, and most risk-averse individuals in the Chinese space sector. Thus, to be successful U.S. efforts to engage China on cooperation in space need a specific task or project, somewhere to go together or something to do together. This project needs to be significant enough for the senior Chinese leadership to interrupt the trajectory of China's current space agenda and direct China's space planners to accommodate it.

B. Space policy is the single most important issue in the alliance. Continued unilateral actions by the United States will push China toward aggressive responses.

HITCHENS AND CHEN, 2008
[Therese, Center for Defense Information, World Security Institute; David, CENTRA Technology, Inc; "Forging a Sino-US "grand bargain" in space," *Space Policy;* v. 24]

The relationship between the USA and China will remain a complex one and perhaps the world's most important bilateral relationship in the 21st century. The issue of space security, while only one of many issues of contention, is a high-stakes one that can either stabilize or further destabilize the relationship. A code of conduct establishing clear boundaries delineating the behaviors of responsible stakeholders in space would be an important step toward improving Sino-US ties. By using a two-pronged approach of mitigating US space systems' vulnerability, and negotiating Chinese acceptance of a space code of conduct using incentives like joint space missions and commercial space policy reform, the next president could open a window to avoid an incipient space race with China. Managing such a feat would not only serve peace and stability on Earth and in the heavens, but also it would make a fitting legacy to Nixon's opening of China.

China Cooperation 1AC (3/14)

C. China's recent testing of anti-satellite weapons proves they are responding to U.S. unilateral space policies with military modernization. If the U.S. doesn't engage China now, cooperation will become impossible in the future.

HAGT, 2007

[Eric, director of the China Program at the World Security Institute, "China's anti-satellite weapon Test: Strategic Response" *China Security*; Winter; http://www.wsichina.org/cs5_3.pdf]

Even if we are facing the worst case scenario and China is bent on space weaponization (entirely inconsistent with its past behavior), the reality remains that China can be brought to the negotiating table with appropriate measures and international pressure. After all, China clearly remains the far weaker space power vis-à-vis the United States and a space race would be proportionately far more costly to China than the United States. But in order for progress to be made, the United States also needs to come to terms with a new reality. China's anti-satellite weapon test was a voice of opposition both to the structure of security in space and the U.S. pursuit of military dominance in space at the exclusion of others. And thus, it is actually America's response to the anti-satellite weapon test that may be even more important in how the future of space security plays out. China probably has both the technological and financial means to compete with the United States in space over the long term. If the United States concludes it must meet a threat with more threat, it may invite a military race in outer space and China may just give it to them. If the United States can muster the political will and leadership to restrain its reaction, there is still hope. But flexibility and sacrifice will be essential.

China Cooperation 1AC (4/14)

D. Aggressive military space policies will start a spiral of suspicion that makes accidental war inevitable.

HITCHENS AND CHEN, 2008
[Therese, Center for Defense Information, World Security Institute; David, CENTRA Technology, Inc; "Forging a Sino-US "grand bargain" in space," *Space Policy;* v. 24]

The logic of China's investment in counter-space operations follows from what it sees as a regional security environment that, in the foreseeable future, will be dominated by an asymmetric balance of power vis-a` -vis the USA. Unless altered by domestic political will from the highest echelons of leadership, anti-satellite technologies will probably remain a part of its larger access denial strategy against the USA. Add to that a bilateral relationship peppered with crisis incidents, and often fueled by mutual misunderstanding, and the potential for a crisis situation to spiral out of control should give pause to any responsible leader. Since the Reagan era, US interest in on-orbit and anti-satellite weapons has stemmed from three intertwining strategic concerns: the threat of ballistic missile strike, protecting the space systems upon which the US military depends, and preventing an adversary from using space in the same way as the US military does to enhance its conventional military prowess. After President Reagan announced the Strategic Defense Initiative in the 1980s, "China began a program to modernize its strategic missile forces because of doubts about the survivability of its small nuclear deterrent" [5]. The Pentagon notes that the Chinese Navy is developing the necessary technologies to field a nuclear submarine fleet, a key to increasing the survivability of China's nuclear deterrent in the face of a second-strike-nullifying ballistic missile shield [6]. The current US strategic policy of "space dominance" aims at ensuring US freedom of action in space, as well as the ability to deny the use of space to adversaries [7]. China, with some good reason, sees itself as particularly vulnerable to such space doctrine, and in response may feel compelled to develop countervailing measures, in order to counteract the proscriptions of US policy. The USA cannot reasonably be expected to abandon its space capabilities, but a more constructive modus vivendi can surely be found by demonstrating that both the USA and China are "responsible stakeholders" in the realm of space.

E. This risk is magnified by the lack of dialogue over space issues between the two countries, which makes it more difficult to pull back from the brink.

SADEH, 2010
[Eligar, Astroconsulting International LLC, "Report: United States-China Space Dialogue Project," *Astropolitics,* v.8 n.1]

The potential of future conflict in the space domain is heightened for the United States by the lack of clarity about the intent of the Chinese approach to space, and by the writings of Chinese military commentators arguing that China create asymmetrical capabilities to degrade U.S. space assets in the event of military confrontation. The United States expressed on several occasions concern about the direction of Chinese space policy and activities, but there exists no official channel of communication between the United States and China on the subject of space. As space technology continues to develop at a rapid pace in China, and as the United States grows ever more dependent on space for warfighting and national security, dialogue is essential to understand political implications and to reduce the likelihood of conflict in space. The consequences of conflict not only threaten military, civil, and commercial space capabilities of the United States and China, but also capabilities of all spacefaring states with global repercussions.

China Cooperation 1AC (5/14)

F. U.S./China war draws in every great power and goes nuclear, causing extinction.

STRAITS TIMES, 2000
["Regional Fallout: No One Gains in War Over Taiwan," 6/25, lexis-nexis]

THE high-intensity scenario postulates a cross-strait war escalating into a full-scale war between the US and China. If Washington were to conclude that splitting China would better serve its national interests, then a full-scale war becomes unavoidable. Conflict on such a scale would embroil other countries far and near and -- horror of horrors -- raise the possibility of a nuclear war. Beijing has already told the US and Japan privately that it considers any country providing bases and logistics support to any US forces attacking China as belligerent parties open to its retaliation. In the region, this means South Korea, Japan, the Philippines and, to a lesser extent, Singapore. If China were to retaliate, east Asia will be set on fire. And the conflagration may not end there as opportunistic powers elsewhere may try to overturn the existing world order. With the US distracted, Russia may seek to redefine Europe's political landscape. The balance of power in the Middle East may be similarly upset by the likes of Iraq. In south Asia, hostilities between India and Pakistan, each armed with its own nuclear arsenal, could enter a new and dangerous phase. Will a full-scale Sino-US war lead to a nuclear war? According to General Matthew Ridgeway, commander of the US Eighth Army which fought against the Chinese in the Korean War, the US had at the time thought of using nuclear weapons against China to save the US from military defeat. In his book The Korean War, a personal account of the military and political aspects of the conflict and its implications on future US foreign policy, Gen Ridgeway said that US was confronted with two choices in Korea -- truce or a broadened war, which could have led to the use of nuclear weapons. If the US had to resort to nuclear weaponry to defeat China long before the latter acquired a similar capability, there is little hope of winning a war against China 50 years later, short of using nuclear weapons. The US estimates that China possesses about 20 nuclear warheads that can destroy major American cities. Beijing also seems prepared to go for the nuclear option. A Chinese military officer disclosed recently that Beijing was considering a review of its "non first use" principle regarding nuclear weapons. Major-General Pan Zhangqiang, president of the military-funded Institute for Strategic Studies, told a gathering at the Woodrow Wilson International Centre for Scholars in Washington that although the government still abided by that principle, there were strong pressures from the military to drop it. He said military leaders considered the use of nuclear weapons mandatory if the country risked dismemberment as a result of foreign intervention. Gen Ridgeway said that should that come to pass, we would see the destruction of civilisation. There would be no victors in such a war. While the prospect of a nuclear Armaggedon over Taiwan might seem inconceivable, it cannot be ruled out entirely, for China puts sovereignty above everything else.

China Cooperation 1AC (6/14)

Scenario 2: Cooperation on satellite development is necessary to boost the United States' aerospace industry and overall economy.

A. Other countries are out-investing the U.S. in space, and our competitive lead on satellites is eroding.

WASHINGTON POST, 2008
[Marc Kaufman, Staff Writer; "US Finds It's Getting Crowded Out There:," 7/09, http://www.globalpolicy.org/component/content/article/152/25824.html]

Although the United States remains dominant in most space-related fields -- and owns half the military satellites currently orbiting Earth -- experts say the nation's superiority is diminishing, and many other nations are expanding their civilian and commercial space capabilities at a far faster pace. "We spent many tens of billions of dollars during the Apollo era to purchase a commanding lead in space over all nations on Earth," said NASA Administrator Michael D. Griffin, who said his agency's budget is down by 20 percent in inflation-adjusted terms since 1992. "We've been living off the fruit of that purchase for 40 years and have not . . . chosen to invest at a level that would preserve that commanding lead." In a recent in-depth study of international space competitiveness, the technology consulting firm Futron of Bethesda found that the globalizing of space is unfolding more broadly and quickly than most Americans realize. "Systemic and competitive forces threaten U.S. space leadership," company president Joseph Fuller Jr. concluded. Six separate nations and the European Space Agency are now capable of sending sophisticated satellites and spacecraft into orbit -- and more are on the way. New rockets, satellites and spacecraft are being planned to carry Chinese, Russian, European and Indian astronauts to the moon, to turn Israel into a center for launching minuscule "nanosatellites," and to allow Japan and the Europeans to explore the solar system and beyond with unmanned probes as sophisticated as NASA's.

China Cooperation 1AC (7/14)

B. Specifically, refusing to share satellite technology with China through executive export controls is impeding domestic industry growth while allowing Chinese industries to grow unchecked.

MOLTZ, 2011

[Dr. James Clay, Associate Professor and Academic Associate for Security Studies at Naval Postgraduate School, "China's Space Technology: International Dynamics and Implications for the United States," Testimony for the hearing of the U.S.-China Economic and Security Review Commission on: "The Implications of China's Military and Civil Space Programs," 5/11]

Supporters of the current freeze in U.S.-Chinese space relations argue that Washington is sending a signal to Beijing about its deplorable human rights record and is also limiting China's ability to develop advanced space systems. Unfortunately, while well-intended, current U.S. policy is ineffective sends a weak and off-target signal. Unless the United States is also willing to halt U.S. investment in Chinese manufacturing, cut off Chinese access to the U.S. export market, and find a new client for U.S. debt, holding space cooperation hostage will have no significant impact on China, except pushing it to cooperate with others. In addition, it puts the United States in the odd position of promoting "protectionism" in space and adopting a "defensive" strategy, when opening markets and reducing U.S. export barriers instead would strengthen the U.S. space industry and promote American security through greater engagement with the region. Efforts to keep China off of the International Space Station (ISS), for example, have only strengthened China's resolve to build its own space stations. Former NASA Administrator Michael Griffin, notably, argues that failing to work with China may cause the United States to be left behind in new international missions, particularly given the fact that current NASA funding will not sustain a unilateral return mission to the Moon, much less continue shouldering of the lion's share of the ISS budget. A step-by-step process to begin space science cooperation and (if successful) allow gradual Chinese participation on the ISS (first via joint research, then a taikonaut visit, then a possible module) would make more sense: reducing U.S. costs and increasing U.S. knowledge about Chinese space activities.

China Cooperation 1AC (8/14)

C. Satellite export controls have encouraged China to seek partnerships with European companies, locking the U.S. out of lucrative contracts. This is destroying the U.S. aerospace industry.

HITCHENS AND CHEN, 2008
[Therese, Center for Defense Information, World Security Institute; David, CENTRA Technology, Inc; "Forging a Sino-US "grand bargain" in space," *Space Policy;* v. 24]

After the 1998 Strom Thurmond Defense Authorization Act imposed restrictions on the export of commercial satellites and related technologies under the State Department's Munitions List and the International Traffic in Arms Regulations (ITAR), Beijing considered such policies as primarily an effort to contain China's rise as a space power and to prevent its space industry from competing with US industry on the international market. The congressional rationale for the move was, and remains, concern about the transfer of space technology that could be used by the Chinese to improve their intercontinental ballistic missiles, even though technology migration has traditionally gone the other way around, from ballistic missiles to space launch vehicles. Whatever the motivation, the immediate effect of the export control shift was to all but close the Western satellite and launch market to China and vice versa, since US export law extends to all space systems that use US parts. US export laws may have slowed, but have demonstrably failed to "contain" China's progressive development of space launch and satellite technology. They have also failed to prevent—and some argue have instead provoked— Sino-European cooperation in space, leading to the growth of an "ITAR-free" business model in both Europe and China, to the detriment of the US space industry. As noted by a recent report by the Center for Strategic and International Studies, "Not only have these requirements harmed our domestic technological and manufacturing base, but they have had a drastic negative effect on both the hard and soft power utilization of space" [11]. Further, the commercial satellite industry has long advocated the exemption of certain technologies from the list, arguing that these technologies are already available off-the-shelf. It seems that US government officials are finally listening, as the Pentagon's Defense Technology Security Administration and the National Security Space Office are working to review satellite components with an eye to removing at least some of them from the Munitions List [12]. Thus, the cost of ITAR reform, with regard to commercial space, is in reality likely to be much less than some fear, and may be necessary for maintaining the viability of the US satellite industry.

China Cooperation 1AC (9/14)

D. The U.S. aerospace industry is vital to the economy; it has high-paying jobs, and creates spillover innovation.

HERNSTADT, 2008
[Owen, Associate General Counsel of International Associations of Machinists and Aerospace Workers; "Offsets and the lack of a Comprehensive U.S. Policy," Economic Policy Insitute Briefing Paper #201 4/14, http://www.sharedprosperity.org/bp201.html]

Aerospace is an especially important industry for a nation's economic and physical security, and perhaps no other country has benefited more from the aerospace industry than the United States.9 The Final Report of the Commission on the Future of the United States Aerospace Industry states that the industry "contributes over 15 percent to our Gross Domestic Product and supports over 15 million high quality American jobs" (Aerospace Industry Commission 2002, 1-2). U.S. aerospace has been identified as a major source of "technical innovation with substantial spillovers to other industrial and commercial sectors" and "high-wage employment, which spreads the benefits of rising productivity throughout the U.S. economy...." The Aerospace Commission also noted the industry's contribution to the nation's "economic growth, quality of life, and scientific achievements...." (Aerospace Industry Commission 2002, 1-2). Despite the importance of aerospace, the deterioration of the industry at home has continued at a dramatic rate. Nearly 500,000 jobs have been lost in the U.S. aerospace industry since 1990 (Aerospace Industry Commission 2002, 8-12; see also AIA 2007), and several hundred thousand more workers have lost their jobs in related industries. Sadly, the fact of these enormous job losses comes as no surprise. More than 10 years ago, in Jobs on the Wing, authors Randy Barber and Robert Scott predicted that "up to 469,000" jobs in the aerospace and related industries "could be eliminated by 2013 because of offset policies and increased foreign competition" (Barber and Scott 1995, 2). In a later study, Scott predicted that by 2013 the industry would suffer a loss of over 25% "of the total jobs in aircraft production in 1995" (Scott 1998). These gloomy predictions are apparently reinforced by U.S. government reports. According to the Department of Labor, the outlook for employment in the U.S. aerospace industry is not rosy: between 2002 and 2012 aerospace employment in the United States will "decrease by 18 percent" (U.S. Department of Labor 2004). The future health of the industry depends in large part on its ability to attract new workers, but the crisis in employment and the prediction that the crisis will deepen does not bode well for attracting new workers. In its final report, the Aerospace Commission summarized this concern: The U.S. aerospace sector, once the employer of choice for the "best and brightest" technically trained workers, now finds it presents a negative image to potential employees. Surveys indicate a feeling of disillusionment about the aerospace industry among its personnel, whether they are production/technical workers, scientists or engineers. The majority of newly dislocated workers say they will not return to aerospace. In a recent survey of nearly 500 U.S. aerospace engineers, managers, production workers, and technical specialists, 80 percent of respondents said they would not recommend aerospace careers to their children. (Aerospace Industries Commission 2002, 8-5) While the Aerospace Commission found that "U.S. policy toward domestic aerospace employment must reaffirm the goal of stabilizing and increasing the number of good and decent jobs in the industry," this policy has yet to be embraced, let alone implemented (Aerospace Industries Commission 2002, 8-12).

China Cooperation 1AC (10/14)

E. Economic collapse causes global instability and war.

AUSLIN AND LACHMAN, 2009
[Michael, resident scholar at the American Enterprise Institute; and Desmond, resident fellow at the American Enterprise Institute; "The Global Economy Unravels," 3/06, http://aei.org/publications/pubID.29502,filter.all/pub_detail.asp]

What do these trends mean in the short and medium term? The Great Depression showed how social and global chaos followed hard on economic collapse. The mere fact that parliaments across the globe, from America to Japan, are unable to make responsible, economically sound recovery plans suggests that they do not know what to do and are simply hoping for the least disruption. Equally worrisome is the adoption of more statist economic programs around the globe, and the concurrent decline of trust in free-market systems. The threat of instability is a pressing concern. China, until last year the world's fastest growing economy, just reported that 20 million migrant laborers lost their jobs. Even in the flush times of recent years, China faced upward of 70,000 labor uprisings a year. A sustained downturn poses grave and possibly immediate threats to Chinese internal stability. The regime in Beijing may be faced with a choice of repressing its own people or diverting their energies outward, leading to conflict with China's neighbors. Russia, an oil state completely dependent on energy sales, has had to put down riots in its Far East as well as in downtown Moscow. Vladimir Putin's rule has been predicated on squeezing civil liberties while providing economic largesse. If that devil's bargain falls apart, then wide-scale repression inside Russia, along with a continuing threatening posture toward Russia's neighbors, is likely. Even apparently stable societies face increasing risk and the threat of internal or possibly external conflict. As Japan's exports have plummeted by nearly 50%, one-third of the country's prefectures have passed emergency economic stabilization plans. Hundreds of thousands of temporary employees hired during the first part of this decade are being laid off. Spain's unemployment rate is expected to climb to nearly 20% by the end of 2010; Spanish unions are already protesting the lack of jobs, and the specter of violence, as occurred in the 1980s, is haunting the country. Meanwhile, in Greece, workers have already taken to the streets. Europe as a whole will face dangerously increasing tensions between native citizens and immigrants, largely from poorer Muslim nations, who have increased the labor pool in the past several decades. Spain has absorbed five million immigrants since 1999, while nearly 9% of Germany's residents have foreign citizenship, including almost 2 million Turks. The xenophobic labor strikes in the U.K. do not bode well for the rest of Europe. A prolonged global downturn, let alone a collapse, would dramatically raise tensions inside these countries. Couple that with possible protectionist legislation in the United States, unresolved ethnic and territorial disputes in all regions of the globe and a loss of confidence that world leaders actually know what they are doing. The result may be a series of small explosions that coalesce into a big bang.

China Cooperation 1AC (11/14)

Thus, we offer the following PLAN:

The United States federal government should engage the People's Republic of China on a joint navigation satellite development project in space beyond the Earth's mesosphere.

China Cooperation 1AC (12/14)

Contention 3 is Solvency: the plan is sufficient to rebuild relations with China and sustain the United States' aerospace industry.

A. Starting with space policy allows U.S./China relations to develop gradually, and overcomes every other issue in the relationship.

JOHNSON-FREESE, 2006
[Dr. Joan, Professor of National Security Affairs at Naval War College and former Director of the Center for Space Policy & Law at the University of Central Florida , "A New US-Sino Space Relationship: Moving Toward Cooperation," *Astropolitics,* v.4 n.2]

Traditionally, cooperation has often started small, in nonthreatening areas such as space science, and grown when confidence is established between partners. This appears the approach currently taken by Canada, for example, in developing a space relationship with Beijing. While Canadian companies have worked with China, as illustrated by the Radarsat example, space cooperation between Canada and China has still been relatively low. In 2004, for example, Canadian companies sold only $16 million in space related products to China. Government to government activity has been undeveloped as well. But that could change. After an October 2005 visit to China, however, Canadian Space Agency president Mark Garneau said that the figure could increase severalfold in coming years. Garneau stated, "Given the emergence of China as a big player. . .we want to look at the opportunity of working with them."34 Fully cognizant of the export control issues, initial programs are focusing on space science. In particular, Canada is looking to provide ultraviolet cameras for the Chinese space science research satellite project called Kuafu. There is also Canadian interest in using Chinese recoverable satellites for life and physical sciences research. These are relatively benign ways to begin which, for Canada, could lead tomore extensive, and lucrative, interactions. Canada is known for their capabilities in robotics technology, such as the famed Canadarm used on the Space Shuttle. If China wanted to purchase Canadian robotics technology for the space station they have been talking about building, "Canada would certainly be open to listening," says Mark Garneau. A similar approach could be taken by the United States, starting slow on space science programs, and working toward bigger programs. While not the norm, there is precedent for U.S. space cooperation with China. Chinese scientist Guo Huadone was the only Chinese representative on a 43-scientist team working on the Shuttle Radar Topographic Mission (SRTM), a program to map the world in three-dimensions, flown by the shuttle Endeavor in 2000. Guo, director of the Remote Sensing Application Research Institute under the Chinese Academy of Sciences and expert in radar remote sensing, also worked in the Shuttle Endeavor Radar Scientific Working Group between 1991 and 1996. Ironically, the SRTM mission was not

[This evidence continues on the next page, with no text deleted…]

China Cooperation 1AC (13/14)

[The Johnson-Freese evidence continues, with no text deleted…]

pure science; the product of the mission bore a very real, practical, and dual use, product, which could be used for purposes ranging from environmental and crop monitoring, to targeting. In fact, the mission was co-sponsored by NASA, the National Geospatial-Intelligence Agency (NGA) of the U.S. Department of Defense (DoD), and the German and Italian space agencies. International cooperation in space exploration, encompassing both manned and unmanned programs, was the topic of a May 2004 workshop in Anchorage, AK, including participants from the United States and Europe. At that meeting, the idea of space exploration as a global "program of programs" was discussed.35 That is, governments would provide coordination of an overall effort, including programs from many countries, with implementation accomplished through national, bilateral and multilateral agreements for specific programs. The beauty of such a structure is that not all partners are involved in all programs, yet all would have a vested interest in overall program success. It would also allow for use of all the traditional agreements—and NASA has considerable experience having entered into over 3000 international agreements since 1958—as well as some of the innovative approaches that have been raised at various international space cooperation workshops.36 It is interesting to note that several themes consistently emerge from workshop discussions: the need for programmatic flexibility, the need for good communication, optimizing the combined efforts of participants and promotion of sustainability and continuity among them. Obviously, such a "program of programs" could be undertaken without China; but including China, including in the manned portion, is important for all the reasons previously explicated. Learning to work with the Chinese, much like working with the Japanese earlier, will be a process. Cultural differences, such as viewing information as a valued commodity to be shared only like any other commodity, and standard operating procedures, including legal and business norms, are different. Not necessarily nefarious, but different. Both sides have concerns which must be taken seriously; in the United States those concerns focus on technology transfer, in China they largely focus on losing face. Incremental steps offer the best chance of success, defined in both technical and political terms. Cooperation on space science programs is the tried-and-true best-first-step approach. Space scientists share a natural affinity for each other and are driven by goals set by nature, rather than politicians. Cooperation on a government sponsored space science project offers a good way for both China and the United States to learn each others' standard operating procedures. While China hasn't necessarily been barred from applying to participate in NASA space science programs in the past, they have also not been encouraged (read "invited") to apply. The U.S. knows a considerable amount about what Chinese space scientists are working on from U.S. universities scientists who travel to China fairly regularly. For example, in 2005 China selected the Hard-X-Ray Modulation Telescope (HXMT) as its first astronomy mission. The launch date is sometime before 2010. The choice was between it and a large solar telescope. While China is still some thirty years behind the U.S. in space science, the quality of their scientists and graduate students is very high; certainly high enough to partner at least in a small way on NASA programs. In at least some cases, the Chinese have not applied to NASA Requests for Proposals because they are unwilling to risk being turned down and thus lose face; and in their minds, perhaps having been deliberately set up to do so. The first step will be up to the United States. Assuming that the United States decides not to forego its leadership in manned spaceflight, China should also be included in whatever the Vision for Space Exploration evolves into, hopefully that will be a Program of Programs. Including China in manned cooperative programs makes the tortoise and the hare space race plaguing the U.S. vanish, and emphasizes U.S. leadership in a positive manner.

China Cooperation 1AC (14/14)

B. Cooperating with China will allow the U.S. to increase transparency measures and decrease perceptions of tension and aggressiveness.

JOHNSON-FREESE, 2005
[Joan, Department of National Security Decision Making, Naval War College, "Maintaining US leadership in human spaceflight" *Space Policy*; v. 21]

The USA has historically and successfully employed cooperative space activities to 'shape' other countries' programs; guiding them into benign areas of interest and leaving them fewer funds to pursue activities that are less in its interest. Controlled or limited cooperation has also allowed the USA to get a much better idea of exactly what the priorities and capabilities are in other countries. Because China's program is still largely opaque, isolating it will only limit our ability to monitor what they are doing and, perhaps even more importantly, to determine their long-term intent. Technology transfer remains a critical issue. Given that stopping technology transfer to China is impossible because the USA does not have a technology monopoly, managing it through transfers from the USA, rather than having China obtain it from other countries with fewer controls, becomes a pragmatic option. Further, cooperation with China in space offers the USA leverage in Chinese space activities, removes the counterproductive perception of a space race, and offers the USA the opportunity to develop soft power through a human space program with a goal beyond science and exploration— strategic leadership.

C. Reaching out to China while their industry is still developing will lock-in U.S. satellite leadership.

MOLTZ, 2011
[Dr. James Clay, Associate Professor and Academic Associate for Security Studies at Naval Postgraduate School, "China's Space Technology: International Dynamics and Implications for the United States," Testimony for the hearing of the U.S.-China Economic and Security Review Commission on: "The Implications of China's Military and Civil Space Programs," 5/11]

For these reasons, viewing China's space program solely from the perspective of its military activities is misleading. While China is active in the military sector and is seeking to check current U.S. advantages in this area, China's challenge to the United States in space may eventually be equally significant in the civil space sector, where China's expanding infrastructure, growing cadre of space scientists and engineers, and active international outreach puts it in a favorable position for longterm competition. But China still lags behind the United States and suffers from some serious, structural weaknesses in regard to space: bureaucratic overhang, a lack of capable space allies, and tepid receptivity to its efforts at international leadership. Unfortunately, the United States has failed to exercise its advantages in some of these fields. The international space environment is changing, yet Washington has too often fallen back into Cold War patterns, which are ineffectual in the today's expanded space marketplace. The new National Space Policy and National Security Space Strategy have outlined important new directions, but specific steps are now needed to implement them in regard to China and, as importantly, with U.S. allies and friends in the region. Such combined policies would assist in the development of U.S. markets and increase U.S. space security.

Add-on Advantage: Chinese Stability

A. A successful Chinese space program is key to domestic stability.

MOLTZ, 2011
[Dr. James Clay, Associate Professor and Academic Associate for Security Studies at Naval Postgraduate School, "China's Space Technology: International Dynamics and Implications for the United States," Testimony for the hearing of the U.S.-China Economic and Security Review Commission on: "The Implications of China's Military and Civil Space Programs," 5/11]

In the emerging postCold War space environment, Asian countries—among them China, India, and Japan—have played an increasingly prominent role. The motives of these countries to date have been different from than those of the superpowers, putting a greater emphasis on domestic economic goals, regional competition, and international prestige, as compared to more limited geostrategic military aims. China's 2006 White Paper on space listed the goal to "build up the comprehensive national strength" as one of the country's core rationales for space activity. Thus, while China has significant military aims in space, it also has important civil space purposes that are often underappreciated. Given the waning relevance of Communist Party doctrine to Chinese reality, the government is using civil space activities to promote its legitimacy in the eyes of its people.

B. Cooperation allows further space development that is critical to Chinese governmental stability.

HITCHENS AND CHEN, 2008
[Therese, Center for Defense Information, World Security Institute; David, CENTRA Technology, Inc; "Forging a Sino-US "grand bargain" in space," *Space Policy;* v. 24]

Nevertheless, without an agreed upon understanding, the incentive to strike at what many Chinese strategists consider the Achilles' heel of the US military machine is likely to remain a dominant consideration in China's space strategy. Clearly, China's leaders are driven by the strategic imperative to protect and project national sovereignty. This motivation has resulted in the Shenzhou manned spaceflight program and the Chang-e lunar probe mission, as well as the formation of cooperative associations such as the Asia–Pacific Space Cooperation Organization. An important dividend of these programs is the promotion of China's national prestige, both domestically and abroad. As the defenders of China's sovereignty and international image, the Chinese Communist Party (CCP) relies on such programs as a bulwark for the regime's claim to legitimacy. Yet, even as the CCP stokes nationalistic zeal, it fears losing control of its citizens, making constructive outlets for nationalism, such as can be offered through international space cooperation, of vital importance.

Add-on Advantage: Chinese Stability

C. Chinese Communist Party instability causes it to lash out with weapons of mass destruction, causing extinction.

EPOCH TIMES, 2005
[San Renxing, staff writer, "The CCP's Last-ditch Gamble: Biological and Nuclear War," 8/05, http://www.theepochtimes.com/news/5-8-5/30931.html]

These speeches describe in a comprehensive, systematic, and detailed way the CCP's nearly 20 years of fear and helplessness over its doomed fate, and its desperate fight to extend its life. In particular, the speeches lay uncharacteristically bare what is really on the CCP's mind and hide nothing from the public—a rare confession from the CCP that can help people understand its evil nature. If one truly understands what is said in this confession, one will immediately catch on to the CCP's thinking. In short, the speeches are worth reading, and I would like to comment on them. I. A Gangster Gambles with the World as His Stake, and the Lives of People in this Global Village Become Worthless What, then, is the gist of this wild, last-ditch gamble? To put it in a few words: A cornered beast is fighting desperately to survive in a battle with humanity. If you don't believe me, read some passages directly from the speeches. 1) "We must prepare ourselves for two scenarios. If our biological weapons succeed in the surprise attack [on the US], the Chinese people will be able to keep their losses at a minimum in the fight against the U.S. If, however, the attack fails and triggers a nuclear retaliation from the U.S., China would perhaps suffer a catastrophe in which more than half of its population would perish. That is why we need to be ready with air defense systems for our big and medium-sized cities. Whatever the case may be, we can only move forward fearlessly for the sake of our Party and state and our nation's future, regardless of the hardships we have to face and the sacrifices we have to make. The population, even if more than half dies, can be reproduced. But if the Party falls, everything is gone, and forever gone!" 2) "In any event, we, the CCP, will never step down from the stage of history! We'd rather have the whole world, or even the entire globe, share life and death with us than step down from the stage of history!!! Isn't there a 'nuclear bondage' theory? It means that since the nuclear weapons have bound the security of the entire world, all will die together if death is inevitable. In my view, there is another kind of bondage, and that is, the fate our Party is tied up with that of the whole world. If we, the CCP, are finished, China will be finished, and the world will be finished." 3) "It is indeed brutal to kill one or two hundred million Americans. But that is the only path that will secure a Chinese century, a century in which the CCP leads the world. We, as revolutionary humanitarians, do not want deaths. But if history confronts us with a choice between deaths of Chinese and those of Americans, we'd have to pick the latter, as, for us, it is more important to safeguard the lives of the Chinese people and the life of our Party. That is because, after all, we are Chinese and members of the CCP. Since the day we joined the CCP, the Party's life has always been above all else!" Since the Party's life is "above all else," it would not be surprising if the CCP resorts to the use of biological, chemical, and nuclear weapons in its attempt to extend its life. The CCP, which disregards human life, would not hesitate to kill two hundred million Americans, along with seven or eight hundred million Chinese, to achieve its ends. These speeches let the public see the CCP for what it really is. With evil filling its every cell the CCP intends to wage a war against humankind in its desperate attempt to cling to life. That is the main theme of the speeches.

2AC Inherency: Answers To 1NC #1: "Obama Space Cooperation with China Now" (1/2)

They say Obama's cooperating with China on space now, but…

____Extend the 1AC SADEH 2010 evidence: official U.S. policy is not to engage with China on bilateral space policies, and this includes the existence of satellite export controls which prohibit sharing technology with China. Their evidence is about visits and discussions, but doesn't cite any actual policies.

____Export controls, accusations of espionage, and the International Space Station prove U.S. space policy toward China is competitive, not cooperative.

JOHNSON-FREESE, 2006

[Dr. Joan, Professor of National Security Affairs at Naval War College and former Director of the Center for Space Policy & Law at the University of Central Florida , "A New US-Sino Space Relationship: Moving Toward Cooperation," *Astropolitics,* v.4 n.2]

Cooperation has both public and private sector components. Beyond U.S. government refusal to include China in cooperative space activities such as the International Space Station, the U.S. aerospace industry has been restrained in crucial export sales with China because of U.S. regulations designed to stop the spread of dangerous technology transfer. The U.S. aerospace regulatory environment in the 1990s was one already marked by ambiguity and overlapping bureaucratic authority. But it was made worse by adding layers of ideological politics and broader (still ambiguous) rules consequent to the May 1999 report of the House Select Committee on U.S. National Security and Military=Commercial Concerns With the People's Republic of China (known as the Cox Report after committee chair Rep. Christopher Cox) on alleged Chinese acquisition of U.S. technology in a number of sensitive areas, including nuclear weapons, high-performance computers, and missile and space systems. The committee partially focused on accident reports issued consequent to a series of Chinese launch failures involving U.S. built satellites in the 1990s. While the regulation changes consequent to the Cox report were no-doubt well-intended, the result has been to push aerospace buyers away from the United States and toward other global suppliers, which are increasingly available. That, in effect, gives the United States less control over technology transfer than previously. Therefore, the U.S. aerospace export control regulations must be reviewed generally, and specifically regarding their application to China. Moving toward engagement does not mean that the U.S. should embrace China without restriction or take an "anything goes" approach to the Chinese space market; it means the current approach has proven largely ineffective, and ignores the realities of the global environment.

2AC Inherency: Answers To 1NC #1: "Obama Space Cooperation with China Now" (2/2)

____U.S. space policy toward China is based on a hardline military approach, but the opportunity exists to create cooperation.

HITCHENS AND CHEN, 2008
[Therese, Center for Defense Information, World Security Institute; David, CENTRA Technology, Inc; "Forging a Sino-US "grand bargain" in space," *Space Policy;* v. 24]

In Washington's space security community the debate has coalesced around the question of whether the future of Sino-US relations in space should more closely resemble arms control or an arms race—illustrated by the intercepts and destruction of satellites by both nations a year apart. Whatever direction Washington and Beijing take in their nascent military space competition is certain to be followed by other major and emerging space powers. Unfortunately, the existing trend in both nations is for promoting an offensive space strategy aimed primarily at one another. With a new US administration, whichever candidate enters office will face the challenge of finding viable alternatives to the anti-satellite arms race that lies at the end of the present course, an outcome that would be in neither party's interest. The incoming president might avoid such a security dilemma with China by utilizing the full range of US soft power, backed by realistic hard power consequences. This will require the incoming administration to expand its understanding of what constitutes a space issue, and to develop a deeper knowledge of what motivates China's leadership. Using both persuasion and dissuasion to craft a kind of "grand bargain" with China regarding space, the next president may be able to steer Sino-US competition toward trade, economics and sport, rather than military oneupmanship. Accomplishing this would strengthen US national security and international stability in the Pacific region.

2AC Harms [Economy]: Answers To 1NC #1: "Chinese export controls mean no challenge" (1/2)

They say Chinese export controls mean they won't challenge us, but…

____Extend the 1AC WASHINGTON POST and MOLTZ evidence: China is working with European companies because of U.S. export controls, and this is boosting international markets faster than the U.S. can catch up. Their evidence is about one aspect of Chinese industry, while ours is comparative of the whole picture with the United States.

____China is rapidly expanding its space program, and has caught up to the United States.

MOLTZ, 2011
[Dr. James Clay, Associate Professor and Academic Associate for Security Studies at Naval Postgraduate School, "China's Space Technology: International Dynamics and Implications for the United States," Testimony for the hearing of the U.S.-China Economic and Security Review Commission on: "The Implications of China's Military and Civil Space Programs," 5/11]

China has emerged as a major spacefaring nation in the past decade after more than fifty years of effort and many setbacks. Today, it has Asia's second largest space budget (estimated at $2.24 billion) after Japan ($3.83 billion), but is narrowing the gap. It conducted as many launches (15) as the United States in 2010, second only to Russia.

____China has plans to expand its satellite and exploration programs.

MOLTZ, 2011
[Dr. James Clay, Associate Professor and Academic Associate for Security Studies at Naval Postgraduate School, "China's Space Technology: International Dynamics and Implications for the United States," Testimony for the hearing of the U.S.-China Economic and Security Review Commission on: "The Implications of China's Military and Civil Space Programs," 5/11]

China's priorities for the coming five years in space applications, include development of higher-resolution remote-sensing satellites and related ground stations, implementation of its Beidou precision navigational system, completion of the mission of its second lunar orbiter (Chang'e 2) launched in October 2010, conduct of a lunar mission and a later sample-return mission in 2017 to 2020, and development of a series of three small space laboratories (called Tiangong1, 2, and 3) in the coming decade. Further ahead, China has announced plans for a 60ton space station to be launched by 2020. Some officials have mentioned a possible 2024 Moon mission as well..

2AC Harms [Economy]: Answers To 1NC #1: "Chinese export controls mean no challenge" (2/2)

____Export controls do not prevent China from developing space technology.

JOHNSON-FREESE, 2006
[Dr. Joan, Professor of National Security Affairs at Naval War College and former Director of the Center for Space Policy & Law at the University of Central Florida , "A New US-Sino Space Relationship: Moving Toward Cooperation," *Astropolitics,* v.4 n.2]

Since the late 1990s, U.S. policy has focused on trying to constrain Chinese access to and development of space technology. U.S. concern regarding China's space activity stems from the dual use nature, having both military and civilian applications, of space technology. The fact that 95% of space technology is considered dual-use technology creates a plethora of difficulties that then permeate U.S.China relations. Overall Chinese success with their space activities, however, makes it increasingly evident that U.S. efforts have not been effective. In a globalized world, China can largely buy what it wants or learn through cooperative programs with other countries what it cannot learn or buy from the United States. Therefore, the United States would do well to reconsider its approach.

2AC Harms [Economy]: Answers To 1NC #2: "No Global Economic Impact"

They say we can't prove an impact for the global economy, but…

____The U.S. economy is critical to a strong global economy because other countries are too interconnected to survive a U.S. collapse.

MEAD, 2004
[Walter Russell, Senior Fellow at Council on Foreign Relations, "America's Sticky Power," Foreign Policy, Mar/Apr, lexis-nexis]

Similarly, in the last 60 years, as foreigners have acquired a greater value in the United States-government and private bonds, direct and portfolio private investments-more and more of them have acquired an interest in maintaining the strength of the U.S.-led system. A collapse of the U.S. economy and the ruin of the dollar would do more than dent the prosperity of the United States. Without their best customer, countries including China and Japan would fall into depressions. The financial strength of every country would be severely shaken should the United States collapse. Under those circumstances, debt becomes a strength, not a weakness, and other countries fear to break with the United States because they need its market and own its securities. Of course, pressed too far, a large national debt can turn from a source of strength to a crippling liability, and the United States must continue to justify other countries' faith by maintaining its long-term record of meeting its financial obligations. But, like Samson in the temple of the Philistines, a collapsing U.S. economy would inflict enormous, unacceptable damage on the rest of the world. That is sticky power with a vengeance.

2AC Harms [Economy]: Answers To - #3

____Extend the 1AC WASHINGON POST evidence: The U.S. aerospace industry is rapidly losing global market share to foreign companies, and this is killing the industry. Even if growth is happening, it is slower than in other countries meaning we will be leapfrogged in the short-term.

___Export controls have given foreign competitors an advantage in launch cost, which is causing the U.S. to fall behind.

NOBLE, 2008
[Michael, United States Air Force, "Export Controls and United States Space Power," *Astropolitics,* v.6 n.3]

The launch market is of particular concern due to the cascading effect it can have on other elements of commercial space. As international competitors offer launch at lower prices than the U.S., they can then package satellites with launchers for a lower priced "turn-key" solutions than satellites packaged on U.S. launchers. This provides a significant competitive advantage. Any profits can be rolled back into satellite and launch technologies further enhancing competitiveness. Conceptually, this leads to a "snowball effect" in market share. From an export control vantage point, this snowball effect translates to growing erosion in U.S. technological superiority, or worse, a growth in foreign technological superiority.

Export controls are not slowing foreign space industries from catching up to the United States.

NOBLE, 2008
[Michael, United States Air Force, "Export Controls and United States Space Power," *Astropolitics,* v.6 n.3]

U.S. export controls have not slowed the development of competitive space capabilities around the globe. Chinese, European, Indian, and Russian launch programs have all advanced unabated by U.S. export controls. The explosion of COMMUNICATIONS SATELLITEs and the proliferation of know-how to develop and build these staples of the commercial space market have not been measurably affected. In fact, the move from Commerce to State to regulate exports appears to have accomplished little more than erode U.S. global COMMUNICATIONS SATELLITE market share.

2AC Harms [Economy]: Answers To 1NC #3: "US Space Industry Growing" (1/3)

They say the US space industry is growing, but…

____Export controls drive cheating and international competition that hurts U.S. domestic industries.

JOHNSON-FREESE, 2006
[Dr. Joan, Professor of National Security Affairs at Naval War College and former Director of the Center for Space Policy & Law at the University of Central Florida , "A New US-Sino Space Relationship: Moving Toward Cooperation," *Astropolitics,* v.4 n.2]

U.S. policies which demands control of increasingly globalized dual-use industries end up being counterproductive. For many years, France was unable to gather requisite political support in Europe to build a European launcher because cooperating with the United States and using U.S. launch vehicles was cheaper. It was only after the United States began putting restrictions on what the Europeans could launch that they united to build the Ariane launcher, and quickly took over half the commercial launch market from the United States. Nevertheless, that lesson-learned from the 1970s seems to keep being ignored. In trying to retain control of globalized space technology, the U.S. ends up losing control and the proliferation of space technology largely proceeds. Representative CurtWeldon stated at a July 27, 2005 hearing of the House Armed Services Committee, "We've allowed some of our industrial defense contractors and technology to violate the security of America, and I would ask you at the appropriate time to respond to that." American contractors have clearly pushed the envelope in interpreting the rules of what is permissible and what is not. The fault for doing that, however, does not solely rest with industry, but also on the U.S. export control regulations that may be ideologically satisfying but have no relation to the globalized world in which we live. It is nonsensical for the United States to try to control what is available on the commercial market, as Larry Wortzel stated in September 2005. "Generally, technologies that are widely available on the world market and not unique to the United States should not be unduly restricted unless they can be subjected to multilateral controls."20 Since the United States posture has been to shun multilateral controls considered not beneficial to the United States, such as the Landmine Treaty, the International Criminal Court and the Kyoto Treaty, it is unlikely that other countries would sign-up to multilateral export controls over dual-use technology that they see as entirely appropriate for export and that would hurt them economically.

____Export controls prevent U.S. companies from buying foreign products, hurting their competitiveness.

NOBLE, 2008
[Michael, United States Air Force, "Export Controls and United States Space Power," *Astropolitics,* v.6 n.3]

Given the history of pre-eminence in science and technology, it is easy to assume that the U.S. leads the world in most technologies of military significance. Nevertheless, due to a combination of forces, including the industrialization of formerly agrarian states and the accelerating pace of information flow, this is no longer the case. U.S. export policies are formulated and implemented on an assumption of pre-eminence—protecting what is "inside the fortress walls" is job number one—that does not comport with a world in which sometimes the best technology lies "outside the fortress." In some cases, the U.S. export control policy stance on space technologies has the perverse effect of actually impeding U.S. access to foreign technologies, effectively turning the "fortress" into a "cage."

2AC Harms [Economy]: Answers To 1NC #3: "US Space Industry Growing" (2/3)

____U.S. industry share of global satellite market proves export controls are hurting competitiveness.

NOBLE, 2008
[Michael, United States Air Force, "Export Controls and United States Space Power," *Astropolitics,* v.6 n.3]

As mentioned earlier, the evidence suggests that the U.S. export control system has had the effect of encouraging the growth of foreign industry and foreign competition beyond the control or direct influence of the U.S. One expert at CSIS found that at least two foreign companies credited their origin to U.S. export controls. More quantitative data along this line of reasoning is found in the U.S. share of the global satellite manufacturing market measured in annual revenues. Since export regulation of COMMUNICATIONS SATELLITEs and their components were moved from Commerce to State, the U.S. satellite manufacturing global market share dropped from over 60%to roughly 40%.95 This implies the emergence of the rest of the world abetted by U.S. export controls.

____Export controls create massive delays and artificially boost foreign competition, and this is destroying the U.S. aerospace industry.

BINI, 2007
[Antonella, German Aerospace Center, "Export control of space items: Preserving Europe's advantage," *Space Policy*; v. 23]

The present situation in the space industry is one in which US companies, mainly those that produce satellites, have great difficulty competing in the world market. The most serious barrier to US competitiveness in this field is government policy on export controls. The outcome of 20 years of cooperation and joint ventures with partners such as Chinese and Russian space firms to produce launch vehicles,1 is a system with a rigid interpretation of ambiguous statutory requirements and a confusing licensing process that leads to long delays and uncertain results. The main problem is identified in the length of time it takes to obtain an International Traffic in Arms Regulations (ITAR) approval. According to reports from US manufacturers, 2 the time taken to get a licence has increased from 104 to 150 days. In addition, the situation is complicated by the uneven application of international agreements. The Wassenaar Arrangement, for instance, binds US commercial satellite companies with restrictions that several companies in Europe, Canada, Russia and Japan, not being members of the agreement, are not subjected to. Within this framework US competitiveness in the international satellite market has been seriously compromised in the past 10 years. Current export control policy for dual-use items has increased the cost associated with doing business for US satellite manufacturers while at the same time decreasing their ability to compete in the global marketplace. The US market share in the commercial satellite-manufacturing sector has declined and may continue to do so for years to come. Based on Satellite Industry Association data, the US share of global satellite sales decreased from 64% of the $12.4 billion market in 1998 to 36% in 2002.3

2AC Harms [Economy]: Answers To 1NC #3: "US Space Industry Growing" (3/3)

____Export controls deny U.S. companies the ability to hire the highest quality personnel.

NOBLE, 2008
[Michael, United States Air Force, "Export Controls and United States Space Power," *Astropolitics,* v.6 n.3]

It is an unassailable fact that the most fundamental need of business is qualified staff. In today's business environment—and certainly in the space segment—this increasingly translates to access to individuals with technical training. Across-the-board, jobs that demand technical skills are growing at five-times the rate of those requiring non-technical skills.109 In the face of this growth trend, the U.S. technical workforce is aging and retiring and the next generation of U.S. workers have become progressively less inclined to pursue the science, technology, engineering, and math (STEM) education required to keep pace with the growth in demand. This is a problem in-and-of-itself. Export controls, and immigration rules, act to compound the problem by denying or encumbering access to qualified foreign-grown talent.

2AC Harms [Economy]: Answers To 1NC #4: "Satellites Not Key to Economy"

They say satellites aren't key to the economy, but …

___Extend the 1AC HERNSTADT evidence: the U.S. aerospace industry is key to the economy because it produces lots of jobs and spinoff technologies that boost every other industry. Their evidence is a snapshot of one year of growth, not an overall conclusion.

____The commercial satellite industry is the most globalized, fastest growing industry in the world.

HITCHENS, 2003
[Theresa, vice president of the Center for Defense Information; "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

The commercial space and telecommunications sector is also arguably the most globalized of today's economic sectors. The customer base is international; the industry itself is largely comprised of multinational alliances among companies and consortia, as well as joint government programs. Whereas space used to be available only to the most developed nations, there are more than 1,100 companies in 53 countries now exploiting space.34 Space is a major worldwide market accounting for many billions in revenue, and U.S. firms are dominant in the sector. According to a 2000/2001 study by the Washington-based Satellite Industry Association, worldwide revenue (including both government and commercial customers) for the satellite industry was $85.1 billion in 2000, and $97.7 billion is estimated for 2001. Over the past five years, the average annual growth has been 17 percent. The industry association was predicting year-end numbers in 2001 to show 15 percent growth. The U.S. satellite industry pulled in $8.9 billion in 2000, and $10.3 billion in 2001 in satellite manufacturing alone, out of worldwide revenue of $17.2 billion and $20.7 billion respectively. Importantly, exports account for half or more of U.S. industry revenue.35

2AC Harms [U.S./China Relations]: Answers To 1NC #1: "Can't Solve Underlying Problems"

They say we can't solve underlying problems in US-China relations, but…

____Extend the 1AC JOHNSON-FREESE evidence, space policy is a unique area that creates cooperation opportunities in other areas because it combines military, economic, and social dimensions. This overcomes purely military concerns by creating transparency.

____Chinese economic troubles make space policy a unique springboard for improving U.S./China relations in all areas.

THAISRIVONGS, 2006
[David, Associate Editor of Harvard International Review , "New Space for US-China Relations" *Harvard International Review,* May 6, http://hir.harvard.edu/international-trade/the-final-frontier]

Beneath the facade of China's costly display in October, there lies a country still in need of economic help. According to the World Bank's World Development Indicators for 2002, China's gross national income index is a mere US$940, compared with US$35,060 for the United States. Despite a burst of recent growth, foreign direct investment (FDI) and loan growth in China declined in October 2003, a possible sign that the Chinese economy is starting to cool off. The Commerce Ministry recently reported that for the first ten months of 2003, FDI was at US$46.6 billion, giving the country a little over two more months to attract another US$13 billion to China's 2003 FDI target level of US$57 billion. This economic situation represents an ideal opportunity for the United States to permanently strengthen its relations with China by utilizing the recent manned spaceflight as a springboard for bilateral cooperation in many sectors. Given its knowledge in the area of space technology and China's demonstrated willingness to work with other countries on space-related projects, the United States has the opportunity to join the large circle of nations that offer China assistance for its space program. Given that foreign-backed ventures make up half of the total exports in China and are critical in creating jobs (30 million former public workers, 150 million rural citizens, and about 200 million other people in China are jobless), it is in desperate need of US economic investment, both at the private and public levels. From China's entry into the World Trade Organization to the support it has given to US corporations that tap its resources, China's promising steps suggest it is time for the United States to reduce some of the tariffs stifling economic integration and discouraging business cooperation at many levels. The United States should welcome China into the group of countries it considers strong allies, disavowing the history of suspicion and escalating standoffs, and accepting China as a partner in a broader, global context. Aiding the Chinese space program could be the first key step in launching US-China relations into an era of mutual trust and cooperation.

2AC Harms [U.S./China Relations]: Answers To 1NC #2: "Space Coop Impossible"

They say space cooperation is impossible, but…

____The plan overcomes these barriers. Language issues only matter if government agents aren't directly speaking because it means they have to interpret intent by reading reports. A cooperative space program would create face-to-face interactions that would spur easier cooperation.

____Cooperation on space increases transparency and solves mistrust more effectively than isolation.

LOGAN, 2008
[Jeffrey, Specialist in Energy Policy - Resources, Science, and Industry Division of Congressional Research Service," China's Space Program: Options for U.S.-China Cooperation", Sep 29]

The potential benefits of expanded cooperation and dialogue with China include:! Improved transparency. Regular meetings could help the two nations understand each others' intentions more clearly. Currently, there is mutual uncertainty and mistrust over space goals, resulting in the need for worst-case planning. ! Offsetting the need for China's unilateral development. Collaborating with China — instead of isolating it — may keep the country dependent on U.S. technology rather than forcing it to develop technologies alone. This can give the United States leverage in other areas of the relationship. ! Cost savings. China now has the economic standing to support joint space cooperation. Cost-sharing of joint projects could help NASA achieve its challenging work load in the near future. Some have argued that U.S. space commerce has suffered from the attempt to isolate China while doing little to keep sensitive technology out of China.

2AC Harms [U.S./China Relations]: Answers To 1NC#3: "No Satellite Attacks"

They say China won't attack our satellites, but…

____Extend the 1AC HITCHENS AND CHEN evidence: unilateralism causes high levels of suspicion and tension that make accidental war inevitable, even if China knows it can't successfully launch a full-scale attack.

____Even if the attack failed, the debris created would destroy every satellite in space.

FORDEN, 2008
[Geoffrey, Massachusetts Institute of Technology, "Viewpoint: China and Space War," *Astropolitics,* v.6 n.2]

If the short-term military consequences to the U.S. were not that bad, the long term consequences to all spacefaring nations would be devastating. The destruction of the nine satellites hit during the first hour of the attack considered here could put approximately 19,000 new pieces of debris over 10 cm in diameter into the most populated belt of satellites in LEO. Even more debris would be put into GEO, if China launched an attack against communications satellites. In the immediate aftermath of the attack, the debris from each satellite would continue to clump together, much as the debris from China's 2007 test. Over the next year or so, and assuming the space war with China was resolved well before that, the debris fields would fan out and eventually strike other satellites. These debris fields could cause a run-away chain of collisions that renders space unusable from hundreds to thousands of years.14

2AC Harms [U.S./China Relations]: Answers To 1NC #4: "No Impact to China Attack"

They say there's no impact to China attacking our satellites, but…

____Extend the 1AC STRAITS TIMES evidence: Any war between the U.S. and China would immediately escalate and draw in other great powers like Russia, India and China. This guarantees nuclear escalation regardless of the initial outcome.

____Any satellite attack will be misinterpreted as a nuclear strike, and this causes immediate escalation.

FORDEN, 2008
[Geoffrey, Massachusetts Institute of Technology, "Viewpoint: China and Space War," *Astropolitics,* v.6 n.2]

Throughout the history of the Cold War, the U.S. has had a policy of only launching a "retaliatory" nuclear strike if an incoming attack is detected by both early warning satellites and radars. Without the space leg of the early warning system, the odds of the U.S. misinterpreting some radar-detected missile launch as a nuclear attack would be greatly increased—even if the U.S. did not view the satellite destruction as a sufficiently threatening attack by itself. Such a misinterpretation is not without precedent. In 1995, Russia's early warning radars viewed a NASA sounding rocket launch off the coast of Norway and flagged it as a possible Trident missile launch. Many analysts believe that the only reason Russia did not respond is that it had a constellation of functioning early warning satellites.12 Any Chinese attacks on U.S. early warning satellites would risk both intentional and mistaken escalation of the conflict into a nuclear war without a clear military goal.

2AC Solvency: Answers To 1NC #1: "China Won't Cooperate on Space"

They say China won't cooperate on space, but…

____Extend the 1AC SADEH evidence, China has tried to initiate dialogue on space but the United States has said no. They are willing to cooperate if we stop acting unilaterally.

____Unlike in the Cold War, China is basing its space program on cooperation and wants to work with the United States.

MOLTZ, 2011
[Dr. James Clay, Associate Professor and Academic Associate for Security Studies at Naval Postgraduate School, "China's Space Technology: International Dynamics and Implications for the United States," Testimony for the hearing of the U.S.-China Economic and Security Review Commission on: "The Implications of China's Military and Civil Space Programs," 5/11]

As "second-generation" space actors, Asian space programs have also differed in their development from the superpowers' space programs in the much larger degree of international cooperation involved in their formation: including purchases of technology and joint activities with outside partners. U.S.-Soviet space technological developments, by contrast, took place much more autonomously. Space cooperation by Asian countries with other programs has been extensive and consistent, as states have reached out to foreign partners and have attempted to carry out typical late-developing "import substitution" strategies seen in other industrial fields (such as shipbuilding, electronics, and automobiles). Unlike during the Cold War, space technology is now widely available on the international market due to forces of globalization and the presence of advanced producers (Russia, France, Britain, Italy, Israel, and others) willing to sell. On the other side of the equation, China is now exporting space technology and serving as a trainer for developing countries interested in space. In fact, China has set up specific organizations to facilitate its cooperation with other space programs both within Asia and beyond. China wants to be perceived as a space leader and to build lasting relationships with developing countries.

____China is willing to cooperate with the United States on space policy, but the United States has rebuffed these efforts and this is leading to conflict.

SADEH, 2010
[Eligar, Astroconsulting International LLC, "Report: United States-China Space Dialogue Project," *Astropolitics,* v.8 n.1]

Chinese scholars present at the second workshop viewed U.S. actions the past decade as threatening to China's national interests. In this context, the Chinese directly pointed to U.S. unwillingness to cooperate with China in civil and commercial space; U.S. actions, like the inadvertent bombing of China's embassy during the war in Kosovo; and the doctrine of counterspace operations that is reflected in U.S. Air Force writings and in national space policy. These events, among other interests, encouraged China to develop comprehensive space power capabilities. The anti-satellite weapon test of January 2007 was viewed by China as a routine test along this path to space power. At the same time, Chinese scholars conveyed that China's willingness to demonstrate space power creates opportunities for dialogue with the United States.

2AC Solvency: Answers To 1NC #2: "Improving Relations Takes Years"

They say improving US-China relations takes years, but…

____Extend the 1AC JOHNSON-FREESE evidence: Space policy creates immediate cooperation in every other area because it involves military, economic and social policy. This constructive dialogue is enough to solve our impacts.

____Cooperating with China on new space projects solves the perception of an "arms race" and prevents U.S./China conflict.

MILOWICKI AND JOHNSON-FREESE, 2008
[Gene, Director, Aviation Programs, Aviation Center of Excellence at Florida State College at Jacksonville; and Joan, Professor of National Security Affairs at Naval War College and former Director of the Center for Space Policy & Law at the University of Central Florida "Strategic Choices: Examining the United States Military Response to the Chinese Anti-Satellite Test," *Astropolitics,* v.6 n.1]

The same document that ties the hands of the U.S. military in its response to the Chinese anti-satellite weapon test also has the potential for defusing the current situation. China is aggressively pursuing its owned manned spaceflight program, and it is intent on continuing launching taikonauts into space, building a space laboratory and eventually a space station. Furthermore, China has embarked upon an aggressive lunar exploration program, first with robots, and then likely with a manned mission, and eventual long-term sustained lunar presence. Currently, the U.S. and China are working independently of each other on similar goals, creating the perception of a competition that only the U.S. can lose, since China is the underdog, working at a slow, incremental pace, yet still outpacing an underfunded and anemic U.S. Vision for Space Exploration. Replacing competition with cooperation would eliminate the perception of a "space race" and, equally important, co-opt the Chinese into a manned exploration enterprise that would potentially redirect limited Chinese resources into mutually beneficial and constructive space exploration initiatives. The U.S. National Space Policy already has the necessary verbiage and stated goals and objectives to move in this direction. Specifically, the policy reads as follows: Encourage international cooperation with foreign nations and/or consortia on space activities that are of mutual benefit and that further the peaceful exploration and use of space, as well as to advance national security, homeland security, and foreign policy objectives.48 In support of President Bush's 14 January 2004 Space Vision, such a policy would leverage and concentrate the resources of the two most promising space powers in the leadership of a global space exploration initiative. It would also garner soft power for the U.S. at a time when the U.S. image of unilateralism, preemption, and perceived heavy handedness in the Global War on Terror could use a facelift. It is an opportunity that will take leadership and courage to execute, but the potential gains far outweigh the risks.

2AC Solvency: Answers To 1NC #2: "Improving Relations Takes Years"

____Lifting export controls would allow for cooperative space development which increases Chinese prestige and resolves tensions.

HITCHENS AND CHEN, 2008
[Therese, Center for Defense Information, World Security Institute; David, CENTRA Technology, Inc; "Forging a Sino-US "grand bargain" in space," *Space Policy;* v. 24]

Finally, lifting the ITAR restrictions, in whole or at least in large part, opens the previously blocked path of cooperation with China in space exploration. Cooperation on civil space traditionally has been seen in the USA as a tool of soft power and a method of dampening tensions between potential adversaries, dating back to the Apollo– Soyuz Test Project. Enabling, for example, a multi-nation cooperative program in lunar exploration would again be a "prestige" incentive for China, which wants very badly to be seen as a world-class space power. Arguably such broad international cooperation on space exploration would also benefit the USA directly by allowing NASA to more widely share the nontrivial cost burdens at a time when budgetary pressure on the US government is growing rapidly.

China Cooperation Negative – Table of Contents

1NC Frontline: Inherency

1. Obama has pressed for official space cooperation with China.

FUKUSHIMA, 2011
[Yasuhito, National Institute for Defense Studies, Ministry of Defense of Japan, "An Asian perspective on the new US space policy: The emphasis on international cooperation and its relevance to Asia" *Space Policy*; v. 27]

The Obama administration is now trying to promote space cooperation with China. In November 2009 President Obama and China's President, Hu Jintao, agreed to seek further discussions on space science cooperation and to initiate a dialogue on human spaceflight and space exploration.22 The two leaders also welcomed reciprocal visits of the NASA administrator and his Chinese counterpart in 2010. This led to an official visit to China by NASA Administrator Charles Bolden in October 2010.23 Bolden met his counterpart, Chen Qiufa, head of the China National Space Administration and visited Chinese human spaceflight related facilities.24 In addition, both presidents shared the view that the two countries have common interests in the promotion of the peaceful use of space and agreed to take steps to enhance security in space. In pursuance of this the administration is seeking bilateral TCBMs with China. In October 2010 Defense Secretary Gates mentioned the need for strategic dialogue, which includes the issue of space security, in a meeting with China's Defense Minister Liang Guanglie.25

2NC/1NR Extensions: Inherency 1NC #1: "Space Cooperation with China Now"

____Extend the 1NC #1 FUKUSHIMA 2011 evidence. Obama has already established official state-to-state dialogues with China on space policy, and is pushing for more cooperation. This means that the Aff's harms are already being addressed, so none of their impacts will occur.

And, here's more evidence that Obama's National Space Policy already creates international cooperation.

FUKUSHIMA, 2011
[Yasuhito, National Institute for Defense Studies, Ministry of Defense of Japan, "An Asian perspective on the new US space policy: The emphasis on international cooperation and its relevance to Asia" *Space Policy*; v. 27]

Obama's NSP is, however, rooted in cooperation and incorporates the concept throughout, instead of just mentioning it in one section. The introduction states that "the United States hereby renews its pledge of cooperation," whereas for the principles of space activities, the USA will adhere to its principles "in this spirit of cooperation" and proposes that other nations follow suit. Also, as one of the goals of its national space programs, emphasis is placed on the expansion of international cooperation. In the inter-sectoral guidelines there is a special section on international cooperation, which stipulates the need to strengthen US space leadership, identify areas for potential international cooperation, and develop transparency and confidence-building measures (TCBMs). According to a senior administration official, who played a central role in shaping the document, enhancing international cooperation and collaboration in space is positioned as a "key cornerstone" in Obama's NSP.2

____And, the U.S. and China are already engaging in dialogue and cooperation on space policy.

SADEH, 2010
[Eligar, Astroconsulting International LLC, "Report: United States-China Space Dialogue Project," *Astropolitics,* v.8 n.1]

In 2006, the Eisenhower Center for Space and Defense Studies at the United States Air Force Academy initiated a China, Space, and Strategy workshop to develop dialogue between the United States and China. The workshop brings together a community of experts and policy makers from the government, academic, and think-tank sectors that include U.S. and Chinese nationals. Since 2006, the dialogue has fostered intellectual capital to develop peace building capacity and confidence building measures within the evolving U.S.-China space relationship. This is critical to avoid a security dilemma between the two states in which actions perceived as defensive by one are viewed as offensive by the other. Through this dialogue effort, clarification of divergent points and areas of consensus emerged, which can serve as a basis for future space relations, including the development of rules of the road and codes of conduct in space.

1NC Frontline: Harms [Economy] (1/2)

1. Chinese export controls already guarantee the U.S. maintains its advantage in space technology.

MOLTZ, 2011
[Dr. James Clay, Associate Professor and Academic Associate for Security Studies at Naval Postgraduate School, "China's Space Technology: International Dynamics and Implications for the United States," Testimony for the hearing of the U.S.-China Economic and Security Review Commission on: "The Implications of China's Military and Civil Space Programs," 5/11]

Another potentially limiting factor is the fact that the State Council and the Military Commission of the Communist Party's Central Committee have since 1997 implemented new export controls and a licensing system. Since 2002, the Military Products Export Control List—administered by SASTIND—has included a special Category 8 for military space items, while other regulations now govern civilian space exports. While possibly reducing China's space trade, this recent development of space-related export controls must be viewed as a positive development from a U.S. perspective, bringing China into greater compliance with international efforts to prevent the proliferation of technologies that could be used for military purposes. Indeed, most Chinese space exports today focus on delivery-on-orbit products and services, rather than direct technology transfer.

2. There is no internal link to their impact evidence. They only prove that the U.S. economy will decline, but their terminal impact is about the global economy.

3. The U.S. space industry is not dying – investments are increasing.

SADEH, 2008
[Eligar, Astroconsulting International LLC, "Export Controls of Space Technologies," *Astropolitics,* v.6 n.2]

Overall, financial viability for the U.S. space industry is good based on publicly available company annual reports, with 70% of the companies considered at low risk. Twenty-five percent of the companies were considered at moderate or high risk (primarily commercial space services and manufacturers of materials for launch systems). Aggregate Research and Development expenditures grew an average of 8%per year since 2003, primarily in Tiers 2 and 3 as an investment in innovation by firms to remain competitive. The space workforce has grown 22% over the last 4 years.

1NC Frontline: Harms [Economy] (2/2)

4. The satellite market has flattened out, it isn't key to the economy anymore.

HITCHENS, 2003
[Theresa, vice president of the Center for Defense Information; "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

While commercial space was a booming market during most of 1990s, the market for low-earth orbit satellites has collapsed over the past two years. Launch providers are predicting a flat marketplace for a number of years.37 In addition, the market for large geosynchronous orbit satellites for communications also is at near rock bottom and is expected to remain flat through 2011, according to a recent report by Forecast International/DMS Inc.38 The growth in the market is now being driven by satellite services, such as direct downlinks for Internet (with high hopes pinned on the development of broadband Internet services) or TV. There further is excess capacity in the commercial space market place, with five major manufacturers (three U.S., two European), according to Christopher E. Kubaski, chief financial officer of Lockheed Martin Corp.39 Kubaski and other U.S. industry leaders are predicting little growth in the commercial sector in the near term.

2NC/1NR Extensions: Harms [Economy] 1NC #1: "Chinese export controls mean no challenge"

____Extend the 1NC #1 MOLTZ 2011 evidence. China has enacted its own export controls that are hurting its ability to develop a domestic aerospace industry. This is allowing to U.S to maintain its competitive advantage even if we have export controls too.

2NC/1NR Extensions: Harms [Economy] 1NC #2: "No Global Economic Impact"

____Extend the 1NC #2, that there is no internal link to their terminal impact card. The AUSLIN AND LACHMAN evidence assumes that an economic collapse is happening in Japan, China, and Russia, as well as in the United States. It is the Aff's burden to prove that these other countries are declining, but they have only read evidence about the U.S. This means their impact won't happen because other countries are stable and won't need to go to war.

2NC/1NR Extensions: Harms [Economy] 1NC #3: "US Space Industry Growing"

____Extend the 1NC #3 SADEH 2008 evidence. The U.S aerospace industry is not dying, and is still very competitive. This means that export controls and unilateralism are not hurting U.S. companies, so either there is no risk of economic collapse or there are factors that the plan does not address and economic collapse is inevitable. Either way, the plan does nothing to help the economy.

____And, data proves that the U.S. workforce is not aging, and education policy is more important than export controls.

NOBLE, 2008
[Michael, United States Air Force, "Export Controls and United States Space Power," *Astropolitics,* v.6 n.3]

Yet concern over an impending workforce crisis is not universal. In a 2003 study, RAND found no compelling evidence of a looming shortage in the S&E workforce, noting for instance that S&E workers tend to work until later in life, thereby softening the connection between a "graying" workforce and a retiring workforce.114 Regardless of the rate at which the current workforce is retiring, as the balance of jobs tilts further toward those requiring technical skills, the educational system must produce greater numbers to meet this growing demand.

2NC/1NR Extensions: Harms [Economy] 1NC #4: "Satellites Not Key to Economy"

____Extend the 1NC #4 HITCHENS 2003 evidence. The best data proves that the satellite market has already topped out and will no longer be a driver of the U.S. economy. Investors are no longer demanding satellite services, and supply is outpacing demand. This means that there is no room for the aerospace industry to grow even if the plan create new growth opportunities.

1NC Frontline: Harms [U.S./China Relations]

1. U.S./China relations are hurt by structural issues that go deeper than just a lack of cooperation. Even in areas where they work together, the military controls policy and will continue to be aggressive.

WORTZEL, 2008
[Larry M., Colonel, United States Army (Retired), "The Chinese People's Liberation Army and Space Warfare," *Astropolitics*, v.6, n.2]

The U.S. has taken a course with China that is far different from the isolationist and confrontational approach with the former Soviet Union during the Cold War. Both states are heavily involved in trade, economic, and political engagements with each other. Nonetheless, both states are wary of the potential for conflict with the other, and there exist some deep fundamental differences of national interest. Whether one is a proponent of arms control agreements or not, the dialogue between the U.S. and the Soviet Union over arms control and treaties produced a body of mutual understanding that holds up today. The U.S. and the Soviet Union seemed to realize that it is potentially destabilizing to define the upper limits of sovereignty. Thus, neither country interfered with the other's free passage in space. Also, they agreed that the ability to conduct strategic verification from space stabilized the nuclear balance. No such dialogue has taken place with China. The PLA has either ignored or rebuffed American efforts at such a dialogue. Often, senior military or Chinese Communist Party leaders have told Americans that to engage in such a dialogue is an example of a cold war mentality.98 Yet discussions on these issues are important to clarify the rationales for America's positions on space and serve as threat reduction measures.

2. Other issues and language barriers make cooperation on space policy impossible.

SADEH, 2010
[Eligar, Astroconsulting International LLC, "Report: United States-China Space Dialogue Project," *Astropolitics,* v.8 n.1]

The United States relationship with China in the space domain will likely define the future uses and governance of space, and is inextricably connected to the broader dynamics of foreign policy issues and international relations between the two states. China's demonstration of anti-satellite capability in January 2007 and the United States destruction in space of a malfunctioning American satellite in February 2008 raise the possibility of future conflict in space. Mitigation of this possibility is hampered by lack of a common lexicon of terms applicable to activities in space. The Chinese profess to have contradictory interpretations of U.S. concepts, such as transparency, deterrence, dual-use, intentional versus unintentional interference, defense, and offense. A language barrier complicates the problem. American concepts, like "transparency," posit unintended implications when translated into Mandarin Chinese. The combination of conceptual confusion and linguistic imprecision increase the chance of misunderstanding that can lead to conflict, and decrease the possibility of formal or informal agreement regulating space competition between the two states.

1NC Frontline: Harms [U.S./China Relations]

3. No impact: Attacking U.S. satellites is too difficult, and we would know about it far enough ahead of time to stop the attack.

FORDEN, 2008
[Geoffrey, Massachusetts Institute of Technology, "Viewpoint: China and Space War," *Astropolitics,* v.6 n.2]

However, China could not launch the massive attack required to have anything like a significant effect on U.S. ability to utilize space without months of careful planning and pre-positioning of anti-satellite weapon carrying missiles around the country. It would also have to utilize its satellite launch facilities to attack any U.S. assets in deep space, i.e., the GPS navigation satellites and communications satellites in GEO orbit. Most importantly, it would have to time the attack to hit as many U.S. satellites as simultaneously as possible. And despite all that movement, China would somehow have to keep the whole thing secret. Failure to do so would undoubtedly result in the U.S. attacking the large, fixed facilities China needs to wage this kind of war before the full blow had been struck. Even if the U.S. decided not to attack, China would undoubtedly plan for that contingency.

4. No impact: Even in the worst case scenario, the U.S. military would be fine and able to handle China easily.

FORDEN, 2008
[Geoffrey, Massachusetts Institute of Technology, "Viewpoint: China and Space War," *Astropolitics,* v.6 n.2]

The answers to these questions should influence how the U.S. responds to the threats China's anti-satellite weapon represents. There is at least one way to answer these questions, i.e., "war-gaming" a massive Chinese attack on U.S. satellites, where China is only limited by the laws of physics and the known properties of their anti-satellite weapon, and see how much damage could be done. Such an exercise also reveals what the U.S. could do, and what it could not do, to minimize the consequences. The results are reported herein. They assume that China launches a massive attack and that everything works exactly as planned; every anti-satellite weapon launches, the U.S. does not respond until after the attacks are launched even though it will have overwhelming evidence ahead of time, and every anti-satellite weapon hits its target. Thus, this is a worst case scenario for the U.S. In the end, the U.S. would still possess sufficient space assets to fight a major conventional war with China, even after such an attack. America's military capabilities would be reduced, for a few hours at a time, but they would not be crippled. Back in 2001, a commission lead by Donald Rumsfeld warned of a "Pearl Harbor" in space whereby a single strike could cripple America's satellite network.1 It turns out that there is no such thing.

2NC/1NR Extensions: Harms [U.S./China Relations] 1NC #1: "Can't Solve Underlying Problems"

____Extend the 1NC #1 WORTZEL 2008 evidence. Chinese military leaders control policymaking, and this means that cooperation is worthless and doesn't translate into better relations. Even if the Aff succeeds in establishing a new space dialogue, the Chinese response will still be aggressively anti-American.

____The Chinese Military and the Chinese State Department operate on different channels of communication; even if the U.S. works with the government, the military won't listen.

SADEH, 2010
[Eligar, Astroconsulting International LLC, "Report: United States-China Space Dialogue Project," *Astropolitics,* v.8 n.1]

On the question of clarity-of-intent, the issue of China's decision-making with regard to the anti-satellite weapon test was discussed. The Chinese pointed out that the People's Liberation Army (PLA) and the Ministry of Foreign Affairs (MFA) reported up separate communication channels to the State Council,1 and that there was no direct communication between the PLA and MFA. The thinking among the Chinese scholars was that the PLA is quite insular and there was not enough attention paid to the international implications of the anti-satellite weapon test. One implication is that the test is not something that the MFA suggested or advocated for in China's decision-making process.

2NC/1NR Extensions: Harms [U.S./China Relations] 1NC #2: "Space Coop Impossible"

___Extend the 1NC #2 SADEH 2010 evidence. Other issues like security and economic interests are more important to the U.S./China relationship than space, and language barriers distort even the best policies. Any positive effects from the plan will be overwhelmed by these other issues, so there will be no increase in relations.

____Other economic and security issues will overwhelm attempts to cooperate on space.

LOGAN, 2008
[Jeffrey, Specialist in Energy Policy - Resources, Science, and Industry Division of Congressional Research Service," China's Space Program: Options for U.S.-China Cooperation", Sep 29]

China and the United States have a limited history of both civilian and military collaboration in space. China has publicly pushed for more dialogue and joint activities. Mistrust of Chinese space intentions grew in the mid-1990s when U.S. companies were accused of transferring potentially sensitive military information to China.12 Since then, cooperation has stagnated, often roiled by larger economic, political, and security frictions in the U.S.-China relationship.

____There are too many alternate causalities in U.S. space policy. Even if the plan works, it will take a long time to solve relations.

MILOWICKI AND JOHNSON-FREESE, 2008
[Gene, Director, Aviation Programs, Aviation Center of Excellence at Florida State College at Jacksonville; and Joan, Professor of National Security Affairs at Naval War College and former Director of the Center for Space Policy & Law at the University of Central Florida "Strategic Choices: Examining the United States Military Response to the Chinese Anti-Satellite Test," *Astropolitics,* v.6 n.1]

However, working with China on civil space programs will not immediately or directly defuse military tensions between the U.S. and China or assure space security. The U.S. still faces the daunting task of prioritizing its limited military space resources between space support, force enhancement, space control, and force application. The U.S. must maintain a robust military space program and protect its assets- the question is how. It still must decide whether continuing to pursue space domination is technically and economically viable—or whether to change course. But, working with China on civil matters—incrementally, likely starting with space science or Earth observation and working toward a grand exploration program—would allow both countries to build trust, the kind of trust imperative to space security in the future.

2NC/1NR Extensions: Harms [U.S./China Relations] 1NC#3: "No Satellite Attacks"

___Extend the 1NC #3 FORDEN 2008 evidence. China doesn't have the capability to rapidly attack one of our satellites, and we have enough intelligence gathering to spot an attack coming well ahead of time. This means accidental escalation is impossible because there won't be any satellite disruptions.

2NC/1NR Extensions: Harms [U.S./China Relations] 1NC #4: "No Impact to China Attack" (1/2)

____Extend the 1NC #4 FORDEN 2008 evidence. Even if China launched a massive attack and hit every target they were aiming for, the U.S. wouldn't lose enough satellite coverage to be hurt. Our military response would be overwhelming, and the war would not last long enough to escalate.

____China could only take out satellites for a few hours at a time. The U.S. military could still fight effectively.

FORDEN, 2008
[Geoffrey, Massachusetts Institute of Technology, "Viewpoint: China and Space War," *Astropolitics,* v.6 n.2]

There are usually about nine GPS satellites over China at any given time. If China somehow managed to destroy all of these, it could eliminate America's use of precision-guided munitions—for a few hours, until the orbits of other GPS satellites take them over the Taiwan Straits. Quite quickly, the constellation's other 23 satellites would fill in the gap due to their normal orbital movement. Even if it destroyed 16 satellites, China could still only interrupt GPS over the Straits for about eight hours.10 During the other 16 hours, there would be the four or more satellites present over the target area for bombing runs, unmanned aerial vehicle (UAV) flights, and ship tracking. This pattern of eight hours off followed by 16 hours when GPS could be used would be repeated every day until new satellites are launched. This outage would certainly cause difficulties; GPS guides precision bombs, helps pilot UAV spy planes, and navigate ships. U.S. casualties might increase, with air crews forced to fly missions during daylight hours, and conduct some of the dangerous missions now flown by robotic planes. No American commander would want to face this situation, though it would not be catastrophic. Further, it would not eliminate precision weaponry, UAVs, or any other American activity that depends on GPS. Keep in mind that this is the worst of the worst-case scenarios. It is highly unlikely that China could remove all the satellites over the conflict area at the same time. After all, attacking 16 satellites, all in different orbits with anti-satellite weapons launched on just four different rockets involves some complex orbital maneuvers. A much more likely scenario is that, at best, China could destroy four GPS satellites in the initial wave followed roughly seven hours later by four more, a third wave at roughly 45 minutes after that, and the final wave two hours later. Thus, the GPS attack is spread over ten hours and never eliminates all the satellites visible over the area of conflict at the same time. This Chinese attack on U.S. navigation satellites would not eliminate or even significantly degrade the U.S. ability to use precision-guided munitions.

2NC/1NR Extensions: Harms [U.S./China Relations] 1NC #4: "No Impact to China Attack" (2/2)

____After the first attack, simply changing the speed of the satellites prevents escalation.

FORDEN, 2008
[Geoffrey, Massachusetts Institute of Technology, "Viewpoint: China and Space War," *Astropolitics,* v.6 n.2]

At that point, the U.S. could effectively stop China's attack simply by changing the remaining satellites' orbital speeds by as little as 300km per hour. This very small change will have a large effect in the position of the satellite the next time it crosses over China effectively putting the satellite out of range of the prepositioned anti-satellite weapon launcher. This is not an excessive change in speed and, unless the satellite is very close to the end of its operational life, is well within the capability of its onboard fuel supply. Furthermore, it does not have to change its speed very rapidly the way a satellite would have to in order to avoid collision in its final moments. Instead, this relatively small velocity change has tens of minutes or even hours to change the position of the satellite before the next time it crosses over China. During this time, it is steadily moving away from its original position so that it could be hundreds of km from where China thought it was going to be. While it is possible that the pre-positioned anti-satellite weapon missiles could still reach their target even after it had changed, they would not know where to aim the missile. Instead, they would have to perform a radar search for the satellite in an ever expanding volume of space. This volume quickly becomes too large for even the most powerful of mobile radars. In fact, it would take large radar, perhaps 15 meters in diameter, to detect the satellite during its next pass, and China does not have many of those radars. So most, if not all, of the satellites remaining after the first hour would be safe for the next 24 hours. During that time, the U.S. could try to destroy all of China's fixed radars that are capable of tracking the satellites in their new orbits. In other words, it does not matter how many additional anti-satellite weapons China has to shoot at LEO satellites— a very different circumstance than the deep-space anti-satellite weapons.

1NC Frontline: Solvency

1. China doesn't want to cooperate on space, they have turned down Obama already.

KULACKI, 2010
[Dr. Gregory, Senior Analyst & China Program Manager at Union of Concerned Scientists, "Potential for Cooperation with China" Presented at *Moving Ahead on Space Security,* 12/15]

The Obama administration seems interested in engaging China on these issues and appears to be making a good-faith effort. Officials point to the language on space in the Joint Statement issued after President Obama's visit to China in November 2009; NASA Administrator Bolden's visit to China in November 2010; and ongoing attempts to initiate a dialog on strategic stability, which presumably would include space. Unfortunately, administration officials attempting to engage China on space are frustrated with China's apparent lack of enthusiasm. Despite the language in the November 2009 Joint Statement, China does not seem to be willing to meet the United States halfway, and is not pressing to make space an important issue in bilateral relations. More troubling, China is pursuing, in a sustained and systematic fashion, the development, testing, and deployment of counter-space capabilities.

2. There is a long time-frame for Aff solvency. If they are right that we are on the brink of war, then it will take decades to repair those relations to the point of active cooperation and development of an actual satellite.

2NC/1NR Extensions: Solvency 1NC #1: "China Won't Cooperate on Space"

____Extend the 1NC #1 KULACKI 2010 evidence. China won't agree to cooperate with the U.S. on space projects. This has been empirically proven because Obama has already tried to engage them.

____China no longer needs cooperation on space, so they have no incentive to work with the U.S.

KULACKI, 2010
[Dr. Gregory, Senior Analyst & China Program Manager at Union of Concerned Scientists, "Potential for Cooperation with China" Presented at *Moving Ahead on Space Security,* 12/15]

The growth in the size and capability of China's space sector has virtually eliminated its previous incentives for cooperation in space. China no longer needs to import foreign technology and expertise. Moreover, many of the scientists and engineers in China's space sector believe they make more rapid progress by pursuing a policy of self-reliance. As a result, a significant faction within the Chinese space community either actively opposes increased international cooperation or is disinclined to support it. Increased proficiency in the field of space technology has reduced the Chinese political leadership's anxieties about national status and international competitiveness in space. Continued international isolation is an embarrassment to the Chinese leadership, and something they would like to change, but so long as the success of its own program continues to attract international attention, continued isolation does not carry any meaningful costs. The international status Chinese leaders seek through space activity can be obtained without cooperation with the United States.

2NC/1NR Extensions: Solvency 1NC #2: "Improving Relations Takes Years"

____Extend the 1NC #2, there is a long timeframe for Aff solvency. Relations require decades of cooperative policy to build, which means the Aff impacts won't happen for years. The Cold War proves our argument: The U.S. is still trying to develop positive relations with Russia years after the Soviet Union disbanded. Add to that the development time for satellites, and we may never see their impacts.

Frontline: Add-on Advantage [Chinese Stability]

1. The Chinese Communist Party is resilient, and they have survived worse crises than the status quo.

NATHAN, 2006
[Andrew, professor of political science at Columbia University, "Is Communist Party Rule Sustainable in China?" 10/05, http://carnegieeurope.eu/events/?fa=916]

Nathan noted that the Chinese Communist Party (CCP) has been able to withstand great disturbances, both abrupt and gradual, such as the Tiananmen uprising, the acceleration of globalization, the emergence of the middle class, and the rise of the Internet. He noted that the CCP has proven resilient because it has taken meaningful policy steps – adopting a more transparent posture on HIV/AIDS, attacking corruption, abolishing agricultural fees and taxes, and constructing a social welfare system.

2. Their impact evidence is from a translated speech, and provides zero warrant or explanation for how China will be able to launch enough weapons to cause extinction.

3. The Chinese government can't collapse because there is no organized revolution, and will never lash-out more than is necessary.

NATHAN, 2006
[Andrew, professor of political science at Columbia University, "Is Communist Party Rule Sustainable in China?" 10/05, http://carnegieeurope.eu/events/?fa=916]

It is difficult to imagine a scenario in which China's political apparatus would collapse, according to Nathan. "A spark isn't going to start a prairie fire in China," he said: an isolated peasant uprising or comparable disturbance is unlikely to culminate in a countrywide conflagration. In fact, he said, the government's system of repression is designed precisely to preempt that type of occurrence. The Chinese people are highly divided and the upwardly mobile middle class doesn't want to challenge the Chinese Communist Party regime that enabled their success.

2NC/1NR Extensions: Harms [China Stability] 1NC #1: "Chinese Government Stable"

____Extend the #1 NATHAN 2006 evidence. The Chinese Communist Party is resilient and will overcome any crisis to its stability. Space failure is a minor challenge compared to AIDS, globalization or the Internet spurring rebellions. If none of these caused a global lash-out, then there is no probability for space to cause one.

2NC/1NR Extensions: Harms [China Stability] 1NC #2: "No Qualified Author for China Stability War"

____Extend the #2, their impact evidence is unqualified. China has never launched weapons of mass destruction, and there is no scenario for this happening even if the government felt challenged. Author qualifications are important because they determine which side should be believed; you should prefer our evidence from professors who have studied Chinese history and are published in peer-reviewed journals over some hack writer for an internet magazine.

2NC/1NR Extensions: Harms [China Stability] 1NC #3: "Collapse Impossible"

____Extend the #3 NATHAN 2006 evidence: there will never be a rebellion large enough to challenge the Chinese Communist Party government because there is no organized resistance in China and most powerful social groups support the government. Even if resistance forms, the Chinese governemtn has historically used low level repression to put it down, but would never resort to using weapons of mass destruction.

Space Debris Disadvantage – Table of Contents

Affirmative Answers

Background Notes: Space Debris Disadvantage

Space Debris: The term “space debris” (or “orbital debris,” or “space junk”) includes any item in space that no longer serves a useful purpose. As satellites and spaceships fly through space, they routinely lose parts. Most of this is expected, such as paint chipping or loose screws coming off, and does not seriously harm the ships. Once loose, however, even very small debris becomes a huge problem because of the speeds that items travel in space. Debris orbits the Earth in the same way that satellites do, and so each small item becomes a bullet constantly circling the Earth until it runs into something with incredible force. While most space debris consists of smaller objects, even things as large as broken satellites count and are tracked by the United Nations.

Inter-Agency Space Debris Coordination Committee (IADC): The United Nations holds annual conferences on the dangers of space debris, and encourages member nations to share data they have (most countries, including the United States, try to track large debris with satellites so that they can avoid collisions). The IADC is a committee in charge of organizing international cooperation to deal with the debris problem. The United Nations considers space debris to be one of the 10 most important problems in the world, and set up a website with a lot of additional information: http://www.un.org/en/events/tenstories/08/spacedebris.shtml

Space Debris Disadvantage – 1NC Shell (1/3)

A) Uniqueness: International guidelines are minimizing the amount of new debris being created by space missions.

PEREK, 2004
[Lubos, Astronomical Institute, Academy of Sciences in Prague, "Space Debris Mitigation and Prevention: How to Build a Stronger International Regime" *Astropolitics,* v.2 n.2]

As regards the above scientific and technical aspects, the problem of preventing the generation of new space debris is on the way to a promising way and to an acceptable arrangement on to its worldwide acceptance. Launching states are aware of the risk of space debris, they are taking preventive measures and these measures are discussed in the IADC and in the UN COMMITTEE ON PEACEFUL USES OF OUTER SPACE. An international agreement or recommendation can be expected. It is even possible that the International Organization for Standardization (ISO) will formulate a set of space debris mitigation guidelines.

B) Link: New space missions will increase the debris orbiting Earth, and this makes satellite destruction inevitable.

JAKHU, 2007
[Ram, Institute of Air and Space Law, McGill University, "Legal Issues of Satellite Telecommunications, The Geostationary Orbit, and Space Debris," *Astropolitics*, v.5, n.2]

In 2007, the world is celebrating the 50th anniversary of the dawn of the space age, which has brought a new era with great potential for the betterment of mankind. Concomitantly, increasing space activities are generating man-made space pollution, particularly space debris, and consequently are making the use of outer space more expensive and dangerous. It is generally believed that the problem of space debris is serious.2 Pieces of space debris "travel at speeds over 22,000 miles an hour (or 35,000 kilometers (km) an hour). At such high velocity, even small debris can rip holes in a spacecraft or disable a satellite."3 No satellite can be reliably protected against this kind of destructive force. Space debris created by anti-satellite tests will pose significant danger to civilian and commercial satellites and could result in denial of access to space in practice to all. In this regard, it becomes an imperative to assess the adequacy, and inadequacy, of applicable international space law, and to explore new approaches on how to fill-in lacunae in the current legal regime.

Space Debris Disadvantage – 1NC Shell (2/3)

C) Impact:

1. **The existence of anti-satellite weapons has made every country nervous. Losing a satellite to debris will be misinterpreted, leading to escalation and war.**

GREGO AND WRIGHT, 2010
[Laura, senior scientist in the Global Security Program of the Union of Concerned Scientists; and David, senior scientist and co-director of the UCS Global Security Program; "Securing the Skies Ten Steps the United States Should Take to Improve the Security and Sustainability of Space," Nov, http://www.ucsusa.org/assets/documents/nwgs/securing-the-skies-full-report-1.pdf]

Third, threats to satellites can amplify the risks of other undesirable outcomes, such as the creation or escalation of terrestrial crises. The development of anti-satellite weapon capabilities by one country could create enough suspicion and tension to spur the development of anti-satellite weapons by others. Because so much of satellite and space-launch technology is dual-use, development of space systems would increase the chances of dangerous misinterpretations, especially in the absence of clearly stated policies and meaningful communication between countries. Moreover, if anti-satellite weapons are being developed and tested, the loss of an important satellite during a time of political tension could be interpreted—rightly or wrongly—as an attack. Quickly determining the reason for the satellite's disruption might be difficult or impossible, and this incomplete information together with the absence of reliable channels for communication between countries that are not close allies could exacerbate the crisis even further, possibly leading to its escalation. Recent "war game" conflict simulations confirm that such a satellite loss could have very serious consequences.6

2. **Specifically, satellite malfunctions will be misread by U.S. military personnel as an attack on Taiwan, and will cause a U.S. – China war.**

WORTZEL, 2008
[Larry M., Colonel, United States Army (Retired), "The Chinese People's Liberation Army and Space Warfare," *Astropolitics*, v.6, n.2]

The problem in this reasoning is that there is no consideration given to a likely American reaction to the disruption of its missile early warning systems. One possible reaction by the U.S. is that it might well think it is coming under immediate attack and launch its own strike against China's strategic missile forces. Another reasonable reaction by U.S. forces might be to strike the source of the Chinese attack, particularly if it came from a ground based laser or direct ascent launch. Even if such a reaction by the U.S. used conventional weapons, the PLA may find it has created a deeper crisis that led to an American strike on Chinese soil. These four PLA authors do not seem to have considered the ramifications of their own research.

Space Debris Disadvantage – 1NC Shell (3/3)

3. And, a U.S. attack on China will escalate to nuclear war.

STRAITS TIMES, 2000
["Regional Fallout: No One Gains in War Over Taiwan," 6/25, lexis-nexis]

THE high-intensity scenario postulates a cross-strait war escalating into a full-scale war between the US and China. If Washington were to conclude that splitting China would better serve its national interests, then a full-scale war becomes unavoidable. Conflict on such a scale would embroil other countries far and near and -- horror of horrors -- raise the possibility of a nuclear war. Beijing has already told the US and Japan privately that it considers any country providing bases and logistics support to any US forces attacking China as belligerent parties open to its retaliation. In the region, this means South Korea, Japan, the Philippines and, to a lesser extent, Singapore. If China were to retaliate, east Asia will be set on fire. And the conflagration may not end there as opportunistic powers elsewhere may try to overturn the existing world order. With the US distracted, Russia may seek to redefine Europe's political landscape. The balance of power in the Middle East may be similarly upset by the likes of Iraq. In south Asia, hostilities between India and Pakistan, each armed with its own nuclear arsenal, could enter a new and dangerous phase. Will a full-scale Sino-US war lead to a nuclear war? According to General Matthew Ridgeway, commander of the US Eighth Army which fought against the Chinese in the Korean War, the US had at the time thought of using nuclear weapons against China to save the US from military defeat. In his book The Korean War, a personal account of the military and political aspects of the conflict and its implications on future US foreign policy, Gen Ridgeway said that US was confronted with two choices in Korea -- truce or a broadened war, which could have led to the use of nuclear weapons. If the US had to resort to nuclear weaponry to defeat China long before the latter acquired a similar capability, there is little hope of winning a war against China 50 years later, short of using nuclear weapons. The US estimates that China possesses about 20 nuclear warheads that can destroy major American cities. Beijing also seems prepared to go for the nuclear option. A Chinese military officer disclosed recently that Beijing was considering a review of its "non first use" principle regarding nuclear weapons. Major-General Pan Zhangqiang, president of the military-funded Institute for Strategic Studies, told a gathering at the Woodrow Wilson International Centre for Scholars in Washington that although the government still abided by that principle, there were strong pressures from the military to drop it. He said military leaders considered the use of nuclear weapons mandatory if the country risked dismemberment as a result of foreign intervention. Gen Ridgeway said that should that come to pass, we would see the destruction of civilisation. There would be no victors in such a war. While the prospect of a nuclear Armaggedon over Taiwan might seem inconceivable, it cannot be ruled out entirely, for China puts sovereignty above everything else.

2NC/1NR Extensions: Overview

In the status quo, countries have agreed to limit space activities that would risk adding new debris to Low-Earth Orbit. The plan creates a new space mission that will inevitably create waste and debris that will gather around the Earth, posing a huge risk to satellites because even the smallest paint chip can detonate when travelling at orbital speeds. When a satellite is hit by this new debris, the communication blackout will cause paranoid policymakers to think that the most likely war scenario, a Chinese invasion of the Taiwan Strait, is happening, and this will escalate to nuclear war between the United States and China.

The disadvantage outweighs the Affirmative case:

a) Probability: Every space mission creates debris, so it is guaranteed that the plan will add to the orbiting junk ring around Earth. As more is built up, satellite destruction becomes inevitable.

b) Timeframe: Both the U.S. and China have itchy trigger fingers, so a satellite explosion will be interpreted as an attack. This leads to immediate retaliation and escalation to full-scale conflict.

c) Magnitude: A nuclear war between the U.S. and China would draw in every great power, including Russia, India, and Pakistan, and this results in the release of every nuclear weapon on Earth. Extinction is guaranteed.

2NC/1NR Extensions: Answers To 2AC #1: "Non-Unique: Satellites" (1/2)

They say non-unique because of satellites, but…

____ Extend the 1NC Uniqueness PEREK 2004 evidence. Countries are cooperating to clean up space debris and minimize the amount of new debris put into outer space now. This ensures that current satellites will be safe from collisions.

____And, more evidence that countries are working to prevent new debris from being created, but once it exists it is impossible to remove.

PEREK, 2004
[Lubos, Astronomical Institute, Academy of Sciences in Prague, "Space Debris Mitigation and Prevention: How to Build a Stronger International Regime" *Astropolitics,* v.2 n.2]

It is much easier to prevent the generation of new debris than to remove old debris from space. All space agencies and designers of spacecraft have been paying attention to minimizing debris and to removing causes for breakups and explosions of spacecraft.

____And, our evidence is more recent than theirs. Countries are cooperating now to clear space debris and share data.

GREGO AND WRIGHT, 2010
[Laura, senior scientist in the Global Security Program of the Union of Concerned Scientists; and David, senior scientist and co-director of the UCS Global Security Program; "Securing the Skies Ten Steps the United States Should Take to Improve the Security and Sustainability of Space," Nov, http://www.ucsusa.org/assets/documents/nwgs/securing-the-skies-full-report-1.pdf]

Cooperation is also necessary to address the growing threat from space debris. Providing leadership in the international efforts to address this problem, the United States began working with other countries in the 1990s to develop voluntary debris-mitigation guidelines through the Inter-Agency Space Debris Coordination Committee (IADC);16 these guidelines were adopted by the United Nations in 2007 (NASA 2007). This mitigation effort has been partially successful and, like the ITU, illustrates the benefits of international coordination. But the IADC guidelines are not binding, and no mechanisms are in place to enforce them. As a result, they are not as successful in stopping debris production as they could be, and not as effective as is necessary.17 Debris and overcrowding in space are somewhat less of a problem when satellite operators know where other objects are and can avoid hitting them. Better cooperation in monitoring the orbits of space objects would thus increase the ability of the United States and all other space actors to use this environment safely and efficiently. Toward that end, accurate tracking information about active satellites and debris is needed for managing traffic and coordinating activities in space, and in particular for preventing collisions.

2NC/1NR Extensions: Answers To 2AC #1: "Non-Unique: Satellites" (2/2)

____Even if there is debris now, we haven't reached the point of complete orbital congestion because voluntary guidelines are helping.

WEEDER, 2011
[Brian; Secure World Foundation; "Overview of the legal and policy challenges of orbital debris removal" *Space Policy,* v. 27]

In the late 1970s, two influential NASA scientists, Burt Cour-Palais and Donald Kessler, laid the scientific groundwork for what became to be known as the "Kessler syndrome" [4]. They predicted that at some point in the future the population of artificial space debris would hit a critical point where it grew at a rate faster than the rate at which debris is removed from orbit through natural decay into the Earth's atmosphere. According to their models, large pieces of space debris would get hit by smaller pieces of debris, creating hundreds or thousands of new pieces of small debris which could then collide with other large pieces. This "collisional cascading" process would increase the population of space debris at an exponential rate and significantly increase the risks and costs of operating in space. Although the exact tipping point at which this collisional cascading will occur is still a matter of debate, research and modeling done by both NASA and the European Space Agency show that the growth of the space debris population will accelerate, largely as a result of debris-on-debris collisions [5]. The voluntary space debris mitigation guidelines developed by the Inter-Agency Space Debris Coordination Committee (IADC) and endorsed by the United Nations will reduce some of this growth. But, ultimately, actively removing space debris will be necessary to deal with the problem in the longterm [6].

____We haven't reached the brink yet because the debris density is too low. The plan pushes us over the brink where collisions become unavoidable.

BREARLEY, 2005
[Andrew, University of Southampton; "FASTER THAN A SPEEDING BULLET: ORBITAL DEBRIS," *Astropolitics,* v.3 n.1]

The population of debris in LEO is rising towards a critical situation known as the 'Kessler Syndrome'. At this point, there are so many objects in orbit that even without additional satellites deployments, the population will rise due to cascading, resulting from random collisions causing larger objects to fragment. The total mass would remain constant, but it would be redistributed in favour of smaller objects.73 Fragmentations can be divided into three categories: accidental failures of propulsion systems, deliberate actions and unknown causes.74 Deliberately destroyed satellites are usually military, either those that have come to the end of their life time which their owners do not want to be inspected by others,75 or those tested as part of space weaponry systems.76 Fragmentation is considered a serious threat; therefore, when satellites are placed in orbit the remaining fuel is vented from spent rocket stages to reduce the possibility of accidental explosions.77 The Inter-Agency Space Debris Coordination Committee (IADC) guidelines for debris, as presented to the United Nations Committee on the Peaceful Uses of Outer Space (UNCOMMITTEE ON PEACEFUL USES OF OUTER SPACE), further state that batteries on board spacecraft should be designed such that they will not result in fragmentations when the craft becomes defunct.78 This process of pacification is important, as non-pacified upper rocket stages have been involved in a third of all known fragmentations in orbit.79 The requirement for mitigation measures is illustrated by the fragmentations that have been observed; eight separate occasions have individually produced over 240 pieces of debris.80 Should the Kessler Syndrome occur; the Earth would be surrounded by a permanent 'debris belt', just as Saturn has a ring around it. Although such chain reactions remain theoretical at present, expert opinion holds that two altitudes in LEO may have already reached 'critical density', 900–1,000km and 1,500 km.81 The possibility of chain reactions is the most dangerous aspect of debris production;82 demonstrated by the fact that 85 per cent of all debris greater than 5 cm in diameter may be the product of fragmentation of upper rocket stages or spacecraft.83

2NC/1NR Extensions: Answers To 2AC #2: "China Won't Miscalculate"

They say China won't misinterpret debris collisions, but…

____ Extend GREGO AND WRIGHT 10 and WORTZEL 8. The existence of anti-satellite weapons makes every explosion in space seem like offensive behavior rather than an accident, and the importance of the satellite network means that policymakers will be on high-alert. This is especially true because China has tested anti-satellite weapons and is publicly against U.S. intervention in the region.

____And, here's more evidence that policymakers can't distinguish between a debris collision and a military strike.

MARSHALL, 2008
[Dr. Will, Academic Advisor in Small Spacecraft Office at Singularity University, and NASA Ames Research Center; "Reducing the Vulnerability of Space Assets: A Multitiered Microsatellite Constellation Architecture," *Astropolitics,* v.6 n.2]

Compounding the problem is a lack of space situational awareness (SSA). Actors are not always able to distinguish between satellite failures caused by environmental factors and satellite component age degradation or that due to a deliberate attack, let alone, if the latter, what kind of deliberate attack. This has led many experts to argue that greater SSA is critical to improvements in space security. The inherently dual-use nature of many space capabilities complicates this further. For example, it is largely impossible to distinguish whether a recently launched satellite has the purpose of being a dedicated space mine or not—in fact, there are many satellites that are launched for a myriad of functions that could have space mine capabilities. The physical features of space are important in order to understand how critical each of the proposed vulnerabilities. For each of the vulnerabilities one should look at the offense=defense debate—what can an adversary do to attack a satellite and what can be done to protect from such attacks.23

2NC/1NR Extensions: Answers To 2AC #3: "Military Can Survive Debris"

They say debris doesn't take out military satellites, but…

____Empirically, debris collisions have destroyed satellites. If a military satellite is hit, it could cause accidental war.

JAKHU, 2007
[Ram, Institute of Air and Space Law, McGill University, "Legal Issues of Satellite Telecommunications, The Geostationary Orbit, and Space Debris," *Astropolitics*, v.5, n.2]

There have been several recorded close encounters with space debris90 and one confirmed collision, in which the spent third stage of Ariane Flight 16 collided with and disabled the French military micro-satellite CERISE on 24 July 1996.91 Several Space Shuttle flights, the Hubble Space Telescope, the Long Duration Exposure Facility, and the International Space Station (ISS) have suffered numerous times damage due to space debris. In 1985, a U.S. kinetic energy anti-satellite weapon test produced over 250 pieces of catalogued debris, some of which came within 1.3km of the ISS. The last piece of debris generated from this test de-orbited almost twenty years later in 2002.A collision of a piece of space debris with an active military satellite, such as the CERISE accident, during a period of high tension could have very serious implications between the concerned states. Debris not only pose a threat to active satellites in orbit, but can also cause damage on the surface of the Earth. For example, the Soviet satellite COSMOS 954 disintegrated in 1978 and scattered radioactive debris over a large area in Northern Canada.92

____Even small debris is travelling so quickly that it will destroy a satellite.

BREARLEY, 2005
[Andrew, University of Southampton; "FASTER THAN A SPEEDING BULLET: ORBITAL DEBRIS," *Astropolitics,* v.3 n.1]

To comprehend the danger which even a fleck of paint can pose it is necessary to consider Newton's second law of motion: Force = Mass x Acceleration8 The force involved in a collision dictates the damaged caused. Therefore, although many pieces of debris have very small mass, they can cause a large amount of damage because collisions involving them have enormous acceleration. More specifically, deceleration – pieces of debris have very high velocities that are instantly reduced to zero on impact. The velocity of a piece of debris relative to another object in low Earth orbit (LEO) is approximately 9–11km=sec,9 ten times faster than a high-powered rifle bullet.10 To provide an example, travelling at this speed the distance from London to New York would be covered in a little under ten minutes. Further, a collision with a 1 cm aluminum sphere, travelling at the velocities associated with LEO, would be the equivalent of an impact with a 400 lb safe travelling at 60 mph.11 The nature of collisions at high velocity creates further problems. The energy involved is such that, upon impact, a piece of debris will liquify. Therefore, instead of one piece impacting with a satellite, there may be many thousands of smaller particles causing damage.12 In short, sufficient energy is involved in such impacts to cause enormous damage to satellites.

2NC/1NR Extensions: Answers To 2AC #4: "Debris Burns Up"

They say debris burns up before reaching Earth, but…

____ Don't buy this evidence. "Astroprof" is an anonymous blogger. Even if she is a college professor, we can't analyze qualifications if she won't print her name. Also, the evidence says debris takes a long time to re-enter the Earth's atmosphere. Even if it will burn up eventually, accidents occur in the short-term.

____And, debris can't be stopped, and once its created it will last forever.

JAKHU, 2007
[Ram, Institute of Air and Space Law, McGill University, "Legal Issues of Satellite Telecommunications, The Geostationary Orbit, and Space Debris," *Astropolitics*, v.5, n.2]

According to Wang Ting and David Wright, "Satellites cannot be shielded effectively against collisions at this speed with debris larger than about 1 cm. Moreover, debris smaller than about 10 cm cannot be reliably tracked from the ground to give warning of a possible collision."88 Also, space debris can remain in orbit for very long periods of time depending on the altitude and mass of the object. Debris in LEO might fall back to Earth over short periods of time due to atmospheric drag, but pieces of debris in MEO and GEO will remain in outer space for hundreds or even thousands of years.89

____And, our timeframe is faster than the debris can burn up. As soon as new objects go into space, they are hit by debris.

BREARLEY, 2005
[Andrew, University of Southampton; "FASTER THAN A SPEEDING BULLET: ORBITAL DEBRIS," *Astropolitics,* v.3 n.1]

Any object placed in orbit will immediately be exposed to risk from debris impacts. The International Space Station was found to have impact holes after it had been in orbit for less than two weeks.17 The constant barrage of debris particles which space based facilities experience has also been demonstrated by the breakage of exterior light bulbs on the Mir space station.18

2NC/1NR Extensions: Answers To 2AC #5: "No Satellite Damage" (1/2)

They say debris doesn't damage satellites, but…

____Even if space is vast, debris collects in low-earth-orbit and this makes the likelihood of collisions high.

BREARLEY, 2005
[Andrew, University of Southampton; "FASTER THAN A SPEEDING BULLET: ORBITAL DEBRIS," *Astropolitics,* v.3 n.1]

To conceptualise the problem of debris a nautical parallel is of use. A small boat at sea has a very low probability of collision with a large vessel; the oceans are vast and in relation the number of ships is small. However, if that same small boat is considered in the English Channel then it is in far greater danger, as the Channel is a busy shipping lane used far more than a stretch of open sea. This situation is replicated in space, the cosmos as a whole is of incomprehensible size; however, human activities are located in a very small and very useful part of that vastness. Thus a craft from Earth would be in very little danger from space debris were it travelling the enormous distances between planets; however, if that craft is still within Earth orbit it has a greatly increased probability of impact with debris.

____Even if only one satellite has been destroyed before, the plan makes the debris problem worse and you should default to the position that future destruction will be inevitable.

BREARLEY, 2005
[Andrew, University of Southampton; "FASTER THAN A SPEEDING BULLET: ORBITAL DEBRIS," *Astropolitics,* v.3 n.1]

One serious collision in over 40 years of space activity may appear of little concern. However there have been other instances of satellite failures that may have been due to collision with debris. 21 The break-up of the Soviet Kosmos 1275 is strongly suspected to be the result of debris impact.22 Also, many debris impacts have caused holes in space facilities, but not enough damage to disable the system. For example the Hubble Space Telescope was found to have an impact hole 19mm in diameter in 1993.23 Such an impact on another craft, especially one with a crew, could have been fatal. Therefore, the assumption should not be made that current spacecraft are capable of surviving in the future debris environment.

____As more debris accumulates, the likelihood of satellite collisions will grow until incidents are common.

GREGO AND WRIGHT, 2010
[Laura, senior scientist in the Global Security Program of the Union of Concerned Scientists; and David, senior scientist and co-director of the UCS Global Security Program; "Securing the Skies Ten Steps the United States Should Take to Improve the Security and Sustainability of Space," Nov, http://www.ucsusa.org/assets/documents/nwgs/securing-the-skies-full-report-1.pdf]

First, the crowding of space increasingly poses collision hazards. The high speeds of objects in orbit render debris even the size of a marble capable of damaging or destroying a satellite. Three active satellites are known to have been hit by debris in the past 15 years, and it is estimated that under current conditions a collision between an active satellite and a piece of debris larger than a marble will occur every two to three years (Wright 2009).

2NC/1NR Extensions: Answers To 2AC #5: "No Satellite Damage" (2/2)

____Debris will most likely develop in Low Earth Orbit, where the most valuable satellites are.

BREARLEY, 2005
[Andrew, University of Southampton; "FASTER THAN A SPEEDING BULLET: ORBITAL DEBRIS," *Astropolitics,* v.3 n.1]

LEO is the lowest altitude at which orbit can be sustained; it exists up to approximately 2,000km from the surface of the Earth27 and it is in this area that the majority of debris exists.28 There is a simple reason why LEO is the most polluted section of near Earth space; it is the area that has been utilised most. A wide range of satellites are to be found there, including those conducting astronomical observation,29 along with those for meteorology and navigation;30 as this orbit provides optimal viewing of the planet it is also used for military surveillance satellites.31 There are also projected future means in which LEO will be utilised, the most promising being pharmaceuticals based upon crystals grown in the absence of gravity32 and as a launching point for missions carrying crews to other planets.33

2NC/1NR Extensions: Answers To 2AC #6: "Telescopes Solve Debris"

They say telescopes solve for debris, but…

____ This evidence only says that satellites could track the debris, not that companies will actually use policies based on that tracking. Our evidence is more conclusive that the probability of accidents is still high.

____And, the U.S. has limited debris-detection information, and even the best satellites are limited.

GREGO AND WRIGHT, 2010
[Laura, senior scientist in the Global Security Program of the Union of Concerned Scientists; and David, senior scientist and co-director of the UCS Global Security Program; "Securing the Skies Ten Steps the United States Should Take to Improve the Security and Sustainability of Space," Nov, http://www.ucsusa.org/assets/documents/nwgs/securing-the-skies-full-report-1.pdf]

The United States has by far the most capable space surveillance system—the SSN—but this system nevertheless has limitations. For example, it lacks the capability to accurately track all potentially hazardous pieces of debris, and it cannot monitor maneuvers and determine changes in orbit with the timeliness that may sometimes be desired. Some of these shortcomings are due to the limited number of sensors and to their scarcity in certain parts of the globe, particularly the southern hemisphere.

2NC/1NR Link Extensions – Space Policy (General)

____Every space mission creates more debris.

JAKHU, 2007
[Ram, Institute of Air and Space Law, McGill University, "Legal Issues of Satellite Telecommunications, The Geostationary Orbit, and Space Debris," *Astropolitics*, v.5, n.2]

There are various forms of space debris, but it mostly "consists of jettisoned spacecraft parts, nuts and bolts, solar cells, abandoned satellites, paint chips, nuclear reactor cores, spent rocket stages, and solid fuel fragments."76 All space missions inevitably create space debris, e.g., rocket booster stages are expended and released to drift in space and exhaust products are created. The testing of anti-satellite weapons has also created hundreds of pieces of debris. It is the space powers that have created the problem, particularly the U.S. and Russia. Together, they have accounted for more than 80% of all debris, though the space activities of other space-faring nations are contributing to the problem.

2NC/1NR Link Extensions – Lunar Mining Aff

____The next generation of private lunar missions will leave orbiting debris.

ASTROPROF, 2008
[No name given; college professor, teaching physics and astronomy; "Lunar Space Debris"10/28, http://astroprofspage.com/archives/1790]

But, if we really do go back to the Moon with manned missions, we'll be generating more space debris. Today, there are already several unmanned lunar missions studying the Moon from lunar orbit. Even more are planned. Soon, there will be a number of missions in lunar orbit, each with the potential for more space debris. Recent missions have continued the practice of ending the mission by deliberately crashing the spacecraft into the lunar surface, but there is no guarantee that all lunar missions will end that way. With many international parties involved, and perhaps some private lunar missions, there is always the possibility that somebody will leave debris in orbit. Even if they don't mean to do so, there is the possibility that a spacecraft will fail before it is sent into its final orbit into a controlled crash into the lunar surface. This could pose a threat to astronauts on the lunar surface. In a story that I read on Space.com, it is clear that NASA officials have thought of this. There is a program to limit any possible space debris. But, of course, this program will require cooperation of all space agencies, government and private, sending spacecraft towards the Moon. I am glad, though, that they are at least thinking of this.

2NC/1NR Link Extensions – Missile Defense Aff

____Weaponizing space would create tons of new debris.

BREARLEY, 2005
[Andrew, University of Southampton; "FASTER THAN A SPEEDING BULLET: ORBITAL DEBRIS," *Astropolitics,* v.3 n.1]

The word 'peaceful' has become ambiguous and subject to considerable interpretation.172 A current trend insists it means 'non-aggressive' rather than 'non-military';173 indeed, the 2001 Rumsfeld Commission report explicitly states that this is the American interpretation.174 This broad definition goes beyond spy satellites monitoring arms control treaties, which can reasonably be considered both military and peaceful. Rather it has resulted in extensive militarisation of Earth orbit, to the extent that virtually every aspect of modern high technology warfare is dependent upon satellite-based technology.175 When considered in terms of debris this does not provide a problem as the majority of these resources are for communications, targeting and monitoring. However actual weaponised warfare in space would most probably involve Anti-Satellite weapons, either kinetic kill vehicles, conventional explosives or direct energy weapons.176 Utilisation of the latter two would create a considerable amount of debris as the target object would explode; however, kinetic kill vehicles would produce an even greater quantity of debris, as they seek to manoeuvre along side a satellite and then explode. The weapon is loaded with fragments in order to create a cloud of debris and destroy the target.177

2NC/1NR Impact Extensions - Turns case – Economic Collapse

____Satellite availability is the cornerstone of global economic growth.

JAKHU, 2007
[Ram, Institute of Air and Space Law, McGill University, "Legal Issues of Satellite Telecommunications, The Geostationary Orbit, and Space Debris," *Astropolitics*, v.5, n.2]

It is generally known that telecommunications infrastructure and services are indispensable tools for socioeconomic and cultural development of a country. Telecommunication "facilities and services are not only the consequence of economic growth, but a prerequisite for overall development; telecommunications are an integral part of the national and international development process." 1 About two-thirds of world's population does not have reasonable access to basic telecommunications and the remaining one-third keeps expanding its communications requirements. This implies that there is a need for a major expansion of telecommunications in the world. Consequently, there might be an enormous market for telecommunications equipment and services. It is undisputed that satellites are the best means for a rapid expansion of telecommunications, particularly for thin-route traffic, and mobile and broadcasting services. Because of the unique advantages of satellites, their use is, and will be, expanding. However, the level of that expansion is, and will be, greatly determined by the availability of the two indispensable tools for satellites, which are orbital positions and radio frequencies, i.e., electromagnetic spectrum.

2NC/1NR Impact Extensions - Turns case –U.S. Leadership

____Active satellite capability is critical to U.S. military operations.

JAKHU, 2007
[Ram, Institute of Air and Space Law, McGill University, "Legal Issues of Satellite Telecommunications, The Geostationary Orbit, and Space Debris," *Astropolitics*, v.5, n.2]

The demand for radio frequencies for military purposes is increasing as well. The national and international conflicts and crises, including the global war on terror necessitate instant, reliable, extensive, and versatile communications. Satellites seem to serve such demand readily and efficiently. Therefore, according to Peter Galance, "The wars in Iraq and Afghanistan are eating up massive satellite bandwidth to support coalition military operations. [The] military use will generate 46% of all satellite service revenues from 2002 to 2007."25 This implies that radio frequencies required for civilian and commercial use become limited.

____The U.S. military is entirely dependent on satellite security; if the network goes down, the military is helpless.

MARSHALL, 2008
[Dr. Will, Academic Advisor in Small Spacecraft Office at Singularity University, and NASA Ames Research Center; "Reducing the Vulnerability of Space Assets: A Multitiered Microsatellite Constellation Architecture," *Astropolitics,* v.6 n.2]

For better or worse, it is clear that the U.S. military is to some significant extent dependent on its key satellites, which number about 86–105 operational satellites at present. These satellites constitute a significant part of the eyes, ears, and central nervous system of the modern military.4 A practical example that helps to illustrate this is the case of the U.S.-led invasion of Iraq in 2003. First, the decision to go was based in part on satellite imagery and signals intelligence from satellites; whether or not it was interpreted or used correctly is a separate issue. Second, the planning and operation were facilitated by satellite imagery. Third, many planes, ships, tanks, and units' positions were known through Global Positioning System (GPS) satellites, and even most munitions were guided by GPS. Fourth, the operation was commanded from the U.S. in large part through the use of communications satellites. Perhaps more importantly than any of the functions in the Iraq example, early warning (EW) satellites are the U.S.'s and Russia's first warning of nuclear missile attack. As Gray classified, space assets have moved from being "useful and important" to an "indispensable adjunct" in the military over the last decade.5

2NC/1NR Impact Extensions - Turns case –U.S. Leadership (1/2)

____Satellites are necessary for every aspect of military dominance, including deterring rogue states and fighting terrorism.

MARSHALL, 2008
[Dr. Will, Academic Advisor in Small Spacecraft Office at Singularity University, and NASA Ames Research Center; "Reducing the Vulnerability of Space Assets: A Multitiered Microsatellite Constellation Architecture," *Astropolitics,* v.6 n.2]

Most current U.S. military space assets were designed for the world of the Cold War but despite this, these assets are still very relevant for a post-Cold War world—a world where the main threats include rogue or failing states and terrorism, and traditional state actors, and where many technologies are advancing and proliferating. In general terms, space is critical in the broad context of modern strategy and the Revolution in Military Affairs (RMA).8 Space is a crucial enabler to key changes that are driven by RMA, including needs for: 1. precision-guided munitions; 2. network-centric warfare capabilities; 3. more specialized forces; and 4. information operations.9 156 This context helps one to recognize that the needs for space in the near future may be set to increase. Thus, it seems that the space assets designed for a world of the Cold War are certainly relevant today. More specifically, going through the five major contemporary military satellite uses, one can assess them qualitatively and to a first order in light of the new threat portfolio. This entails: (1) EW satellites are still needed, perhaps even more so since there has been an increase in the number of independent actors with long-range missile technology, and thus, increased probability of unexpected missile launch; (2) reconnaissance satellites are still needed to discern the activities of rogue states (e.g., to monitor compliance with treaties on nuclear facilities), and in fact today's need is for more and more difficult collection against many more targets worldwide; (3) the military demand for communications bandwidth on satellites has risen sharply over the past decade as demonstrated vividly by the very large demand during the U.S.led invasion of Iraq in 2003 where the U.S. military used some 700 megabytes per second of satellite communications bandwidth, which can be compared to just 99 megabytes per second during Operation Desert Storm in 1991;10 (4) the same is true for the growth in military use of navigation satellites (e.g., GPS-guided precision missiles) whose role in the same period moved from guiding six percent to 68% of missiles over the same period; and (5) signals intelligence satellites are still very important for use with both rogue states and terrorists.

2NC/1NR Impact Extensions - Turns case –U.S. Leadership (2/2)

____Satellites are uniquely vulnerable, and a single explosion could paralyze the U.S. military.

GOUVEIA, 2005
[William Jr, "An Assessment of Anti-Satellite Capabilities and their Strategic Implications," *Astropolitics,* v.3 n.2]

Precision munitions miss their targets, inadvertently destroying mosques and hospitals. Companies of tanks lose their way in the desert, bypassing their objectives and stumbling into ambushes. Special forces teams deployed into enemy territory cannot communicate to coordinate their extraction. Meanwhile, at CENTCOM headquarters, strategic operational and intelligence communications are rendered inoperable and commanders lose battlespace awareness. This scenario may be far fetched, but it illustrates the reduced effectiveness of American forces if they are denied access to the satellite architectures upon which they heavily rely. The success of space-based communications, navigation and reconnaissance programs – in both the commercial and military arenas – presents a significant vulnerability. Intuitively, as the economic importance and military indispensability of space systems grows, so will their attractiveness as targets. Successful attacks against the ground-based infrastructure, communications capabilities or space-based vehicles of satellite architectures could be extremely effective against selected critical satellites, such as reconnaissance satellites which are small in number, extremely costly and difficult to replace quickly. Although causing such disruption would involve significant operational challenges, economic costs and diplomatic risks, it is well within the realm of technological possibility. This essay shall describe the current capabilities of anti-satellite technology, assess its military impact and consider its broader policy and security implications.

2NC/1NR Impact Extensions - Turns case – Missile Defense (1/2)

____Space Debris will destroy any lasers we put in orbit, rendering missile defense useless.

SPACY, 2003
[William II, career Air Force officer; "Assessing the Military Utility of Space-Based Weapons," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

One final problem is that of transforming a laser into a viable weapon. To do this, we will need to make it robust enough to survive years of inactivity in the hostile environment of space. The threat of being struck by space debris along with environmental factors such as radiation, charged particle bombardment, and thermal cycling make space a challenging environment in which to operate. While all satellites must contend with these problems, lasers are particularly delicate and are extremely dependent on the precise alignment of their components if they are to work. As demonstrated by the near failure of a test of the MIRACL laser, it is difficult to get a high-power laser to work reliably on the ground.26 Building such a laser to withstand the rigors of launch and subsequent storage in orbit will be extremely challenging. Couple these difficulties with the consequences of failure, since they would only used in times of dire need, and the prospects of a feasible space-based laser become dim indeed.

2NC/1NR Impact Extensions - Turns case – Missile Defense (2/2)

____Debris increases will make it impossible to field missile defense because the orbiters will be destroyed.

HITCHENS, 2008
[Theresa, vice president of the Center for Defense Information; "Space Wars - Coming to the Sky Near You?" *Scientific American*; 2/18; http://www.sciam.com/article.cfm?id=space-wars-coming-to-the-sky-near-you]

One of the most serious technological challenges posed by space weapons is the proliferation of space debris, to which I alluded earlier. According to investigators at the air force, NASA and Celestrak (an independent space-monitoring Web site), the Chinese antisatellite test left more than 2,000 pieces of junk, baseball-size and larger, orbiting the globe in a cloud that lies between about 200 kilometers (125 miles) and 4,000 kilometers (2,500 miles) above Earth's surface. Perhaps another 150,000 objects that are a centimeter (half an inch) across and larger were released. High orbital velocities make even tiny pieces of space junk dangerous to spacecraft of all kinds. And ground stations cannot reliably monitor or track objects smaller than about five centimeters (two inches) across in low Earth orbit (around a meter in geostationary orbit), a capability that might enable satellites to maneuver out of the way. To avoid being damaged by the Chinese space debris, in fact, two U.S. satellites had to alter course. Any shooting war in space would raise the specter of a polluted space environment no longer navigable by Earth-orbiting satellites.

Space Debris Disadvantage 2AC (1/3)

1. Non-unique: tons of satellites are going up every year.

JAKHU, 2007
[Ram, Institute of Air and Space Law, McGill University, "Legal Issues of Satellite Telecommunications, The Geostationary Orbit, and Space Debris," *Astropolitics*, v.5, n.2]

Euroconsult "expects 960 satellites to be launched worldwide over the next ten years compared to 900 in the previous ten years. Satellite demand will be diversified, with civilian programs expected to represent two-thirds of the 616 government satellites to be launched from 2007 to 2016; the remainder will be military satellites."13 This expected increase in satellite acquisition is due to an increase in demand for more transponders needed for a variety of telecommunications services. Figure 1 provides a forecast for transponder demand. It is interesting to note that "for the first time since the firstgeneration LEO constellations sputtered early in the decade, demand in that segment is expected to grow, too, as Globalstar and Orbcomm showed last year. . . LEO launches should ramp up rapidly over the next decade as operators replenish their existing constellations and launch higher data rate, second-generation networks. Euroconsult forecasts 120 launches over the ten-year period, from 12 this year to a peak of 28 in 2011."15

2. No internal link: U.S. and Chinese military officials aren't stupid. They can tell the difference between a satellite malfunction and a military invasion. Hold their impact evidence to a higher standard.

3. The military would not be destroyed by a satellite malfunction because back-up systems would kick in, their evidence is all hype.

MARSHALL, 2008
[Dr. Will, Academic Advisor in Small Spacecraft Office at Singularity University, and NASA Ames Research Center; "Reducing the Vulnerability of Space Assets: A Multitiered Microsatellite Constellation Architecture," *Astropolitics,* v.6 n.2]

Space assets are definitely used a great deal by the U.S. military, but that does not mean necessarily as strong a dependence as Gray implies. The loss of U.S. space assets could range in its effect anywhere from a loss to the U.S. military in practical operations, to being catastrophic to U.S. security. The former would entail a reduction in operational effectiveness or speed, but fundamentally supposes that back-up systems and/or redundancy allow a near continuation of military capability. The latter scenario would entail an effective disablement of the U.S. military capability from normal operations. In reality, the significance lies between these boundaries, but this is a topic that could benefit from further research.

Space Debris Disadvantage 2AC (2/3)

4. No internal link: Debris will eventually burn up in the atmosphere and disappear.

ASTROPROF, 2008
[No name given; college professor, teaching physics and astronomy; "Lunar Space Debris"10/28, http://astroprofspage.com/archives/1790]

As it turns out, though, most of the things that were left orbiting the Moon decades ago, during our first phase of lunar exploration are probably no longer there. Satellites and debris orbiting Earth eventually reenter our atmosphere. There are a variety of reasons that orbits decay, but for low Earth orbit, the biggest reason is that Earth's atmosphere drags on objects in orbit. Earth's atmosphere is a gas, so it doesn't have a sharp edge. Rather, it just gets thinner and thinner. There are still air molecules and atoms at the altitude of the Space Shuttle, the Hubble Telescope, and the International Space Station. These bodies running into those atoms gradually slows them down, causing them to spiral downward to lower altitudes, where they run into more of them. The Space Shuttle is not in orbit long enough for this to matter. The ISS must be routinely boosted to a higher orbit to avoid falling back to Earth. The Hubble Telescope is also designed to be boosted every three years to a higher orbit by the Space Shuttle. Without a boost, it will come back on its own in an uncontrolled reentry. That is one reason that we must send another shuttle mission to it. Eventually, NASA will have to send an unmanned rocket to it to either boost it to a far higher orbit until we know what to do with it, or to send it crashing back to Earth somewhere safe (such as over the Pacific Ocean). All of the other debris in low Earth orbit will also fall back to Earth, given time. Satellites and debris reenter all the time, typically putting on quite a show. When these bodies reenter, they look much like meteors, only much slower and often breaking apart. I've seen space debris reenter, and it is impressive. Most of the debris burns up in the atmosphere. Some of it, however, manages to make it to the ground. There have been instances where people have had near misses with space debris, and there have been international incidents where radioactive material from one nation has fallen onto another.

5. No impact: The chances of a satellite colliding with debris are very low, and simple maneuvers can avoid direct hits.

AILOR, 2004
[William, Center for Orbital and Reentry Debris Studies, The Aerospace Corporation, "Collision Avoidance and Improving Space Surveillance" *Astropolitics,* v.2 n.2]

If the operating satellite is controllable (i.e., it has the capability to adjust its orbit even slightly) and if there is sufficient information available, the satellite can move to minimize the likelihood of collision. With sufficient warning, the chance of collision can be lowered by simply changing the timing of an upcoming stationkeeping or orbit maintenance thruster firing. So what is the probability of collision? The probability of collision for a single active satellite in geosynchronous equatorial orbit (GEO) is approximately one in 3,000 over a ten-year mission; however, the collective probability of a collision involving an active GEO satellite over the next ten years is approximately one in ten. To date, there has been only one collision of two tracked objects – the French Cerise satellite was struck by an Ariane H-10 explosion fragment on 24 July 1996, leading to loss of the gravity gradient boom. There were no legal consequences from this event, but it is very likely that the loss of a high-value commercial satellite caused by impact with another operating satellite or by identifiable debris will lead to a lawsuit.

Space Debris Disadvantage 2AC (3/3)

6. New telescope technology allows more accurate tracking that solves the impact of debris.

FAST COMPANY, 2011
[Kit Eaton; staff writer; "DARPA's Wonderfully Lowish-Tech Solution To Space Debris: Looking For It" 4/25, http://www.fastcompany.com/1749704/darpas-clever-lowish-tech-solution-to-space-debris-looking-for-it]

In conjunction with the USAF, DARPA's announced the availability of a new telescope that it's adding to the current Space Surveillance Network. It's the Space Surveillance Telescope (SST), and it's got one singular power: It can survey the sky faster than any other telescope of its class, meaning it can collect data on space junk faster than has ever been possible before. And since the 'scope can actually see dimmer objects, it can correctly resolve images of smaller debris--meaning more accurate mapping of the goings-on among the horrifying cloud of spent rocket parts, dropped space tools, and bits of exploded satellite that are orbiting Earth like a particularly trashy ring, one that can also destroy satellites and potentially kill spacewalking astronauts. The SST was nine years in development, and came with a relatively small price tag of just $110 million. MIT's aerospace engineers were involved in its design and were responsible for its 3.5-meter aperture and curved CCD sensor design. This aperture size is three times bigger than typical ground-based telescopes, and means the SST can capture "wide-angle" views of the sky to garner more data in one image than similar systems can. The telescope's frame is also designed to maneuver more swiftly, so it can scan more quickly. Compared to some of the beautiful, intelligent, high tech, futuristic, and far-flung ideas about dealing with the space debris problem, the SST is a simple and effective solution that may well see multiple installations around the globe to create a 360-degree scan of the sky for the most accurate map of space junk yet. It's the necessary first phase in any junk-disposal plans.

1AR Extension Evidence to 2AC #1: "Non-Unique: Satellites"

Extend the 2AC #1, the Disadvantage is Non-Unique because we have many satellites in orbit now that would produce debris.

____Space debris is already clogging low-earth orbit, and is growing daily.

WEEDER, 2011
[Brian; Secure World Foundation; "Overview of the legal and policy challenges of orbital debris removal" *Space Policy,* v. 27]

Since the launch of the first satellite in 1957 humans have been placing an increasing number of objects in orbit around the Earth. This trend has accelerated in recent years thanks to the increase in number of states which have the capability to launch satellites and the recognition of the many socioeconomic and national security benefits that can be derived from space. There are currently close to 1000 active satellites on orbit, operated by dozens of state and international organizations [1]. More importantly, each satellite that is placed into orbit is accompanied by one or more pieces of non-functional objects, known as space debris. More than 20,000 pieces of space debris larger than 10 cm are regularly tracked in Earth orbit [1], and scientific research shows that there are roughly 500,000 additional pieces between 1 and 10 cm in size that are not regularly tracked [2]. Although the average amount of space debris per cubic kilometer is small, it is concentrated in the regions of Earth orbit that are most heavily utilized, as shown in (Fig. 1), and thus poses a significant hazard to operational spacecraft.

1AR Extension Evidence To 2AC #3: "Military Can Survive Debris"

Extend our 2AC #3, our evidence proves military satellites can avoid or survive collisions with space debris.

____The most important space objects are able to avoid debris.

AILOR, 2004
[William, Center for Orbital and Reentry Debris Studies, The Aerospace Corporation, "Collision Avoidance and Improving Space Surveillance" *Astropolitics,* v.2 n.2]

The best available collision avoidance services are used to assure that a manned system (Space Shuttle, Space Station, Mir) is not impacted by another object, and as noted earlier, these vehicles have been moved or have taken other precautions (such as moving the Mir's crew to the crew return vehicle) on several occasions where the risk of collision was deemed unacceptably high.

2AC Lunar Mining: Link Turn

____Getting access to lunar minerals would allow us to fuel missions to clean up space debris.

STONE, 2009
[William; chairman of Shackleton Energy Co; "Mining the Moon" June, http://spectrum.ieee.org/aerospace/space-flight/mining-the-moon]

Discovering rich concentrations of hydrogen on the moon would open up a universe of possibilities—literally. Rocket fuels and consumables that now cost an average of US $10 000 per kilogram to loft could instead be produced on the moon much more cheaply. For the first time, access to space would be truly economical. At last, people would be able to begin new ventures, including space tourism, space-debris cleanup, satellite refueling, and interplanetary voyages.

Spending Disadvantage – Table of Contents

Affirmative Answers

Background Notes: Spending Disadvantage

Inflation: "Inflation" occurs when the prices of goods or services go up. It isn't about an individual item, but about the general level of prices. Essentially, inflation means that the value of money has gone down (for a silly example: $1 used to buy me a bottle of Coke, but now that same bottle costs $2; therefore, my dollar bill is only half as valuable as it used to be), so you have to pay more to get the same amount of stuff. Many economists worry that government policies that spend money cause inflation because they add lots of money to the economy, which means businesses feel confident in charging more for goods (due to the larger pool of money available).

The Spending Disadvantage consists of four elements - Uniqueness, the Link, the Internal link, and the Impact. Taken together, those elements tell the story of the disadvantage – plan spends too much money, which hurts the US economy, which ultimately leads to a destructive war.

The first element of the disadvantage, called Uniqueness, explains the current status of the United States economy. With this point, the negative attempts to prove that the US economy is recovering from recent troubles.

The second element of the disadvantage is the Link. In the link of the disadvantage, the negative establishes the connection between the affirmative plan and this disadvantage. For the Spending DA, the link between the two is that the government will spend a lot of money to carry out the plan. In the 1NC Link arguments against both the Lunar Mining and Missile Defense affirmatives, the negative evidence claims that each plan would be very, very expensive.

The third element of the disadvantage is the Internal Link, which explains how the DA's Link would trigger the DA's impact. For the Spending DA, the internal link is that more spending would ultimately collapse the US economy. Thus, by establishing that a spending increase would hurt the economy, the internal link forges the connection between the link (more spending) and the final impact (war caused by US economic collapse). Specifically, this argument claims that plan's cost only creates more ***government debt***. With that increase in debt as a result of plan's spending, the government would owe so much money that it could not pay for services or defense. Thus, because the plan causes the government to go broke, the economy would collapse.

The final element of the disadvantage is the Impact, which claims that US economic crisis would ultimately lead to a destructive global war. As with the Lunar Mining affirmative harms, the Spending DA impact argues that "history proves" the risk of this scenario. Specifically, the impact card says that, when the US economy collapsed in the 1930s, it caused global political and economic instability that ultimately lead to World War Two.

Spending Disadvantage 1NC (1/2)

A) Uniqueness: Every sign shows that the economy is recovering, inflation is decreasing, and more growth is expected.

REUTERS, 2011
[Lucia Mutikani; staff writer; "Consumers spend less, recovery seen on horizon" 6/14, http://www.reuters.com/article/2011/06/14/us-usa-economy-retail-idUSTRE75D2OX20110614]

Consumers have not pulled back aggressively despite the recent slowdown in the economy, retail sales data showed on Tuesday, and falling gasoline prices should support growth in the months ahead. Retail sales fell in May for the first time in 11 months as auto sales took a hit from the damage wrought by Japan's earthquake, while other spending also softened. Sales slipped 0.2 percent, the Commerce Department said, after a 0.3 percent rise in April. However, the decline was less than economists' expectations for a 0.4 percent fall and sales excluding motor vehicles rose 0.3 percent. The data helped U.S. stocks to book their biggest gains in nearly two months. U.S. government debt prices tumbled, with the yield on the benchmark 10-year Treasury note rising back above 3 percent. Sentiment over the economy, which has been shattered by a recent string of surprisingly weak data, was also lifted by a separate report showing a moderation in wholesale inflation last month. "Consumers are not panicking. We should begin to emerge from the soft patch in the second half of the year; a lot of the drags on the recovery are fading," said Ryan Sweet, a senior economist at Moody's Analytics in West Chester Pennsylvania.

B) Link: Space programs always cost more than expected, and budget overruns directly threaten the credit rating of the federal government.

COYLE AND RHINELANDER, 2004
[Philip, Center for Defense Information, Washington, DC; John, Shaw-Pittman, Washington, DC; "Space Weapons: Alternatives for Today" *Astropolitics,* v.2 n.2]

The management of US military space programs has become an embarrassment to the Pentagon. The US General Accounting Office has reported time and again that the cost and schedule overruns in US military space programs reflect a lack of understanding of the demands of space technology, and a need for greater management controls. These billion-dollar cost overruns come at a time when the United States is experiencing budget deficits so high that they may threaten the American economy in the eyes of the international marketplace.

Spending Disadvantage 1NC (2/2)

C) Internal Link: Freezing federal spending is critical to economic recovery.

CHRISTIAN SCIENCE MONITOR, 2011
[Mark Trumbull; staff writer; "As economic recovery sags, would a federal budget deal hurt or help?" 6/15, http://www.csmonitor.com/USA/Politics/2011/0615/As-economic-recovery-sags-would-a-federal-budget-deal-hurt-or-help]

A budget deal that works well could help put a fragile economic recovery back on track, while also starting to steer the nation onto firmer footing for long-term growth. Failure to make fiscal progress, by contrast, could prolong current weakness and increase the risk of a debt crisis. Those are the stakes as talks led by Vice President Joe Biden continue Wednesday. Republicans and Democrats have agreed to meet more frequently amid signs that US job growth has slowed. The two sides are also aware that stock and bond markets could falter if no deal is on the horizon soon. The Treasury Department has said that without an agreement to allow new borrowing, it will run into trouble paying government bills starting around Aug. 2. The difficulties in budget talks are partly about each side maneuvering for political high ground. Republicans say it's irresponsible to allow more Treasury borrowing without enacting a deficit-reduction plan that includes sharp cuts in federal spending. Democrats say path to long-term fiscal health should include a mix of spending cuts and tax revenue, including higher taxes paid by the rich.

D) Impact: A new economic collapse will drag the United States into global war.

MEAD, 2009
[Walter Russell, Henry A. Kissinger Senior Fellow in U.S. Foreign Policy at the Council on Foreign Relations; "Only Makes You Stronger," *The New Republic*, 2/04, http://www.tnr.com/article/only-makes-you-stronger]

None of which means that we can just sit back and enjoy the recession. History may suggest that financial crises actually help capitalist great powers maintain their leads--but it has other, less reassuring messages as well. If financial crises have been a normal part of life during the 300-year rise of the liberal capitalist system under the Anglophone powers, so has war. The wars of the League of Augsburg and the Spanish Succession; the Seven Years War; the American Revolution; the Napoleonic Wars; the two World Wars; the cold war: The list of wars is almost as long as the list of financial crises. Bad economic times can breed wars. Europe was a pretty peaceful place in 1928, but the Depression poisoned German public opinion and helped bring Adolf Hitler to power. If the current crisis turns into a depression, what rough beasts might start slouching toward Moscow, Karachi, Beijing, or New Delhi to be born? The United States may not, yet, decline, but, if we can't get the world economy back on track, we may still have to fight.

2NC/1NR Extensions: Overview

The U.S. economy is on the road to recovery: inflation is low, consumer spending is up and growth is stabilizing. The plan creates unplanned federal spending on a new space project, which will inevitably require cost-overruns and extra federal payouts. This causes a new wave of inflation and job losses, pushing the economy over the brink to collapse and causing war between the United States and other desperate nations.

The disadvantage outweighs the case:

a) Probability: Empirically economic downturns have caused global wars. World War 2 proves that great powers get drawn in, and the existence of nuclear weapons makes escalation certain.

b) Timeframe: International investors base U.S. financial credibility on the perception of fiscal discipline. Allocating the funds for the plan triggers inflation even before the policy is implemented.

c) Magnitude: Great power war is the only scenario for nuclear escalation, and economic collapse makes every country desperate for resources.

____The U.S. economy is critical to a strong global economy because other countries are too interconnected to survive a U.S. collapse.

MEAD, 2004
[Walter Russell, Senior Fellow at Council on Foreign Relations, "America's Sticky Power," Foreign Policy, Mar/Apr, lexis-nexis]

Similarly, in the last 60 years, as foreigners have acquired a greater value in the United States-government and private bonds, direct and portfolio private investments-more and more of them have acquired an interest in maintaining the strength of the U.S.-led system. A collapse of the U.S. economy and the ruin of the dollar would do more than dent the prosperity of the United States. Without their best customer, countries including China and Japan would fall into depressions. The financial strength of every country would be severely shaken should the United States collapse. Under those circumstances, debt becomes a strength, not a weakness, and other countries fear to break with the United States because they need its market and own its securities. Of course, pressed too far, a large national debt can turn from a source of strength to a crippling liability, and the United States must continue to justify other countries' faith by maintaining its long-term record of meeting its financial obligations. But, like Samson in the temple of the Philistines, a collapsing U.S. economy would inflict enormous, unacceptable damage on the rest of the world. That is sticky power with a vengeance.

2NC/1NR Extensions: Answers To 2AC #1: "US Economy Declining"

They say the US economy is already bad, but…

____ Extend our 1NC Uniqueness REUTERS 2011 evidence. Every major factor shows the U.S. economy is on an upward swing. Prefer our evidence that cites an overall impression of the economy, rather than just a single indicator.

____And, new statistics, the stock market, and consumer spending prove the economy is growing.

NEW YORK TIMES, 2011
[Christine Hauser, staff writer, "Markets Rise Sharply on Retail Sales and Other Economic Data" 6/14, http://www.nytimes.com/2011/06/15/business/15markets.html]

Stocks on Wall Street surged Tuesday after the United States government released new statistics on the economy, including a retail sales report that traders viewed as positive. Analysts described the stronger market, which represented the Dow's biggest gain this month, as a relief rally. David Krein, a senior director for Dow Jones Indexes, said investors were pleased with the retail sales report. Best Buy's fiscal first-quarter results also helped buoy the markets, Mr. Krein said. The company reported earnings of $136 million, or $0.35 a share, compared with $155 million, or $0.36 a share, for the same period in 2010. The results beat forecasts, and shares of Best Buy rose more than 4.5 percent to $30.13. An indicator of consumer purchasing from the Commerce Department showed that overall retail sales in May declined by 0.2 percent, less than the 0.5 percent fall that had been forecast by analysts surveyed by Bloomberg. The figure was a reversal of the 0.3 percent increase in April, and it was the first monthly decline after 10 consecutive gains.

2NC/1NR Extensions: Answers To 2AC #2: "Space Not Expensive"

They say space policy isn't costly, but…

____ Extend our 1NC Link COYLE AND RHINELANDER 2004 evidence. Space policies are notoriously expensive and always go over-budget. This means the federal government will have to spend even more once the plan fails, which magnifies the link.

____Prefer our evidence to theirs because only our evidence is in the context of an economic downturn and the impact of budget overruns on the Treasury. Their evidence is only talking about the overall budget, not the effect of surprise spending policies.

____And, default to our link because new unemployment numbers prove that the economy is on the brink of another recession, and spending needs to be frozen soon.

SEATTLE TIMES, 2011
[Neil Irwin; staff writer for Washington Post; "Jobless rate ticks up, adding to debate over debt, spending" 6/03, http://seattletimes.nwsource.com/html/nationworld/2015228957_jobs04.html]

Employers pulled back sharply on job creation in May, and the unemployment rate took a surprising jump, according to new data Friday, confirming worries that the economy is losing momentum — fast. Employers added only 54,000 jobs in May, down from a revised 232,000 in April and the weakest since September, the Labor Department said Friday. The unemployment rate rose to 9.1 percent last month, from 9 percent. The darkening jobs picture — the jobs number was the latest in a string of disappointing economic readings — paints a new backdrop for the debate over taxes, spending and deficits that has absorbed Congress for months. The federal government is poised to hit a legal limit on debt in August, and President Obama and congressional Republicans are in a high-stakes contest to craft a deal to raise the debt ceiling so that the country does not default on its obligations. With the new unemployment numbers, job growth is certain to become another key element in the deficit debate. Republicans on Friday blamed the weakening jobs picture on Obama's policies. House Speaker John Boehner, R-Ohio, said: "One look at the jobs report should be enough to show that the White House should get serious about cutting spending."

2NC/1NR Extensions: Answers To 2AC #3: "Inflation High Already" (1/2)

They say inflation is already high now, but…

____ Our 1NC Uniqueness REUTERS 2011 evidence proves that inflation is shrinking as consumer confidence is increasing. Our evidence cites trends rather than just a snapshot.

____And inflation is dropping, and contrary indicators are only blips.

ASSOCIATED PRESS, 2011
["Inflation slows in May as gas prices fall" 6/16, http://www.boston.com/business/articles/2011/06/16/inflation_slows_in_may_as_gas_prices_fall/]

Falling energy prices cooled inflation in May. Overall, consumer prices rose 0.2 percent, the smallest increase in six months, the Labor Department said yesterday. It was the first drop in energy costs in nearly a year. Still, Americans paid more for cars, clothing, and hotel rooms. That drove the so-called core consumer prices, which exclude volatile food and energy, up by the most in nearly three years. Economists downplayed the increase in core prices. Auto prices will probably fall as the impact of supply disruptions from Japan fades and production picks up. And the big rise in hotel costs probably reflected a one-time increase before summer. Most important, they noted, is that consumers are finally getting some relief from high gas prices. Prices have fallen by nearly 30 cents since peaking last month at a national average of $3.98 per gallon.

____And current inflation rates are consistent with better economic periods.

THE ATLANTIC, 2011
[Daniel Indiviglio, associate editor at The Atlantic, "Consumer Inflation Slowed in May as Energy Prices Eased" 6/15, http://www.theatlantic.com/business/archive/2011/06/consumer-inflation-slowed-in-may-as-energy-prices-eased/240488/]

Americans are finally getting some relief at the pump, according to the latest report on consumer prices. Energy prices fell in May. Their decline helped push inflation down to 0.2%, its lowest rate in six months. Should we find this news encouraging -- can we expected lower inflation going forward? Let's start with the chart for the Consumer Price Index, calculated by the Bureau of Labor Statistics: From this chart, it's pretty clear that overall prices were tamer in May than they had been over the prior several months. That 0.2% rise is more in-line with what we saw throughout 2009 and 2010, when inflation was relatively low. As mentioned, energy prices helped to push down inflation last month. They fell by 1.0%. Gasoline, in particular, dropped 2.0%. That compares to gas prices rising by an average of 4.8% in each of the five months prior.

2NC/1NR Extensions: Answers To 2AC #3: "Inflation High Already" (2/2)

____ We can't risk higher inflation: even if it doesn't seem bad now, there is a hidden threshold that causes economic collapse.

SIVY, 2011
[Michael; chartered Financial Analyst and a former securities analyst for an independent stock research firm; "Why You Should Prepare for Inflation" *Time Magazine*, 6/14, http://moneyland.time.com/2011/06/14/why-you-should-prepare-for-inflation/]

High inflation erodes the purchasing power of savings, pushes up interest rates and undermines future economic growth. Everyone agrees, in short, that it's bad. Very bad. What experts can't agree on is whether the risk of serious inflation demands immediate action, even if that means backing away from some of the current policies aimed at bolstering the economy. Warren Buffett has been sounding the alarm about inflation for several years. On the other side, Nobel Laureate and New York Times columnist Paul Krugman keeps insisting that inflation is "just not something to get frantic about." I agree with Buffett, and I'll explain why. To start, it's important to understand where these two viewpoints actually differ. It's not so much over theory. Instead, the debate is about priorities, time horizons, the likelihood of a relapse into recession, and the amount of maneuvering room still available to economic policymakers. It's only natural that both sides believe clear and present dangers need to be dealt with first. Krugman argues that the most pressing concern is reviving the economy, not preempting possible inflation sometime in the future. He often sounds as though he fears a near-Depression. Krugman may be right that the economy still needs help and that current levels of inflation are not especially dangerous. But Buffett is also correct, in my opinion, when he says that inflation which seems harmless in its early stages can suddenly turn deadly. Indeed, he compares it to jumping off the top of a 50-story building: It doesn't hurt until you hit the ground.

2NC/1NR Extensions: Answers To 2AC #4: "Government Spending Good" (1/3)

They say spending helps the economy, but…

____ Extend our 1NC CHRISTIAN SCIENCE MONITOR 2011 evidence. Freezing spending at current levels is the necessary first step in economy recovery because it signals financial stability. Their evidence does not account for investor perceptions.

____And, new spending empirically doesn't speed up growth, and experts say spending cuts are the most important next step.

CHRISTIAN SCIENCE MONITOR, 2011
[Mark Trumbull; staff writer; "As economic recovery sags, would a federal budget deal hurt or help?" 6/15, http://www.csmonitor.com/USA/Politics/2011/0615/As-economic-recovery-sags-would-a-federal-budget-deal-hurt-or-help]

But others say that stimulus programs, which add more debt to an already high-debt economy, have had only marginal impact thus far, so a different approach is warranted. "My sense is that some policy that puts the fiscal house in order ... is the only way out," says Alberto Alesina, a Harvard University economist who has studied the relationship between government budgets and GDP. By his research, nations working to control their debt levels achieve the strongest economic growth when they emphasize spending cuts more than tax increases. Mr. Alesina cites Canada in the 1990s as among the examples of nations that have successfully pared down debt (as a percentage of GDP) while also encouraging economic growth. By contrast, he says, an Italian effort to adjust public finances through tax increases backfired, leaving Italy with a still-high debt level.

____And, new federal spending would put the cart before the horse; growth isn't strong enough to support it.

POLITICO, 2011
[Frank Donatelli; opinion contributor; "The answer isn't taxes but growth" 6/15, http://www.politico.com/news/stories/0611/57033.html]

Our economy is not growing fast enough to support the level of federal expenditures envisioned by current law. Indeed, it's hardly growing at all — even for the nearly two years since the end of the Great Recession. That's why the deficit has exploded into the trillions each of the past three years. In comparison, for the four years from 2004 to 2007, growth averaged nearly 3 percent and the annual deficit ran slightly more than $300 billion. Not great but far better than the current situation.

2NC/1NR Extensions: Answers To 2AC #4: "Government Spending Good" (2/3)

____Stimulus spending doesn't create jobs because it trades off with private sector demand.

FOSTER, 2011
[J.D; Norman B. Ture Senior Fellow in the Economics of Fiscal Policy at The Heritage Foundation; "Why the Demand Side Stimulus Failed" 2/16, http://www.heritage.org/Research/Testimony/2011/02/Why-the-Demand-Side-Stimulus-Failed]

The heart of the Administration's approach to stimulus is the equivalent of fiscal alchemy. Alchemy, "the art of transmuting metals," refers specifically to turning base metals like lead into gold. Fiscal alchemy is the attempt to turn government deficit spending—whenever, wherever, and on whatever—into jobs. Regarding near-term stimulus, it is not a matter of how wisely or foolishly the money is spent. It is not a matter of how quickly or slowly the money is spent. It is not a matter of whether some is saved or not—any more than the phase of the moon or adding a bit more wolfsbane or a stronger electric current enhances the prospects for lead to become the substance of an alchemist's dreams. The basic theory of demand-side stimulus is beguilingly simple. The theory observes that the economy is under performing and total demand is too low, and thus total supply needed to meet that demand is too low. It would appear obvious enough, then, that a solution is to increase demand by deficit spending and rising supply will naturally follow. The net of government spending over tax revenues adds to total demand. Increase the deficit and you increase demand, supply naturally follows, and voila: the economy is stronger and employment is up. One wonders then why government should not simply increase spending much, much more and create instant full employment. Why, indeed. The answer, as is now obvious, is that this policy does not work for the simple reason that government must somehow fund this additional spending, and it does so by borrowing. Suppose you take a dollar from your right pocket and transfer it to your left pocket. Do you have a new dollar to spend? Of course not. Or suppose you pour a bucket of water into a bathtub. You would expect the level of the water to rise. But where did the water in the bucket come from? It came from dipping it into the bathtub. You may make a splash, but when the water settles, in terms of the water level nothing will have changed. An increase in government borrowing to finance an increase in deficit spending produces one of two ensuing events, either of which (or in combination) leaves total demand unchanged. First, the increase in government borrowing can mean a reduction in the amount of saving available for private consumption and private investment. Government demand goes up, private demand goes down, total demand is unchanged. Alternatively, the increase in government borrowing may be financed not by reducing private borrowing but by an increase in net inflows of foreign saving—either a reduction in the gross outflows of U.S. saving or an increase in the gross inflows of foreign-sourced saving. Total demand remains unaffected, however, because the balance of payments still balances, and so the increase in net inflows of saving is matched by an increase in the net inflows of goods and services—the increase in the trade deficit offsets the increase in deficit spending.

2NC/1NR Extensions: Answers To 2AC #4: "Government Spending Good" (3/3)

____Krugman is wrong about spending because today's economy is not similar to 1937.

SAMUELSON, 2011
[Robert; economics reporter for Washington Post; "Are we stumbling into another recession?" 6/15, http://www.washingtonpost.com/blogs/post-partisan/post/are-we-stumbling-into-another-recession/2011/06/15/AGPIX3VH_blog.html]

So government blundered into recession. Could it happen again? Economist and New York Times columnist Paul Krugman has argued (in a June 2 column) that, in part, it already has. Concern over the deficit, he contended, made the 2009 "stimulus" package too small. Any new deficit-reduction efforts "will put a further drag on an already weak economy." But there are also big differences between now and then. The most obvious is that the policy reversals in 1937-38 dwarfed anything now being contemplated. From 1936 to 1938, the federal deficit fell from 5.5 percent of gross domestic product (GDP) to 0.1 percent — a huge swing especially when the economy was tanking. By contrast, today's budget deficits are much larger as a share of GDP, and prospective reductions are much smaller. Here are the Congressional Budget Office's latest deficit estimates for the Obama budget: 8.9 percent of GDP in 2010, 9.5 percent in 2011 and 7.4 percent in 2012. Moreover, some of the 2012 drop assumes an improving economy, which raises tax revenues and reduces spending on unemployment benefits, food stamps and the like. Similar caveats apply to Fed policy. Nothing like the 1936-37 doubling of reserve requirements is in the works. True, the Fed's so-called QE2 (the purchase of $600 billion in Treasury bonds) is ending. But Fed Chairman Ben Bernanke has repeatedly said that he expects low interest rates to continue for many, many months. Moreover, he has — so far — dismissed high prices for oil and other commodities as either temporary or the result of supply-demand imbalances. He doesn't expect them to lead to higher, general inflation warranting tighter money.

2NC/1NR Extensions: Answers To 2AC #5: "Spending Inevitable"

They say spending is inevitable in an election year, but…

____ This evidence is speculative at best. It's a staff writer predicting that unnamed Congresspeople will pass unnamed laws costing unspecified amounts of money. View this evidence with skepticism because we have links specific to space policy, and the only new spending policy on the docket is the Affirmative plan.

____And, Congressional negotiators are working toward a spending freeze.

POLITICO, 2011
[Frank Donatelli; opinion contributor; "The answer isn't taxes but growth" 6/15, http://www.politico.com/news/stories/0611/57033.html]

Contrary to all expectations, congressional negotiators working with the administration and Vice President Joe Biden are reportedly making progress in finding some common ground on a package of measures to cut the deficit as part of a plan to potentially raise the debt ceiling. This is extremely good news. The huge deficits now envisioned for the next decade are unsustainable and could substantially harm America's economic prospects. Unless we want to resemble Greece soon, we need to move quickly to get our fiscal house in order.

____And, predictive trends prove the federal government will spend less on space policy.

NOBLE, 2008
[Michael, United States Air Force, "Export Controls and United States Space Power," *Astropolitics,* v.6 n.3]

Growing fiscal constraints will make government enabling of the U.S. space industry increasingly unaffordable. Reporting on the FY 2009 budget, the Congressional Research Service (CRS) identified several long-term budget challenges facing DoD. Focusing on the Future Year Defense Program (FYDP) through FY 2013, all of these challenges revolved around the fact that in the face of budget growth pressure on many fronts including personnel, operations, and acquisitions, the top line "base" budget will flatten out.151

2NC/1NR Link Extensions – Lunar Mining Aff (1/2)

____Incentives for companies to develop the moon would be extremely expensive.

JOBES, 2005
[Douglas, president of the Space Settlement Institute; "Lunar Land Claims Recognition: Designing the Ultimate Incentive for Space Infrastructure Development," *Space Times*, May, http://www.space-settlement-institute.org/Articles/LCRSpaceTimesMay2005.pdf]

Private industry is motivated by the potential for profit, so a considerable return on investment is needed. Some have proposed government cash prizes and even huge tax breaks for companies that help to develop space. Both of those concepts involve an obvious deal-killer: they both would drain the U.S. Treasury at a time when budget deficits have reached record levels. It is very unlikely that Congress would approve multi-billion-dollar, government-funded space incentives.

2NC/1NR Link Extensions – Lunar Mining Aff (2/2)

____New tax cuts for corporations will hurt the economy by taking revenue away from the federal government.

THE HILL, 2011
[Bernie Becker, staff writer; "Study finds many corporations pay tax rate of effectively zero," 6/01, http://thehill.com/blogs/on-the-money/domestic-taxes/164103-report-corporations-pay-low-effective-tax-rates]

Citizens for Tax Justice (CTJ) released an examination on Wednesday that said that a dozen major companies had, between them, an average effective tax rate of roughly -1.5 percent between 2008 and 2010 — well below the top marginal corporate rate of 35 percent. The liberal-leaning group's analysis comes more than a quarter-century after it released a similar report that is widely credited with adding momentum to the push for the last successful overhaul of the tax code, which was completed in 1986. Robert McIntyre, CTJ's director, said that he hopes the center's effort has a similar impact this time around, especially given the country's current fiscal situation. CTJ is among the groups calling to eliminate corporate tax credits and deductions and use the profits to help pay down deficits. "Now we're even more desperate to get money out of these guys," McIntyre told The Hill.

2NC/1NR Link Extensions – Colonization Aff

____Constructing an off-Earth sanctuary would cost billions of dollars.

FUKUSHIMA, 2009
[Robert, Department of Chemistry, New York University, "New rationale for returning to the Moon? Protecting civilization with a sanctuary" *Space Policy*; v. 25]

The cost of constructing and maintaining such a sanctuary would be many billions of dollars, though the expenses would be spread over many years. Further, an expensive support organization will also be needed back on Earth, to establish the repositories, manage them in tranquil times and activate them as needed. Costs could be cut considerably if the sanctuary were located on Earth. Why then place it on the Moon?

2NC/1NR Link Extensions – Missile Defense Aff (1/3)

____Missile defense is outrageously expensive, and replacement costs make the price even higher.

HITCHENS, 2008
[Theresa, vice president of the Center for Defense Information; "Space Wars - Coming to the Sky Near You?" *Scientific American*; 2/18; http://www.sciam.com/article.cfm?id=space-wars-coming-to-the-sky-near-you]

Finally, getting into space and operating there is extremely expensive: between $2,000 and $10,000 a pound to reach low Earth orbit and between $15,000 and $20,000 a pound for geostationary orbit. Each space-based weapon would require replacement every seven to 15 years, and in-orbit repairs would not be cheap, either.

2NC/1NR Link Extensions – Missile Defense Aff (2/3)

____Missile defense would be the single most expensive item in the defense budget, and Obama has already pledged to cut the program because it is wasteful.

PRAVDA, 2009
[No author attribution; "Missile defense system too expensive and inefficient for USA" 3/02, http://english.pravda.ru/world/americas/03-02-2009/107055-missile_defense_system-0/]

On 16 December 2002 President George W. Bush signed National Security Presidential Directive 23 which outlined a plan to begin deployment of operational ballistic missile defense systems by 2004. The following day the U.S. formally requested from the UK and Denmark use of facilities in Fylingdales, England, and Thule, Greenland, respectively, as a part of the National Missile Defense program. The projected cost of the program for the years 2004 to 2009 will be $53 billion, making it the largest single line in The Pentagon's budget. Russia threatened to place short-range nuclear missiles on the Russia's border with NATO if the United States refuses to abandon plans to deploy 10 interceptor missiles and a radar in Poland and the Czech Republic. In April 2007, Putin warned of a new Cold War if the Americans deployed the shield in Central Europe. Putin also said that Russia is prepared to abandon its obligations under a Nuclear Forces Treaty of 1987 with the United States. John McCain is a strong supporter of missile defense. In October 2007, McCain said: "And the first thing I would do is make sure that we have a missile defense system in place in Czechoslovakia and Poland, and I don't care what his [Putin's] objections are to it." Barack Obama said he supported shifting federal resources away from an "unproven missile defense system" to proven technologies. "I will cut tens of billions of dollars in wasteful spending. I will cut investments in unproven missile defense systems. I will not weaponize space. I will slow our development of future combat systems," Obama said.

2NC/1NR Link Extensions – Missile Defense Aff (3/3)

____Even in the testing phase, missile defense is the most expensive Pentagon program.

INSTITUTE FOR POLICY STUDIES, 2006
[Frida Berrigan and William D. Hartung; "Missile Defense Program Wasteful and Unnecessary" 7/14, http://www.ips-dc.org/articles/missile_defense_program_wasteful_and_unnecessary]

The sheer size of this year's military budget defies comprehension, with almost half a trillion dollars going to Pentagon programs. But more money does not equal more security -- as "missile defense," the most expensive program of all, demonstrates so well. In his proposed budget for 2007, President Bush requested another $10.4 billion to continue work on a system that has so far cost U.S. taxpayers more than $130 billion without producing a single workable device. Missile defense rarely makes front-page news. But as the government throws more and more money at this wasteful and unnecessary program, it deserves scrutiny. Spending on ballistic missile programs has doubled during the Bush presidency. Yet the system remains a high-priced failure. The last three tests of the system's ground-based element failed. In two, the interceptor missile didn't even make it out of the launch silo.

2NC/1NR Impact Extensions - Turns case: U.S. Leadership (1/2)

____Economic collapse causes a massive cutback in foreign aid and military expenditures, hurting United States global leadership.

FRIEDBERG AND SCHOENFELD, 2008
[Aaron, professor of politics and international relations at Princeton University's Woodrow Wilson School, and Gabriel, senior editor of Commentary, is a visiting scholar at the Witherspoon Institute in Princeton, N.J.; "The Dangers of a Diminished America," Wall Street Journal, 2010/21, http://online.wsj.com/article/SB122455074012352571.html?mod=googlenews_wsj]

One immediate implication of the crisis that began on Wall Street and spread across the world is that the primary instruments of U.S. foreign policy will be crimped. The next president will face an entirely new and adverse fiscal position. Estimates of this year's federal budget deficit already show that it has jumped $237 billion from last year, to $407 billion. With families and businesses hurting, there will be calls for various and expensive domestic relief programs. In the face of this onrushing river of red ink, both Barack Obama and John McCain have been reluctant to lay out what portions of their programmatic wish list they might defer or delete. Only Joe Biden has suggested a possible reduction -- foreign aid. This would be one of the few popular cuts, but in budgetary terms it is a mere grain of sand. Still, Sen. Biden's comment hints at where we may be headed: toward a major reduction in America's world role, and perhaps even a new era of financially-induced isolationism. Pressures to cut defense spending, and to dodge the cost of waging two wars, already intense before this crisis, are likely to mount. Despite the success of the surge, the war in Iraq remains deeply unpopular. Precipitous withdrawal -- attractive to a sizable swath of the electorate before the financial implosion -- might well become even more popular with annual war bills running in the hundreds of billions.

2NC/1NR Impact Extensions - Turns case: U.S. Leadership (2/2)

____Mounting debt will convince the rest of the world that the U.S. economic model is flawed, and this collapses U.S. leadership in every arena.

BRITT, 8

[Robert Roy, LiveScience Managing Editor, "America's Superpower Status Threatened by Financial Crisis," Strategy Page, 2010/11; http://www.strategypage.com/militaryforums/30-103532.aspx]

A dismal economy coupled with mounting federal debt and expected cuts to science and technology spending threaten to unseat the United States as the reigning superpower of the world. Many people around the globe already thought the mantle had been passed, perhaps to China, though that possibility is hotly debated. Now signs of changing times are more stark, with world leaders frustrated and even angry over a global financial crisis many see as caused by American policy mistakes. Meanwhile the monetary meltdown is likely to force cuts in public and private science and technology investment - a cornerstone of the American economic engine that has historically driven the nation's preeminence. While opinions on the ultimate outcome run the full spectrum of possibilities, many see a new world order, of some sort, in the making. "The general perception of the United States as the key base of the world economy is shaken badly right now," said Alan Porter, emeritus professor of the School of Public Policy at the Georgia Tech. "That will spiral into foreigners being less inclined to put their money into our government and companies. And that will lead to less investment and production." Porter and others also don't see how military spending can continue at such a high level. "Military might depends upon economic wherewithal," Porter told LiveScience. "We are so stretched now, that this is certainly slipping." Yale University sociologist Immanuel Wallerstein has been predicting the end of America's global dominance since the 1980s. This week he told the Christian Science Monitor that fallout from the Iraq war and the mounting U.S. debt had accelerated the country's decline, and the current global crisis is just a culmination of these events. Superpower ingredients America's superpower status depends on many factors. It was achieved through dominance in military, economic, political, intellectual, technological and cultural realms. Some experts have been saying in recent years that power could shift to those nations with huge emerging economies. In a survey released in June, the Pew Research Center reported that citizens in many countries think the shift has already occurred: "Most of those surveyed in Germany, Spain, France, Britain and Australia think China either has already replaced the U.S. [as the superpower] or will do so in the future," according to the report. But historians and other analysts told LiveScience in August, during the Olympics, that such a change had not yet taken place, and many doubted that it would anytime soon. The current global financial crisis has created an all-bets-are-off feel, however, leaving some seasoned observers to ponder big changes that could emerge when the dust settles. One unavoidable observation is that money, which equals power to a large degree, is vaporizing faster than you can say "$700 billion." Anne-Marie Slaughter, Dean of the Woodrow Wilson School of Public and International Affairs at Princeton University, says the perception that New York is the financial capital of the world a false one - and now she's not the only one thinking that way. "Shanghai is booming, and Hong Kong is booming, and Singapore is booming. London was already growing enormously," Slaughter said this week in an interview with the Council on Foreign Relations. She said neither New York nor any other single city will dominate the financial scene moving forward. Others are more blunt. "The USA will lose its superpower status in the global financial system," Germany's Social-Democrat Finance Minister Peer Steinbrueck said recently. "The world financial system is becoming multi-polar." Perceptions rule One big question the next president of the United States will have to deal with is how the nation's money problems play out in military, political and cultural realms. And when it comes to power, perceptions are important, too. The German magazine Der Spiegel summed up a growing European sentiment in a commentary last week: "The banking crisis in the United States has shaken many things in recent days, not just the chancellor's [Angela Merkel] affection for America and the respect the rest of the world once had for the U.S. as an economic and political superpower. ... Now, of all times, the world is faced with a preeminent power that no longer seems capable of leading and a U.S. president who is not even able to unite his divided country in an hour of need." The situation will only worsen, Carnegie Endowment Visiting Scholar David Rothkopf wrote Sunday in The Washington Post: "Already this crisis has seen not just our enemies but even some of our closest allies wondering whether we are at the beginning of the end of both American-style capitalism and of American supremacy." Superpower status is not just about having money and military might, but persuading much of the world to emulate or at least admire your political and financial systems, among others. That less-tangible aspect to power is eroding, too, as citizens and politicians around the world question how the unique American mix of democracy, capitalism and deregulated finance are now playing out. "Whatever the final outcome, one thing is certain," says Eswar Prasad, a senior fellow for Global Economy and Development at the Brookings Institution, a think-tank in Washington, D.C. "The rest of the world will no longer be enthusiastic about adopting the free-market principles that guided U.S. financial development."

2NC/1NR Impact Extensions - General

____Economic downturn collapses the industrial base, and this makes space programs impossible.

VEDDA, 2008
[Dr. James, senior policy analyst at the Aerospace Corporation's Center for Space. Policy & Strategy in Arlington, Virginia , "Challenges to the Sustainability of Space Exploration," *Astropolitics,* v.6 n.1]

Economic hardship can result from a number of conditions and have repercussions throughout many sectors of societal activity. Some examples include rising energy prices due to scarcity or market manipulation; loss of export markets due to unfavorable currency exchange rates, deliberate resistance to American products, or war; natural disasters, pandemics, and global terrorism, which soak up resources, disrupt markets and supply lines, and hinder travel; and fiscal or monetary mismanagement at the national level. Economic downturns in the U.S. since the middle of the 20th century have been relatively brief and have not approached the severity of the Great Depression of the 1930s, but there is no guarantee that this will hold true throughout the decades that solar system exploration is building its momentum.26 Another challenge related to economics is more domestic in its focus: concern over the decline of the U.S. aerospace industrial base and workforce. Much has been written and debated on this topic in recent years,27 so it will not be addressed here, except to note that there are worries in the space community that "loss of pre-eminence in our aerospace industry would certainly cripple our future and would foreclose on national capabilities."28

2NC/1NR Impact Extensions - Free Trade

A) Economic collapse causes strong protectionist pressures that hurt free trade.

FRIEDBERG AND SCHOENFELD, 2008
[Aaron, professor of politics and international relations at Princeton University's Woodrow Wilson School, and Gabriel, senior editor of Commentary, is a visiting scholar at the Witherspoon Institute in Princeton, N.J.; "The Dangers of a Diminished America," Wall Street Journal, 2010/21, http://online.wsj.com/article/SB122455074012352571.html?mod=googlenews_wsj]

Protectionist sentiments are sure to grow stronger as jobs disappear in the coming slowdown. Even before our current woes, calls to save jobs by restricting imports had begun to gather support among many Democrats and some Republicans. In a prolonged recession, gale-force winds of protectionism will blow.

B) Free Trade prevents nuclear war.

COPLEY NEWS SERVICE, 1999
[Dec 1, lexis-nexis]

For decades, many children in America and other countries went to bed fearing annihilation by nuclear war. The specter of nuclear winter freezing the life out of planet Earth seemed very real. Activists protesting the World Trade Organization's meeting in Seattle apparently have forgotten that threat. The truth is that nations join together in groups like the WTO not just to further their own prosperity, but also to forestall conflict with other nations. In a way, our planet has traded in the threat of a worldwide nuclear war for the benefit of cooperative global economics. Some Seattle protesters clearly fancy themselves to be in the mold of nuclear disarmament or anti-Vietnam War protesters of decades past. But they're not. They're special-interest activists, whether the cause is environmental, labor or paranoia about global government. Actually, most of the demonstrators in Seattle are very much unlike yesterday's peace activists, such as Beatle John Lennon or philosopher Bertrand Russell, the father of the nuclear disarmament movement, both of whom urged people and nations to work together rather than strive against each other. These and other war protesters would probably approve of 135 WTO nations sitting down peacefully to discuss economic issues that in the past might have been settled by bullets and bombs. As long as nations are trading peacefully, and their economies are built on exports to other countries, they have a major disincentive to wage war. That's why bringing China, a budding superpower, into the WTO is so important. As exports to the United States and the rest of the world feed Chinese prosperity, and that prosperity increases demand for the goods we produce, the threat of hostility diminishes.

Chinese-built railway to bypass the Panama Canal.)

Spending Disadvantage 2AC (1/3)

1. Non-unique: the economy is already collapsing because U.S. growth is slow and other countries are increasing debt.

CHRISTIAN SCIENCE MONITOR, 2011
[Mark Trumbull; staff writer; "As economic recovery sags, would a federal budget deal hurt or help?" 6/15, http://www.csmonitor.com/USA/Politics/2011/0615/As-economic-recovery-sags-would-a-federal-budget-deal-hurt-or-help]

But the economic outlook has darkened in recent weeks, raising the stakes in this debate. Among the sobering signs: •The pace of US growth has been slower than expected during the year's first half – near a 2 percent annual pace, adjusted for inflation. That's not fast enough to bring down unemployment. In May, the official unemployment rate ticked up to 9.1 percent. •The global economy has also lost momentum, with emerging nations like China and India struggling to tamp down inflation pressures. In addition, Japan has slowed since the March earthquake and tsunami, and Europe is struggling to contain concerns about whether nations like Greece will be able to finance their public-sector debts. •The credit rating firm Moody's joined Standard & Poor's in issuing a warning that the United States needs to get its fiscal act together, or risk a downgrade of its public debt rating. A downgrade, while not considered imminent, would push up the cost of borrowing throughout the US economy.

2. Space policy is not expensive – it is a tiny percentage of federal spending.

VEDDA, 2008
[Dr. James, senior policy analyst at the Aerospace Corporation's Center for Space. Policy & Strategy in Arlington, Virginia, "Challenges to the Sustainability of Space Exploration," *Astropolitics,* v.6 n.1]

Another important consideration is the difference in the pressures on federal spending compared to the 1960s. Apollo expenditures reached their peak at about the same time that the Vietnam War spending was ramping up and the Great Society entitlement programs were just beginning. The same year that Apollo 11 landed on the Moon, the U.S. government began a long era of deficit spending that continues today (interrupted only once, in the last two years of the Clinton administration). The result is that the interest on the national debt currently consumes 8% of the federal budget, and this is expected to continue for the near future. NASA accounts for about 0.6 percent of the federal budget, a level that is expected to stay fairly stable. In other words, the funds expended to pay interest on the national debt each year are enough to pay for more than thirteen NASAs.

Spending Disadvantage 2AC (2/3)

3. Non-unique: Inflation is rising, and is already passing the threshold for economic collapse.

LOS ANGELES TIMES, 2011
[Jim Puzzanghera and Don Lee, staff writers; "Core prices rise faster in May, causing fears of stagflation" 6/16, http://www.latimes.com/business/la-fi-inflation-cpi-20110616,0,5067093,full.story]

Higher prices seeped from the gas pump into the broader U.S. economy in May, adding new hurdles for the sluggish recovery and the government's options for boosting it. The combination of a stagnant economy and rising inflation led some economists to worry that the country might be headed toward a repeat of the 1970s phenomenon of stagflation, which hobbled growth for years. Wednesday's Labor Department report rattled financial markets already spooked by the worsening debt situation in Greece and raised the specter that the Federal Reserve might have to raise interest rates sooner than expected to blunt inflation pressures.

4. Turn: the government needs to spend money in the short-term to encourage consumer spending. Big cuts now would pull the rug out from under the economy.

CHRISTIAN SCIENCE MONITOR, 2011
[Mark Trumbull; staff writer; "As economic recovery sags, would a federal budget deal hurt or help?" 6/15, http://www.csmonitor.com/USA/Politics/2011/0615/As-economic-recovery-sags-would-a-federal-budget-deal-hurt-or-help]

Sometimes, efforts to fix the problem can bring complications of their own. Just look at Greece. To retain a credit lifeline from neighboring nations, the country has embarked on an austerity program while also paying sky-high interest on new loans. In its case, government spending cuts appear to be crimping economic activity and tax revenues. By contrast, if a nation can speed up the growth rate for its gross domestic product, that can help not only job creation but also the process of digging out of debt. Some economists argue that if the goal is to get unemployment down and growth up, now is the wrong time to make big changes to the budget. "It is not the time to cut spending or raise taxes," given how fragile the economy is, says Robert Shapiro, a former economic official in the Clinton administration who is now at Sonecon, a policy consulting firm in Washington. To those in this camp, a key risk is that government retrenchment (such as spending cuts) could pull a leg out from under an already weak economy. That could hurt both jobs and the fiscal outlook, since tax revenues rise in a healthy economy.

Spending Disadvantage 2AC (3/3)

5. Election year means massive government spending is inevitable.

THE DAILY BEAST, 2011
[Zachary Karabell, staff writer, "Larry Summers' Impossible Stimulus Dream" 6/13, http://powerwall.msnbc.msn.com/business/larry-summers-impossible-stimulus-dream-1691781.story]

Many on the right argue that government stimulus is always wrong, always a mess and never helpful, but rest assured that if the United States continues to drift into the election year of 2012, Congress will spend indiscriminately and ineffectively in bipartisan fashion so that neither party can be accused of ignoring the plight of suffering millions. Ideology matters, but elections matter more. It would be better to spend rationally now than irrationally in the heat of an election year.

1AR Extension Evidence to 2AC #3: "Inflation Already High"

Extend our 2AC #3, the Disadvantage is Non-Unique because inflation is already so high now it should have damaged the economy.

____Inflation is increasing and the economy is slowing down.

NEW YORK TIMES, 2011
[Christine Hauser, staff writer, "May Consumer Inflation Rose at a Slower Rate" 6/15, http://www.nytimes.com/2011/06/16/business/economy/16econ.html]

Consumer prices crept up last month at the slowest pace so far this year, tempered by a decline in energy prices, according to government figures released on Wednesday, while a regional report for New York suggested a decline in manufacturing activity and optimism. Taken together, the reports reflect the impact of some of the global events that took place in recent months. "Both of them are reflective of the slowdown in the economy that we have experienced over the last few months," said Russell Price, a senior economist with Ameriprise Financial. The Labor Department said in its monthly report that the Consumer Price Index, the most widely used gauge of inflation, was up 0.2 percent in May, compared with 0.4 percent in April, and up 3.6 percent from a year ago before seasonal adjustment.

1AR Extension Evidence to 2AC #4: "Spending Good"

Extend our 2AC #4, the internal link turn, which says that spending actually helps the economy.

____Spending is necessary to stimulate employment, and deficit fears are unfounded.

KRUGMAN, 2011
[Paul; 2008 Nobel Prize in Economics winner, professor of Economics and International Affairs at the Woodrow Wilson School of Public and International Affairs at Princeton University, Centenary Professor at the London School of Economics ; "The Mistake of 2010" 6/02, http://www.nytimes.com/2011/06/03/opinion/03krugman.html?_r=1]

Back when the original 2009 Obama stimulus was enacted, some of us warned that it was both too small and too short-lived. In particular, the effects of the stimulus would start fading out in 2010 — and given the fact that financial crises are usually followed by prolonged slumps, it was unlikely that the economy would have a vigorous self-sustaining recovery under way by then. By the beginning of 2010, it was already obvious that these concerns had been justified. Yet somehow an overwhelming consensus emerged among policy makers and pundits that nothing more should be done to create jobs, that, on the contrary, there should be a turn toward fiscal austerity. This consensus was fed by scare stories about an imminent loss of market confidence in U.S. debt. Every uptick in interest rates was interpreted as a sign that the "bond vigilantes" were on the attack, and this interpretation was often reported as a fact, not as a dubious hypothesis. For example, in March 2010, The Wall Street Journal published an article titled "Debt Fears Send Rates Up," reporting that long-term U.S. interest rates had risen and asserting — without offering any evidence — that this rise, to about 3.9 percent, reflected concerns about the budget deficit. In reality, it probably reflected several months of decent jobs numbers, which temporarily raised optimism about recovery. But never mind. Somehow it became conventional wisdom that the deficit, not unemployment, was Public Enemy No. 1 — a conventional wisdom both reflected in and reinforced by a dramatic shift in news coverage away from unemployment and toward deficit concerns. Job creation effectively dropped off the agenda. So, here we are, in the middle of 2011. How are things going? Well, the bond vigilantes continue to exist only in the deficit hawks' imagination. Long-term interest rates have fluctuated with optimism or pessimism about the economy; a recent spate of bad news has sent them down to about 3 percent, not far from historic lows. And the news has, indeed, been bad. As the stimulus has faded out, so have hopes of strong economic recovery. Yes, there has been some job creation — but at a pace barely keeping up with population growth. The percentage of American adults with jobs, which plunged between 2007 and 2009, has barely budged since then. And the latest numbers suggest that even this modest, inadequate job growth is sputtering out.

1AR Answer To: 2NC/1NR Free Trade Impact

They say that economic collapse hurts free trade, but…

____ Don't buy their COPLEY NEWS SERVICE evidence. It's an unqualified staff writer talking about a world without the World Trade Organization. Even if the economy goes down, we will still trade with other countries because we will still be manufacturing goods and services.

____And, Obama won't pursue free trade because he is influenced by unions.

WASHINGTON POST, 2011
[Charles Krauthammer, opinion writer, "The union-owned Democrats" 6/16, http://www.washingtonpost.com/opinions/the-union-owned-dems/2011/06/16/AGRYNqXH_story.html]

One obvious way to increase exports is through free-trade agreements. But unions don't like them. No surprise then that for two years Obama has been sitting on three free-trade agreements — with Colombia, Panama and South Korea — already negotiated by his predecessor. Under the pressure of dire economic conditions and of the consequences of stiffing three valued allies, Obama appeared ready to relent — only to put up a last-minute roadblock. He's demanding an expansion of Trade Adjustment Assistance — taxpayer money (beyond unemployment compensation) given to workers displaced by foreign competition, something denied to Americans rendered unemployed by domestic competition. It's an idea of dubious fairness but nicely designed to hold up ratification, while placing blame on Republican heartlessness rather than on political sabotage by Democrats beholden to unions for the millions they pour into Democratic coffers. (A deal reportedly may be near. But the years of delay have been costly. Colombia, for example, is negotiating broad trade deals with China, including a possible

2AC Missile Defense – No Link

____Even if money isn't spent on missile defense, it will inevitably be spent on catching up to the threats that the plan solves. It is better to spend it on missile defense and benefit from spin-off technologies.

DOLMAN, 2003

[Everett Carl, Associate Professor at the U.S. Air Force's School of Advanced Airpower Studies; "Space Power and US Hegemony: Maintaining a Liberal World Order in the 21st Century," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

The latter in the second set of arguments is also problematic. It presupposes that spending on space weapons and technology will take away from the quality of life on Earth. Aside from the banal statement that the quality of life is minimized by death, foregoing a defensive system to put increased funds into infrastructure also assumes that the funds for Ballistic Missile Defense research would have been made available instead for expenditures preferred by the opponents of the program. Not likely, as the state would simply shift the appropriations to more conventional areas of the military budget. Even if the death of a program gave an unexpected windfall of public funds, again unlikely since most of the proposed money was for future budgets, there was no guarantee that monies saved would not go back to the public in the form of lower taxes. It further assumes there is no productive benefit to the state from research and development in space weapons applications. To the contrary, the American and world economies have already benefited greatly in the miniaturization and computing technologies developed for Ballistic Missile Defense programs. Military space programs, not the least of which is a robust space launch capacity, are the backbone of many civilian space operations, and the resultant economic advantages of telecommunications, navigation, earth-sensing, and weather satellites are today obvious. The spin-off technology and follow-on economic effects of space research and development are abundant, and must be factored into the cost calculations of the state.

Space Militarization Disadvantage – Table of Contents

Background Notes: Space Militarization Disadvantage

Anti-Satellite Weapon (ASAT): Any weapon used to destroy a satellite can be considered an anti-satellite weapon. The United States used a missile to destroy one of its own malfunctioning satellites in 2008, arguing that it needed to blow the satellite up to prevent it from losing control and falling over a city. In 2007, China destroyed a weather satellite in order to test their Anti-Satellite capabilities.

Deterrence: Deterrence is the idea that military threats can prevent other countries from taking aggressive actions toward you. When multiple countries can equally threaten each other, deterrence theory says that those countries will act peacefully out of fear. For example, if the United States and Russia both have nuclear weapons pointed at each other, neither side will want to start a destructive war and so both will more careful. If only one country has weapons, however, the weaker country will constantly be trying to catch up so that deterrence can be maintained.

Space Militarization Disadvantage 1NC (1/3)

A) Uniqueness: No countries have put weapons in space, but other countries are worried that the United States will be the first.

HITCHENS, 2003
[Theresa, vice president of the Center for Defense Information; "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

For nearly 40 years, there has been an unspoken agreement among the world's space powers to refrain from putting weapons in orbit. Military use of space has been limited to surveillance and communications satellites, and scientific and commercial endeavors have largely been able to develop with minimal concerns about military interference or the possibility of becoming wartime casualties. Even during the height of the Cold War, the two superpower rivals eschewed serious development of offensive space weapons – in fact, though they experimented with the technology, the two sides also refrained from actively deploying weapons that could shoot down satellites from ground, air or sea as well. They even signed a treaty, the 1972 AntiBallistic Missile (ABM) Treaty, which forbade either side to tamper with the other's "national technical means," i.e., spy satellites. Unlike in Star Trek, the "final frontier" has yet to become a battlefield. But if the current trends continue, that will change – not in the distance future of science fiction, but within the next several decades. Emerging Bush administration plans and policies are clearly aimed at making the United States the first nation to deploy space-based weapons. There are several drivers behind this goal, including the very real concern about the vulnerability of space assets that are increasingly important to how the U.S. military operates, and the administration's decision to pursue missile defense.

Space Militarization Disadvantage 1NC (2/3)

B) Link: U.S. military doctrine is the background for every space policy. China will see unilateral actions in the context of preemptive strike policy, and will have to respond as if the plan is weaponization.

KREPON, 2004
[Peter, president emeritus of the Henry L. Stimson Center "Weapons in the Heavens: A Radical and Reckless Option," *Arms Control Today,* Nov, http://www.armscontrol.org/act/2004_11/Krepon]

Even if space weapons are not used, their flight-testing or presence overhead, capable of impairing a country's ability to see, hear, navigate, detect impending danger, and fight, would have profound implications for international relations. The medium of space is not country-specific. The placement of space weapons in low-Earth orbit will be of concern to any country over which the space weapon passes or could pass with orbital adjustments. Washington policymakers do not talk often or publicly about space warfare, and China and Russia continue to seek improved ties to the United States. There is, however, considerable awareness in Moscow and Beijing about the Pentagon's plans and deep skepticism that the Pentagon's interest in space warfare is directed solely at states such as North Korea and Iran. Instead, the Air Force's new counterspace doctrine is widely viewed in the broader context of the Bush administration's endorsement of pre-emptive strikes and preventive wars, open-ended national missile defense deployments, and the integration of improved broad-area surveillance and conventional deep-strike capabilities alongside U.S. nuclear forces, which remain on high states of alert. If U.S. counterspace programs proceed, Russia and China can be expected to forge closer ties, pursuing joint diplomatic initiatives to prevent the weaponization of space, alongside military research and development programs to counter U.S. military options. Instead of engaging in a Cold War-like nuclear arms race with Washington, Moscow and Beijing will compete asymmetrically, using less elaborate and expensive techniques, such as by trailing expensive U.S. space weapons and satellites with cheap space mines.[9]

This is magnified by Chinese military insecurities; they will respond militarily to every unilateral U.S. space policy.

SADEH, 2010
[Eligar, Astroconsulting International LLC, "Report: United States-China Space Dialogue Project," *Astropolitics,* v.8 n.1]

The security dilemma, which characterizes the United States-China space relationship, emanates from U.S. global dominance, and the fact that this situation is unacceptable for China. The development of space power capabilities by China, including the willingness to demonstrate such capabilities with the anti-satellite weapon test, represents a response to this concern. Such capabilities, in the view of China, create opportunities for dialogue with the United States. The implication is that the United States does not view China as a legitimate space power. It is only in the context of more symmetrical power and trust relations that dialogue can emerge to address the security dilemma between the United States and China. There are a number of factors that mitigate the possibility of more symmetrical relations and dialogue on space security issues. First, there is the view, advocated by the military space community in the United States, that space is a contested domain. Aspects of U.S. national space policy that declare preferences for space control and dominance are a result of this view. These preferences, in turn, make other spacefaring peer competitors, including China, less secure, contributing to the security dilemma.

Space Militarization Disadvantage 1NC (3/3)

C) Impact: Space militarization leads to automated and accidental conflict that is more destructive than nuclear war.

MITCHELL, ET AL, 2001
[Dr. Gordon, Associate Professor of Communication and Director of Debate at the University of Pittsburgh, "Missile Defence: Trans-Atlantic Diplomacy at a Crossroads," *ISIS Briefing on Ballistic Missile Defence,* July, http://www.pitt.edu/~gordonm/JPubs/Mitchelletal2001b.pdf]

A buildup of space weapons with capability to execute offensive missions might begin with noble intentions of "peace through strength" deterrence, but this rationale glosses over the tendency that ". . . the presence of space weapons . . . will result in the increased likelihood of their use." Military commanders desiring to harness the precision strike capability afforded by space-based "smart" weapons might order deliberate attacks on enemy ground targets in a crisis. The dizzying speed of space warfare would introduce intense "use or lose" pressure into strategic calculations, with the specter of split-second laser attacks creating incentives to rig orbiting Death Stars with automated "hair trigger" devices. In theory, this automation would enhance survivability of vulnerable space weapon platforms. However, by taking the decision to commit violence out of human hands and endowing computers with authority to make war, military planners could sow insidious seeds of accidental conflict. Yale sociologist Charles Perrow has analyzed "complexly interactive, tightly coupled" industrial systems, which have many sophisticated components that all depend on each other's flawless performance. According to Perrow, this interlocking complexity makes it impossible to foresee all the different ways such systems could fail. He further explains, "[t]he odd term 'normal accident' is meant to signal that, given the system characteristics, multiple and unexpected interactions of failures are inevitable." Deployment of space weapons with pre-delegated authority to fire death rays or unleash killer projectiles would likely make war itself inevitable, given the susceptibility of such systems to "normal accidents." It is chilling to contemplate the possible effects of a space war. According to Bowman, "even a tiny projectile reentering from space strikes the earth with such high velocity that it can do enormous damage–even more than would be done by a nuclear weapon of the same size!" In the same laser technology touted by President Reagan as the quintessential tool of peace, David Langford sees one of the most wicked offensive weapons ever conceived: "One imagines dead cities of microwave-grilled people." Given this unique potential for destruction, it is not hard to imagine that any nation subjected to a space weapon attack would escalate by retaliating with maximum force, including use of nuclear, biological, and/or chemical weapons. An accidental war sparked by a computer glitch in space could plunge the world into the most destructive military conflict ever seen.

2NC/1NR Extensions: Answers To 2AC #1: "Plan Seen As Peaceful" (3/3)

They say there's no link because plan will be seen as peaceful, but…

____Extend the 1NC KREPON and SADEH evidence. China and other countries are already on-edge because of the existence of U.S. preemptive strike policy. Their lack of space defenses means that the U.S. is always one launch away from total domination of space, so they have to evaluate the plan as if it could be the last step to U.S. militarization. This cycle of fear encourages irrational responses to non-military space policies.

____China is already developing policy in anticipation of new U.S. space actions. They will overreact to unilateral policies because they think the U.S. is coming to get them.

SADEH, 2010
[Eligar, Astroconsulting International LLC, "Report: United States-China Space Dialogue Project," *Astropolitics,* v.8 n.1]

Fourth, China's military thinking is directly affected by U.S. policy and programs directed at space power for space dominance and control. This also leads to insecurity among China's leaders. Absent any bilateral dialogue on space security matters, and given constrains at the multilateral level, China is pursuing a "hedging" strategy where it develops a comprehensive set of space power capabilities to be ready to respond to, or to deter, future actions that the United States may take against China's national interests.

____And, intent is irrelevant. China believes that the U.S. only uses space policy to promote military objectives.

WORTZEL, 2008
[Larry M., Colonel, United States Army (Retired), "The Chinese People's Liberation Army and Space Warfare," *Astropolitics*, v.6, n.2]

Ultimately, these Chinese authors fail to acknowledge American intent in developing space doctrine. Nowhere in Cai's work, or other Chinese examinations of the High Frontier concept, do the authors capture Graham's statement of intent, which was to break away from the strategic nuclear calculus of "Mutually Assured Destruction (MAD)" in which the U.S. and the Soviet Union were locked.13 Graham advocated replacing "the dangerous doctrine of MAD with a strategy of assured survival [for the U.S. and its allies]."14 Cai focuses, instead, on Graham's concepts about high performance space planes and directed energy weapons. The PLA has reacted to what its officers observed in military operations in the Balkans, the first Gulf War, Afghanistan, and Iraq, where joint operations and command were so effective because of U.S. space assets.15 It also has studied what the American military writes about space operations. The PLA, like the U.S. Air Force, fully expects any future conflict to include forms of war in space integrated with other military operations. Moreover, the PLA's terminology often flows from what its officers read in U.S. doctrine. What is impressive is how rapidly the PLA has developed advanced capabilities to engage in warfare in space.

2NC/1NR Extensions: Answers To 2AC #1: "Plan Seen As Peaceful" (2/3)

____The general lack of communication and classification of U.S. domestic debates make misperception by Chinese military figures inevitable. They are already suspicious and will view the plan in the worst possible light.

HAGT, 2007
[Eric, director of the China Program at the World Security Institute, "China's ASAT Test: Strategic Response" *China Security*; Winter; http://www.wsichina.org/cs5_3.pdf]

There are a number of problems here, however, and they speak to the lack of communication between the United States and China; the self-absorbed nature of America's strategic outlook; as well as China's hardening suspicion of U.S. intentions in space. First, both U.S. words and actions appear to support a robust military program in space. Furthermore, the budgetary and technological issues that affect the U.S. decision on this matter are obscure and nuanced making it unrealistic for China to accurately read these tea leaves in D.C. over trends in space weaponization. Coupled with America's refusal to sign onto any treaty that constrains its military actions in space, how is China to respond? Can China bank its security interests on a changeable and complex political system such as the United States? Moreover, a significant portion of the U.S. military space program is classified, making a determination of the extent of U.S. military space program highly problematic.68 In fact, it can be reasonably argued that as a best case scenario, "the jury is still out" on whether the United States will ultimately pursue weapons in space. The Chinese military, like any military, is charged with defending the country, and a best case is not a scenario on which to entrust national security. Militaries are inherently conservative, and make a strategic calculus based on worst case scenario assumptions. The United States certainly does and has. This is exacerbated by the fact that China has very little meaningful contact with the United States at the military-to-military level and virtually none in space. A high level of suspicion remains between the two countries, especially in the political and security spheres, setting up an antagonistic if not adversarial relationship. None of this is conducive to the effective communication and transparency that would be required for China to understand both arcane U.S. domestic debates on the subject as well as each other's relevant security concerns in space.

2NC/1NR Extensions: Answers To 2AC #1: "Plan Seen As Peaceful" (3/3)

____The actual launch object isn't important because every country has to assume it might be military in order to protect valuable satellites. Any unilateral launch like the plan encourages preemptive strikes.

KREPON AND HELLER, 2004
[Michael, co-founder of The Henry L. Stimson Center and Director of the Center's Space Security Project; Michael, Research Assistant on the Stimson Center's Space Security Project; "A Model Code of Conduct for Space Assurance," *Disarmament Diplomacy,* May/June, http://www.acronym.org.uk/dd/dd77/77mkmh.htm]

Today, advocates of space warfare capabilities in the United States believe in dominance, not mutual deterrence. The rejection of mutual deterrence in space has profoundly destabilising prospects. In order to seize dominion in space, those who deploy anti-satellite weapons or weapons designed to strike targets on earth would need to prevent potential adversaries from responding in kind. This would require preemptive strikes against the facilities of a state believed to be preparing an anti-satellite weapon launch, or killing the launch vehicle or its payload en route to space. This hard logic is driven by cold facts: Dominion in space cannot be achieved if a potential adversary's anti-satellite weapons are trailing satellites that are essential for the execution of war plans. Nor can dominion be established if anti-satellite warfare produces debris fields. Consequently, choices become rather stark: The rejection of mutual deterrence in space and the pursuit of dominion require not only the initiation of anti-satellite weapon flight tests and deployments, but also the initiation of acts of war. The alternative of accepting the mutual deployment of space weapons would be to risk losing dominion in space. Space warriors cannot have it both ways: If they choose space weapons, they cannot retain assurance that satellites required for national security and commerce will be available when needed. The fundamental choice is between space weapons and space assurance.

2NC/1NR Extensions: Answers To 2AC #2: "Case Outweighs" (1/2)

They say case outweighs, but…

____Extend the 1NC MITCHELL 2001 evidence. Space weapons create accidents and automated preemptive strikes that escalate in the short-term and are more destructive than nuclear war. Our evidence is comparative and says we outweigh on magnitude, timeframe, and probability.

____Reaction to deployment of space weapons is immediate; India proves.

GOUVEIA, 2005
[William Jr, "An Assessment of Anti-Satellite Capabilities and their Strategic Implications," *Astropolitics,* v.3 n.2]

China's 12-day delay in issuing an official statement following the destruction of the satellite produced wide speculation regarding the calculus behind the Chinese decision to test their anti-satellite weapon capability. Nevertheless, international reaction was swift and concerned. Among the countries issuing formal protests, inquiries, and statements were the United Kingdom, Japan, India, Russia, Australia, Canada, and Taiwan. All countries essentially protested the test as irresponsible and contrary to China's declared policy of peaceful use of space. However, at least one country took the opportunity to justify its own intent to assess the need for and pursue as necessary its own anti-satellite weapon capabilities. Most notably, India declared its intent to explore such development, thereby raising the risks of an eventual space arms race with Pakistan, Indonesia, and other Asian nations.16 Due to the smaller number of space assets owned by individual countries in this region and their subsequent dependence on single assets, negating a single asset can have even more impact, and potentially escalate hair-trigger situations even faster, than for countries with redundant capabilities.

____Space war plans are based on worst-case scenario forecasting. The first shots would be fired immediately on Earth, and nuclear escalation happens before the plan is implemented.

LEWIS, 2004
[Jeffery, Post doctorate Fellow in the Advanced Methods of Cooperative Security Program, "What if Space Were Weaponized? Possible Consequences for Conflict Scenarios," July, http://www.cdi.org/PDFs/scenarios.pdf]

It is important to note that the Chinese don't even have to actually acquire anti-satellite weapons for this nightmare scenario to happen. The Pentagon's assessments of Chinese anti-satellite weapons are based largely on circumstantial evidence – a Hong Kong newspaper report here; a commercial purchase by a Chinese company there. In fact, the Pentagon admits that "specific Chinese programs for a laser anti-satellite weapon system have not been identified" and that press reports of a so-called "parasitic" microsatellite "cannot be confirmed."28 Such gaps in U.S. knowledge are dangerous, given the natural tendency of defense planners to assume the worst. Although Blue claimed that it had acted on "unambiguous warning" of a threat to space assets, the mere fact that the Chinese might already have such system – or could improvise a crude anti-satellite weapon in a pinch – would create a strong incentive to use U.S. space systems before they were lost. It is not too far fetched to imagine the president, faced with a crisis over Taiwan, deciding – as he did with Iraq – that "we cannot wait for the final proof – the smoking gun – that could come in the form of a mushroom cloud."29

2NC/1NR Extensions: Answers To 2AC #2: "Case Outweighs" (2/2)

____A space arms race puts everyone on high-alert, which makes preemptive strikes, miscalculation, and immediate escalation occur before the plan is implemented.

KREPON, 2004
[Peter, president emeritus of the Henry L. Stimson Center "Weapons in the Heavens: A Radical and Reckless Option," *Arms Control Today,* Nov, http://www.armscontrol.org/act/2004_11/Krepon]

To prevent adversaries from shooting back, the United States would need to know exactly where all threatening space objects are located, to neutralize them without producing debris that can damage U.S. or allied space objects, and to target and defeat all ground-based military activities that could join the fight in space. In other words, successful space warfare mandates pre-emptive strikes and a preventive war in space as well as on the ground. War plans and execution often go awry here on Earth. It takes enormous hubris to believe that space warfare would be any different. If anti-satellite weapon and space-based, ground-attack weapons are flight-tested and deployed, space warriors will have succeeded in the dubious achievement of replicating the hair-trigger nuclear postures that plagued humankind during the Cold War. Armageddon nuclear postures continue to this day, with thousands of U.S. and Russian nuclear weapons ready to be launched in minutes to incinerate opposing forces, command and control nodes, and other targets, some of which happen to be located within large metropolitan areas. If the heavens were weaponized, these nuclear postures would be reinforced and elevated into space. U.S. space warriors now have a doctrine and plans for counterspace operations, but they do not have a credible plan to stop inadvertent or uncontrolled escalation once the shooting starts. Like U.S. war-fighting scenarios, there is a huge chasm between plans and consequences, in which requirements for escalation dominance make uncontrolled escalation far more likely. A pre-emptive strike in space on a nation that possesses nuclear weapons would invite the gravest possible consequences. Attacks on satellites that provide early warning and other critical military support functions would most likely be viewed either as a surrogate or as a prelude to attacks on nuclear forces.

2NC/1NR Extensions: Answers To #3: "Non-Unique: US Seen As Weaponizing Now" (1/2)

They say we're not unique because the US is already seen as weaponizing space, but…

____Extend the 1NC HITCHENS 2003 evidence. No countries have militarized space yet, and the U.S. policy is currently rhetoric. This puts China on the brink, but it doesn't prove that they have initiated military policies.

____The Cold War proves that tensions and desires do not make space weaponization inevitable.

KREPON, 2004
[Peter, president emeritus of the Henry L. Stimson Center "Weapons in the Heavens: A Radical and Reckless Option," *Arms Control Today,* Nov, http://www.armscontrol.org/act/2004_11/Krepon]

During the Cold War, no weapons were deployed in space, and the last test of an anti-satellite weapon occurred almost two decades ago, in 1985. This record of restraint reflects international norms and widespread public sentiment to keep space free of weapons. The 1967 Outer Space Treaty calls on the exploration and use of outer space to be conducted "for the benefit and in the interests of all countries" and mandates that space may not be subject to "national appropriation" by any means. Why, then, would space warriors now seek to chart a different and far more dangerous course? If the weaponization of space were inevitable, it would have occurred decades ago when Washington and Moscow competed intensively in other domains. Indeed, the record of restraint since the Cold War ended suggests that the Outer Space Treaty's injunctions against placing weapons of mass destruction in space could be broadened if they are championed by the United States, China, and Russia.

____No nation is weaponizing space in the status quo.

COYLE AND RHINELANDER, 2004
[Philip, Center for Defense Information, Washington, DC; John, Shaw-Pittman, Washington, DC; "Space Weapons: Alternatives for Today" *Astropolitics,* v.2 n.2]

Currently no nations have deployed attack weapons in space. While both Russia and the United States experimented with antisatellite weapons in the 1970s and 1980s, neither country has deployed them. Presumably China also has the resources and know-how to build attack weapons for space, but it also has not done so. Iraq, Iran, Libya and North Korea do not have the capability to deploy attack weapons in space. In Iraq, Saddam Hussein's regime has collapsed and US and coalition forces have overrun the country. In Iran, a program to develop uranium enrichment facilities for civil electric power production – and potentially for nuclear weapons – has drawn intense international attention, and Iran has permitted IAEA [International Atomic Energy Agency – international nuclear watchdog organization reporting to UN] inspectors to examine its facilities. Iran has no ICBM-range missiles. Libya has recently agreed to give up its work on weapons of mass destruction, and has permitted US and UN inspection visits. North Korea began work on long-range rockets, but their tests showed those rockets did not have the capability to reach US satellites in outer space. While presumably given enough time North Korea might develop this technology, it is engaged in six-party talks that include its nuclear and missile programs.

2NC/1NR Extensions: Answers To #3: "Non-Unique: US Seen As Weaponizing Now" (2/2)

____China will lead the world in signing a space peace treaty that solves the arms race, but new U.S. unilateral policies will derail talks by encouraging further Department of Defense investment in weapon systems.

GOUVEIA, 2005
[William Jr, "An Assessment of Anti-Satellite Capabilities and their Strategic Implications," *Astropolitics,* v.3 n.2]

Diplomatic measures such the ban on space weapons proposed by China or a multilateral effort to negotiate the 'rules of the road' for space operations could be useful to preclude space operations from threatening global stability. However, this issue is complicated by the broad implications of anti-satellite weapons on the debate about space weaponization. Although the United State has long conceptualized and researched anti-satellite weapons, there has not yet been a clear policy decision to weaponize space. This is a politically complex issue, with some advocating the concept of space as a peaceful sanctuary and others foreseeing space as an inevitable future battleground.43 The United States' missile defense program has the most bearing on the issues of space weaponization and, therefore, anti-satellite weaponry. Indeed, the Pentagon's interest in missile defense programs may be the driver of a new space policy, not the other way around.44 Specifically, systems developed to intercept ballistic missiles have the inherent capability to be used as anti-satellite weapons, particularly given the comparable ease of attacking a satellite on a predictable orbit vice intercepting a ballistic missile. Indeed, analysts posit that all three ground-based missile defense systems planned by the Bush administration – the Ground-based Midcourse Defense (GMD) being deployed in Alaska, the ship-based Aegis-LEAP system, and the Air-Borne Laser (ABL) program – have at least the capability to attack low-orbiting reconnaissance satellites.45 Moreover, space-based missile defense systems under development, such as the Space-Based Laser program, would be effective anti-satellite weapons. Such programs augment the Department of Defense's limited investment in anti-satellite weapon capabilities and obviate the need for dedicated anti-satellite weapon systems, which have little political and budgetary support.

2NC/1NR Extensions: Answers To 2AC #4: "China Won't Militarize Space"

____China will alter its law in order to justify expanded military space powers before they attack.

WORTZEL, 2008
[Larry M., Colonel, United States Army (Retired), "The Chinese People's Liberation Army and Space Warfare," *Astropolitics*, v.6, n.2]

While students of warfare are thinking through Beijing's military doctrine in space, other Chinese strategists and legal scholars are engaged in an internal debate on how traditional ideas of sovereignty and the laws of war apply in space. It is critical for those who follow China's military development to consider these internal debates because they imply that, before using military force in space, China will telegraph its intentions or justify its planned operations through political or legal action. One authoritative volume on the military legal system, Xin Junshi Geming yu Junshi Fazhi Jianshe (The New Revolution in Military Affairs and Building a Military Legal System) explored the importance of ensuring that the PLA sets out legal justifications for military actions in advance of any conflict.27 These studies imply that even now, as these debates take place in China, the General Political Department of the PLA is developing ways to justify its potential military actions in domestic law. Such activities and actions in domestic law are under way now to have an impact in the future on international law and international opinion. Beijing did this in its 1992 Maritime Law adopted by the National People's Congress, which extended sovereign claims over some three million square miles of area in the East and South China Seas, demarcating it as Chinese territory on its maps.28 The 2005 Anti-Secession Law is another example of how domestic law is used by Beijing to justify potential military action in the future, in this case against Taiwan.

2NC/1NR Extensions: Answers To 2AC #5: "China Already Thinks We're Militarizing"

They say China already thinks we're militarizing space, but…

____If this is true, it only proves our brink. China expects U.S. militarization, so they will be even more on edge about new space policies like the plan. There is only a risk that they will interpret the plan as a continuation of U.S. militarism.

____China's space policy is not aimed at war now, but any new U.S. space action will cause them to move toward war preparations.

JOHNSON-FREESE, 2006
[Dr. Joan, Professor of National Security Affairs at Naval War College and former Director of the Center for Space Policy & Law at the University of Central Florida , "A New US-Sino Space Relationship: Moving Toward Cooperation," *Astropolitics,* v.4 n.2]

China's near-term military modernization efforts focus primarily on capabilities to provide an advantage in the advent of a conflict with Taiwan. If a conflict occurred, improvements to Chinese missiles would be most determinative regarding their potential success, though space-based reconnaissance capabilities would also be important force enhancers, especially toward keeping U.S. military assistance at bay. Currently, however, no indication exists that the Chinese have focused on integrating space capabilities into either their military doctrine or operations to try and achieve an asymmetric advantage. For now, it appears China's intentions focus on military modernizations and not being potentially shut out of the heavens by the U.S. or left unprepared for the deployment of U.S. space weapons, which the Chinese anticipate will occur. The Chinese are not interested in pursuing a spending race as the Soviets did in response to Star Wars. To the contrary, the Chinese are acutely aware of how that worked out for the Soviets and will not repeat that mistake. But the Chinese are clearly taking their cues from the United States in terms of future military space hardware development.

____China's space program is overseen by the military, and they have the capability to rapidly weaponize.

EAST ASIAN STRATEGIC REVIEW, 2008
[No author attributed,"China's Space Development— A Tool for Enhancing National Strength and Prestige" Chapter 1, http://www.nids.go.jp/english/publication/east-asian/pdf/2008/east-asian_e2008_01.pdf]

Many of the satellites launched and currently operated by China are believed to have military purposes. Foreign analysts surmise that China operates many reconnaissance satellites under the guise of civilian remote sensing satellites, and possesses mobile telecommunication satellites and electronic intelligence satellites. In addition, the PLA is naturally expected to be a user of the system of Beidou navigation satellites now under development, as well as a network of four optical satellites and four synthetic aperture radar (SAR) reconnaissance satellites that began launching in 2006 and is planned for completion in 2010. The PLA is also exerting an enormous influence over the satellites' development, manufacture, and operation. China has also already developed cruise missiles, and very likely operates them using data from its positioning satellites.

2NC/1NR Extensions: Answers To 2AC #6: "Impact Turn – Space Militarization Increases Cooperation"

They say that space militarization is good because it increases cooperation, but…

____Extend the 1NC MITCHELL 2001 evidence. Space weapons increase the risk of war because they are automated and take the decision out of the hands of military commanders. Even if there is more cooperation, that won't stop accidents from happening which escalate to full-scale nuclear war.

____The prospect of deploying space weapons hurts relations with every country, especially China.

KREPON, 2004
[Peter, president emeritus of the Henry L. Stimson Center "Weapons in the Heavens: A Radical and Reckless Option," *Arms Control Today,* Nov, http://www.armscontrol.org/act/2004_11/Krepon]

Weaponizing space would poison relations with China and Russia, whose help is essential to stop and reverse proliferation. Anti-satellite weapon tests and deployments would surely reinforce Russia's hair-trigger nuclear posture, and China would likely feel compelled to alter its relaxed nuclear posture, which would then have negative repercussions on India and Pakistan. The Bush administration's plans would also further alienate America's friends and allies, which, with the possible exception of Israel, strongly oppose the weaponization of space. The fabric of international controls over weapons of mass destruction, which is being severely challenged by Iran's and North Korea's nuclear ambitions, could rip apart if the Bush administration's interest in testing space and nuclear weapons is realized.

____Escalating the U.S./China arms race causes accidental nuclear war.

SPACY, 2003
[William II, MS, Air Force Institute of Technology; MA, United States College of Naval Command; "Assessing the military utility of space-based weapons " *Astropolitics,* v.1 n.3]

The noted space and missile analyst John Pike has also surmised (see "Nations to take notice of US satellite destruction") that the test also demonstrates a theoretical capability to intercept Chinese submarine launched ballistic missiles using the SM-3. This is important because it appears that China is placing greater emphasis on the sea based leg of its strategic nuclear deterrence force given continued U.S. efforts to achieve a theoretical first strike capability known as "counterforce." This undermines U.S. and global security in a very significant way. As pointed out by the 2008 annual Pentagon report on Chinese military power China's shift toward a more road mobile and sea based strategic nuclear deterrent leads to a whole raft of issues about the safety and reliability of its command and control system. In other words the U.S. attempt to develop a first strike counterforce capability and Chinese efforts to mitigate this increases the likelihood of an accidental nuclear exchange.

2NC/1NR Link Extensions - Space Policy (General)

____Unilateral human spaceflight missions won't be perceived as cooperation. The Cold War proves that military tensions have to be resolved BEFORE space policy can be seen as innocent.

SADEH, 2010
[Eligar, Astroconsulting International LLC, "Report: United States-China Space Dialogue Project," *Astropolitics,* v.8 n.1]

In this regard, analogies were drawn to U.S.-Russia cooperation with the Apollo-Soyuz Test Project (ASTP) and Space Shuttle-Mir.4 In these cases, top-level political commitments were realized, i.e., intergovernmental space cooperation agreements, and each state was able to better understand the other given common terms of reference for cooperation, and through working together to achieve mission objectives. However, historic conditions and political context cannot be controlled. U.S.-Russia cooperation in human spaceflight was explicitly tied to detente in the first case of ASTP, and to the dissolution of the Soviet Union and posts Cold War international relations in the second case of Shuttle-Mir. The question that arises from this analogy to U.S.-Russia space cooperation is the extent to which there are similar political imperatives to U.S.-China relations. Further, human spaceflight plans for both the United States and China are tied to incremental approaches as to funding, schedule, and program and project development. As such, a radical departure from either state's trajectory is unlikely minus aggressive and assertive leadership. In other words, a strategic decision needs to be reached by both U.S. and China leaders to cooperate in human spaceflight and human space exploration.

2NC/1NR Link Extensions –Missile Defense Aff (1/5)

____Other countries will perceive the funding of a missile defense program, and this will cause the space arms race before the system is even built.

UNION OF CONCERNED SCIENTISTS, 2011
["Space Based Missile Defense," May, http://www.ucsusa.org/assets/documents/nwgs/space-based-md-factsheet-5-6-11.pdf]

Although this program has been described as only research and development, Congress should not support such a program. As discussed above, space-based interceptors would not provide a credible defense against ballistic missiles, yet the technology being developed would be useful for offensive attacks on satellites. Placing even a few prototype interceptors in orbit would be seen as providing an anti-satellite capability. A decision to fund this program could send a message to other countries that the United States is developing a space-based anti-satellite weapon capability. This apparent pursuit of space control technologies may encourage similar development by other countries, which would reduce U.S. security. Funding a Space Testbed is not an acceptable compromise between banning and deploying a space-based missile defense.

2NC/1NR Link Extensions –Missile Defense Aff (2/5)

____China is deeply suspicious of U.S. missile defense, and will respond with military action.

WORTZEL, 2008
[Larry M., Colonel, United States Army (Retired), "The Chinese People's Liberation Army and Space Warfare," *Astropolitics*, v.6, n.2]

Security literature elsewhere in China reflects the interpretation that the intent of American concepts regarding missile defenses in space is a way of extending national airspace control. An article on weapons in space by Huang Zhicheng, writing from the Beijing Systems Engineering College, expresses the view that "the United States is trying to build a strategic external border in space with its ballistic missile defense plans."10 Huang quotes President John F. Kennedy as saying "whoever controls space [the universe] can control the Earth (shei neng kongzhi yuzhou, shei jiu neng kongzhi diqiu)," reflecting China's deep uneasiness about U.S. intentions.11 This is a popular quote in the PLA. It is probably taught in its military schools. In a China Military Science article, another author, Liu Jixian, a Major General at the PLA Academy of Military Science, paraphrases Kennedy this way, "whoever controls the universe controls our world, whoever controls space controls initiative in war."12

____China views missile defense as a threat to Taiwan unification plans. They will respond even when the system is in the testing stages.

SADEH, 2010
[Eligar, Astroconsulting International LLC, "Report: United States-China Space Dialogue Project," *Astropolitics,* v.8 n.1]

A third factor entails ballistic missile defense (BMD) in the United States and space war games played out in the United States Air Force. Ballistic Missile Defense is a threat given China's limited ballistic missile and nuclear deterrent, and the fact that space-based components of Ballistic Missile Defense can undermine China's deterrence. Space war games have direct implications of possible conflict in space over a larger conflict regarding Taiwan; the United States Air Force war games emphasized that a scenario of conflict over Taiwan entails a test of space deterrence in a crisis or conflict environment.

2NC/1NR Link Extensions – Missile Defense Aff (3/5)

____Creating new space weapons will encourage other countries to build their own weapons.

MARSHALL, 2008
[Dr. Will, Academic Advisor in Small Spacecraft Office at Singularity University, and NASA Ames Research Center; "Reducing the Vulnerability of Space Assets: A Multitiered Microsatellite Constellation Architecture," *Astropolitics,* v.6 n.2]

There are reasons why development of space-based weapons reduces national security for that actor that deploys the weapons. It is central in political theory and cemented in history that new weapons introduced by one state cause other actors to develop countermeasures and for each space-based weapon there are relatively simple countermeasures (and more detailed studies on individual systems confirm that such systems are easily countered).73 In addition, countermeasures of space-based weapons can be used against other space assets equally, jeopardizing these. This is discussed in greater length elsewhere.74 Further, it has been shown that even if there were security benefits of space based weapons, there are in general ground-based systems that can afford the very same capabilities at a cost that is two to three orders of magnitude less, and so it would not in any case be the weapon of choice.75

____China perceives missile defense as directly targeting them, and will preemptively strike to prevent deployment.

GOUVEIA, 2005
[William Jr, "An Assessment of Anti-Satellite Capabilities and their Strategic Implications," *Astropolitics,* v.3 n.2]

China's decision to research anti-satellite weapons is an indication of its long-term strategic goal of weakening the American monopoly on military space capabilities. Given an inability to compete militarily with the United States, China may focus on asymmetrical methods such as anti-satellite weapons in an effort to counter US military dominance. That is, China could decrease the ability of the United States to react militarily to a conflict with Taiwan by preemptively attacking American satellites, a measure which would not necessarily invite the immediate fury of, for example, attacking American battleships. However, this calculus is complicated by American efforts to deploy missile defense systems. Specifically, China's military analysts perceive missile defense as an American attempt to negate China's nuclear deterrence and are increasingly concerned about how missile defense might affect their ability to deter American actions involving Taiwan. Given that missile defense systems must rely heavily upon satellites, Chinese anti-satellite weapon capabilities could be a useful asymmetrical means to degrade missile defenses. As an article by a Chinese defense analyst stated: 'For countries that can never win a war with the United States by using the method of tanks and planes, attacking the U.S. space system may be an irresistible and most tempting choice'.38

2NC/1NR Link Extensions – Missile Defense Aff (4/5)

____China's motivation for weaponizing space is to counter a U.S. missile defense system.

ACUTHAN, 2006
[Jayan Panthamakkada, Contributor to French Centre for Research on Contemporary China , "China's Outer Space Programme: Diplomacy of Competition or Co-operation?" *China Perspectives;* v. 63, http://chinaperspectives.revues.org/577]

China is opposed to the weaponisation of space for a number of reasons. Most importantly, Beijing opposes the use of space-based equipment is missile defence systems, such as the space-based sensors and intercept warheads in outer space potentially to be deployed is planed US missile defence systems. China is concerned that the US deployment of missile defences, especially national missile defence (NMD), will negate its strategic nuclear deterrent, potentially forcing China into an expensive arms race that it cannot currently afford. Beijing's focus on arms control in outer space is an attempt to block future deployment of missile defence by the United States.

____Deploying space-based missile defense will cause China and Russia to immediately begin developing counterweapons that will neutralize the aff.

GOUVEIA, 2005
[William Jr, "An Assessment of Anti-Satellite Capabilities and their Strategic Implications," *Astropolitics,* v.3 n.2]

Of note, should the United States pursue space-based weapons, potential adversaries have an increased incentive to develop anti-satellite weapon systems that can target them. One plausible scenario is that fielding space-based weapons as part of the missile defense program triggers China and Russia – who may perceive a space-based missile defense program as an attempt to negate their own nuclear deterrence or disable their satellites – to deploy anti-satellite weapons able to disrupt American satellites and negate its missile defenses. Because missile defense systems cannot function without spacebased surveillance systems, an adversary's anti-satellite weapon capability can deny missile defense systems the detection and warning platforms upon which they depend. In light of this requirement, preventing Strategic Implications of anti-satellite weapon Capabilities deployment of anti-satellite weapon systems is a prerequisite for a fully-effective missile defense capability.

2NC/1NR Link Extensions – Missile Defense Aff (5/5)

____Any U.S. move to put weapons in space would cause immediate response from Russia and China, and cause a space arms race.

HITCHENS, 2003
[Theresa, vice president of the Center for Defense Information; "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

It is inconceivable that either Russia or China would allow the United States to become the sole nation with space-based weapons. "Once a nation embarks down the road to gain a huge asymmetric advantage, the natural tendency of others is to close that gap. An arms race tends to develop an inertia of its own," writes Air Force Lt. Col. Bruce M. DeBlois, in a 1998 article in Airpower Journal.29 Chinese moves to put weapons in space would trigger regional rival India to consider the same, in turn, spurring Pakistan to strive for parity with India. Even U.S. allies in Europe might feel pressure to "keep up with the Joneses." It is quite easy to imagine the course of a new arms race in space that would be nearly as destabilizing as the atomic weapons race proved to be.

2NC/1NR Impact Extensions - General

____China's first step in space militarization will be to destroy U.S. satellite capabilities, and this will demobilize all U.S. space projects.

WORTZEL, 2008
[Larry M., Colonel, United States Army (Retired), "The Chinese People's Liberation Army and Space Warfare," *Astropolitics*, v.6, n.2]

The key to achieving this level of deterrence, according to Huang, is to concentrate one's own economic, military, and science and technology power to "ruin an opponent's economy and ability to function in space."93 The intention behind the December 2006 blinding of a U.S. satellite by a Chinese laser and the 11 January 2007 destruction of a Chinese weather satellite by the PLA's own direct ascent kill vehicle is clear when interpreted through this concept of demonstrating space deterrence.94 As Huang concedes, for a deterrent to be credible, one must demonstrate the capability. A deterrent must be demonstrated. It is also important to note that effective space deterrence, as conceived by this writer, includes crippling attacks on information networks and C4SIR systems. In the future, there could be other examples of space deterrence to let the U.S. and other countries know that they do not have free reign in space or over China. The PLA could demonstrate various forms of jamming. In doing so, the PLA would conduct operational tests of the work being done on jamming synthetic aperture radar satellites. Chinese journals do discuss maneuvering space bodies to intersect in orbit. This type of maneuvering lends itself to accidental collisions between space bodies. China could deny the hostile intent of such accidents, but they still would demonstrate a space deterrent capability.

2NC/1NR Impact Extensions - General

____Military conflict takes resources away from space development, turning the case.

VEDDA, 2008
[Dr. James, senior policy analyst at the Aerospace Corporation's Center for Space. Policy & Strategy in Arlington, Virginia , "Challenges to the Sustainability of Space Exploration," *Astropolitics,* v.6 n.1]

Large-scale overseas engagements such as those in Iraq and Afghanistan may be with us for a while, and more may be brewing in other parts of the world. Overseas conflict is consistently one of the top issues on voters' minds at election time, so attention and resources could be diverted away from civil space issues in favor of defense and homeland security if events dictate.

2NC/1NR Impact Extensions – Turns case – U.S. Leadership

____A space arms race will uniquely destroy U.S. military readiness.

KREPON, 2004
[Peter, president emeritus of the Henry L. Stimson Center "Weapons in the Heavens: A Radical and Reckless Option," *Arms Control Today,* Nov, http://www.armscontrol.org/act/2004_11/Krepon]

If Rumsfeld's plans to weaponize space are carried to fruition, America's armed forces, economy, and diplomacy will face far greater burdens, while controls over proliferation would be weakened further. Although everybody loses if the heavens become a shooting gallery, no nation loses more than the United States, which is the primary beneficiary of satellites for military and commercial purposes. If the United States leads the way in flight-testing and deploying new anti-satellite weapons, other states will surely follow suit because they have too much to lose by allowing the Pentagon sole rights to space warfare. U.S. programs will cost more and be far more sophisticated than the anti-satellite weapons of potential adversaries, who will opt to kill satellites cheaply and crudely. The resulting competition would endanger U.S. troops that depend on satellites to an unprecedented degree for battlefield intelligence, communication, and targeting to win quickly and with a minimum of casualties.

____A space arms race would hurt the U.S. military's freedom of movement, undercutting leadership.

HITCHENS, 2003
[Theresa, vice president of the Center for Defense Information; "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

Spurring other nations to acquire spacebased weapons of their own, especially weapons aimed at terrestrial targets, would certainly undercut the ability of U.S. forces to operate freely on the ground on a worldwide basis – negating what today is a unique advantage of being a military superpower.32 U.S. commercial satellites would also become targets, as well as military assets (especially considering the fact that the U.S. military is heavily reliant on commercial providers, particularly in communications). Depending on how widespread such weapons became, it also could even put U.S. cities at a greater risk than they face today from ballistic missiles.

2NC/1NR Impact Extensions - Turns case - Economy

____Space warfare would collapse the global economy.

KREPON, 2004
[Peter, president emeritus of the Henry L. Stimson Center "Weapons in the Heavens: A Radical and Reckless Option," *Arms Control Today,* Nov, http://www.armscontrol.org/act/2004_11/Krepon]

Space warfare would have far-reaching adverse effects for global commerce, especially commercial transactions and telecommunication services that use satellites. Worldwide space industry revenues now total almost $110 billion a year, $40 billion of which go to U.S. companies.[4] These numbers do not begin to illuminate how much disruption would occur in the event of space warfare. For a glimpse of what could transpire, the failure of a Galaxy IV satellite in May 1998 is instructive. Eighty-nine percent of all U.S. pagers used by 45 million customers became inoperative, and direct broadcast transmissions, financial transactions, and gas station pumps were also affected.[5]

2NC/1NR Impact Extensions - Turns case -Economy

____A space arms race would directly hurt the U.S. aerospace industry by making all commercial satellites vulnerable to destruction.

HITCHENS, 2003
[Theresa, vice president of the Center for Defense Information; "Weapons in Space: Silver Bullet or Russian Roulette? The Policy Implications of U.S. Pursuit of Space-Based Weapons," *SPACE WEAPONS Are They Needed?* ed. John M. Logsdon and Gordon Adams; October, http://www.gwu.edu/~spi/assets/docs/Security_Space_Volume.Final.pdf]

The competitive and cost challenges the U.S. satellite industry faces could be increased if the United States moved to make space a battlefield. Up to now, the threat that commercial satellites could become direct wartime casualties has been negligible. But an aggressive U.S. pursuit of anti-satellite weapons would likely encourage others to do the same, thus potentially heightening the threat to U.S. satellites. Space industry executives, whose companies often are working at the margins of profitability, are concerned about U.S. commercial satellites and their operations becoming targets, especially because current commercial satellites have little protection (electronic hardening, for example, has been considered too expensive). There would be costs to commercial providers for increasing protection, and it is highly unclear whether the U.S. government would cover all those costs.

2NC/1NR Impact Extensions - Space Debris

A) A U.S./China space war would create debris that would shut down the global economy and end all space programs.

MILOWICKI AND JOHNSON-FREESE, 2008
[Gene, Director, Aviation Programs, Aviation Center of Excellence at Florida State College at Jacksonville; and Joan, Professor of National Security Affairs at Naval War College and former Director of the Center for Space Policy & Law at the University of Central Florida "Strategic Choices: Examining the United States Military Response to the Chinese Anti-Satellite Test," *Astropolitics,* v.6 n.1]

Alternatively, heading down a path of conflict with the Chinese is fraught with risk for all humankind. A shooting war in space and the ensuing debris could quickly render Earth orbital space unusable for centuries. At a minimum, it would greatly increase the cost of putting payloads into orbit due to the hugely elevated risk of possible collision with debris. One can only imagine the ensuing insurance premiums. The situation could severely limit or even shut down commercial space operations due to the prohibitive costs involved; nearly impossible to imagine since space-based systems provide much of the connectivity required for an increasingly globalized world. Realistically, the U.S. cannot afford not to try cooperation. The alternative is just not acceptable or feasible. Space debris generation due to kinetic warfare in space is the new Mutually Assured Destruction (MAD) of the 21st century. Deterring events, which produce indiscriminate and dangerous debris fields, must be a priority.

Space Militarization 2AC (1/3)

1. No Link: The plan is a peaceful deployment to space. China will not backlash to the plan, only to the actual deployment of weapons.

SADEH, 2010
[Eligar, Astroconsulting International LLC, "Report: United States-China Space Dialogue Project," *Astropolitics,* v.8 n.1]

However, civil space cooperation is constrained due to the dynamic of misunderstanding-misperception. Despite this situation, human spaceflight was perceived at the workshop as a good candidate for cooperation. In this area, both states do benefit in terms of national prestige, and the attendant advances in technology and science that human spaceflight generates. With human spaceflight cooperation, there is a shared interest with absolute political gains, as opposed to the relative gains for one side or the other that is a result of a security dilemma. Further, any bilateral human spaceflight cooperation requires a departure from the Status Quo, necessitating commitments from the respective political leaders.

2. Case outweighs the disadvantage: Our harms scenarios result in nuclear war in the short-term, while space warfare would take years to happen because it requires weapons to be developed, tested, deployed and then used. The plan would solve before triggering their impacts.

3. Non-unique: The U.S. has already declared that it will weaponize space, so the perception link should have already been triggered.

GOUVEIA, 2005
[William Jr, "An Assessment of Anti-Satellite Capabilities and their Strategic Implications," *Astropolitics,* v.3 n.2]

DoD rhetoric has long acknowledged the importance of its space systems and emphasized the promise of space power.3 For 40 years, the United States has embraced the approach of researching potential space weapons – including anti-satellite weapon technologies – but opting not to deploy them, thereby avoiding both difficult funding decisions and a potential arms race in space. However, the January 2001 Commission to Assess United States National Security and Space Management and Organization, chaired by Donald Rumsfeld shortly before his appointment as Secretary of Defense, argued that the United States must pursue an aggressive approach to the military use of space.4 Building on this argument, DoD's September 2001 Quadrennial Defense Review emphasized the need to improve space systems and stated that a key objective is 'not only to ensure US ability to exploit space for military purposes, but also as required to deny an adversary's ability to do so'.5 Department of Defense has clearly recognized that protecting the ability to operate satellites – and potentially denying an adversary this ability – is pivotal to the success of future American military operations. The increasing reliance of military forces and commercial applications on space means that the United States must be able to preserve both military and civilian access to space.

Space Militarization 2AC (2/3)

4. No internal link: Chinese bureaucracy prevents space militarization.

MOLTZ, 2011
[Dr. James Clay, Associate Professor and Academic Associate for Security Studies at Naval Postgraduate School, "China's Space Technology: International Dynamics and Implications for the United States," Testimony for the hearing of the U.S.-China Economic and Security Review Commission on: "The Implications of China's Military and Civil Space Programs," 5/11]

Another problem that China may face in the future relates to its state-run model of organization. With the steady expansion of private entrepreneurship in global space activities, it remains to be seen whether the Chinese state is flexible enough to thrive in the next stage of international space competition. A 2010 study by China expert Eric Hagt for the U.S. Army War College, for example, described China's space industry as "dispersed, bloated, and located in geographically isolated regions." The sector has also had to deal with a series of reforms as Chinese authorities have sought to inject greater civilian management and innovation into hidebound defense industries. With this in mind, the Chinese State Council demoted the old umbrella organization for scientific research and development for the defense industry, COSTIND, in 2008. In its place, a new department called the State Administration for Science, Technology, and Industry for National Defense (SASTIND) has been created under the new super-Ministry of Industry and Information Technology. Still, many of China's state-run organizations continue to suffer from legacy inefficiencies of the socialist economy.

5. Chinese analysts already perceive the U.S. as weaponizing space, and have responded militarily.

HAGT, 2007
[Eric, director of the China Program at the World Security Institute, "China's ASAT Test: Strategic Response" *China Security*; Winter; http://www.wsichina.org/cs5_3.pdf]

Coupled with a number of key U.S. policy and military documents that call for control in space and the development of space weapons as well as the U.S. refusal to enter into any restrictive space arms control treaty, China has concluded that America is determined to dominate and control space.3 This perceived U.S. intent leads Beijing to assume the inevitable weaponization of space.4 Even more worrisome for China is the direct impact of these developments on China's core national interests. The accelerated development of the U.S. ballistic missile system, especially as it is being developed in close cooperation with Japan, has been cited as threatening China's homeland and nuclear deterrent.5 The 'Shriever' space war games conducted by the U.S. Air Force in 2001, 2003 and 20056 strongly reinforced the conclusion that U.S. space control sets China as a target.7 Most central to China's concerns, however, is the direct affect U.S. space dominance will have on China's ability to prevail in a conflict in the Taiwan Straits.8

Space Militarization 2AC (3/3)

6. Impact Turn: Space weapons increases the opportunity for cooperation with other countries.

LAMBAKIS, 2007
[Steven, national security and international affairs analyst specializing in space power and policy studies, and fellow at the National Institute for Public Policy; "Missile Defense From Space," *Policy Review*, 2/01, n. 141, http://www.hoover.org/publications/policy-review/article/6124]

At some point, when the system is seen by other governments as highly effective, they could recognize a diminishing marginal rate of return in their own ballistic missile investments. As more allies invest in missile defense, U.S. space-basing activities could build on current missile defense cooperative activities and open up new avenues for international collaboration, both to develop elements of the space-based layer and to participate in operations.

1AR Extension Evidence To 2AC #3: "Non-Unique: Space Militarization Now"

Extend the 2AC #3, their link is non-unique because we've already declared we're going to militarize space and that's how we're perceived by the world.

____Every nation on earth is already moving toward space militarization.

GOUVEIA, 2005
[William Jr, "An Assessment of Anti-Satellite Capabilities and their Strategic Implications," *Astropolitics,* v.3 n.2]

Although American space dominance is presently unquestioned, the environment of space is rapidly changing as the number of spacefaring nations increases.6 Spurred by economic inducements to expand satellite-based services such as television broadcasting and commercial communications, developing nations such a Nigeria now have access to space. Currently, the United States, Russia, China, France, the United Kingdom, India, Japan, Israel and Brazil all have some degree of space-based military capability. Although only the first three states have pursued anti-satellite weapon capabilities, targeting satellites in low-earth orbit is not beyond the reach of any nation with a nuclear weapon and a relatively primitive launch vehicle.7

1AR Extension Evidence To 2AC #4: "China Won't Militarize Space"

Extend our 2AC #4, they have no internal link to war with China because China can't and doesn't want to militarize space

____Internal political pressures mean China will not develop space weapons.

GOUVEIA, 2005
[William Jr, "An Assessment of Anti-Satellite Capabilities and their Strategic Implications," *Astropolitics,* v.3 n.2]

Although evidence suggests that China began preliminary research on anti-satellite weapon technologies in the 1980s, it has long been an international advocate of a multilateral treaty ban on space weapons. This indicates that although China may be interested in space warfare for strategic reasons, its primary goal is to avoid an expensive space race. Thus, internal pressures may slow progress towards anti-satellite weapon development. 'Publicly, China opposes the militarization of space and seeks to prevent or slow the development of U.S. anti-satellite systems and space-based missile defenses', the Department of Defense reports states. 'Privately, however, China's leaders probably view anti-satellite weapon systems – and offensive counter-space systems, in general – as well as space-based missile defenses as inevitabilities'.42

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Affirmative Answers

Plan-specific Link Answers

Background Notes: Politics Disadvantage

Permanent Normalized Trade Relations (PNTR): The United States sets trade policies with individual countries that cover whether the U.S. can set tariffs (essentially a tax on any items coming into the United States from another country), and how high those tariffs can be. Countries with "normal trade status" receive substantially lower tariffs than others, and this encourages more cooperation on trade between the two countries. From a backgrounder on Trade Relations and Russia: http://www.fas.org/sgp/crs/row/RS21123.pdf

"Normal trade relations" (NTR), or "most-favored-nation" (MFN), trade status is used to denote nondiscriminatory treatment of a trading partner compared to that of other countries.1 Only two countries—Cuba and North Korea—do not have NTR status in trade with the United States. In practice, duties on the imports from a country which has been granted NTR status are set at lower rates than those from countries that do not receive such treatment. Thus, imports from a non-NTR country can be at a large price disadvantage compared with imports from NTR-status countries."

Despite having normal trade relations status in practice, Russia does not have permanent trade relations. Every year, the U.S. President has to decide whether to allow Russia to have this status because of the Jackson-Vanik legislation. Granting Permanent Normalized Trade Relations to Russia would overturn that legislation.

Jackson-Vanik Amendment: The Trade Act of 1974 establishes basic rules for granting countries Normal Trade Relations status. An amendment to that Act, referred to as the Jackson-Vanik Amendment, wanted to tie trade status to a country's immigration policies in order to encourage more freedom for Jewish people to move out of Communist countries with discriminatory governments. The Soviet Union was the primary target, and Jackson-Vanik was used to deny normal trade relations with the Soviet Union until they allowed fair emigration. From the same backgrounder as the above explanation:

"Section 402 of Title IV, the so-called Jackson-Vanik amendment, denies the countries eligibility for NTR status as well as access to U.S. government credit facilities, such as the Export-Import Bank, as long as the country denies its citizens the right of freedom-of-emigration. These restrictions can be removed if the President determines that the country is in full compliance with the freedom-of-emigration conditions set out under the Jackson-Vanik amendment."

Russia no longer discriminates against Jewish people for wishing to emigrate, but the Jackson-Vanik Amendment still requires the President to officially declare a waiver for Russia every year.

Vladimir Putin: Former President of Russia, and current Prime Minister. There is controversy over how much power he still has, and how much control he has over the current President.

Dmitry Medvedev: Current President of Russia.

World Trade Organization (WTO): The World Trade Organization is an international governing body that nations join in order to promote free trade. Russia is not currently a member, and needs support from the United States to become a member. Granting Permanent Normal Trade Relations status to Russia would help them get into the WTO.

Politics Disadvantage 1NC (1/3)

A) Uniqueness: Obama is putting all his political capitol toward pressuring Congress to grant Russia Permanent Normalized Trade Relations status, and getting it done this year is critical to overall U.S./Russian relations and trade.

REUTERS, 2011

[Doug Palmer, staff writer, "U.S. needs Russia in WTO - White House aide" 4/16, http://thestar.com.my/news/story.asp?file=/2011/4/16/worldupdates/2011-04-16T013450Z_01_NOOTR_RTRMDNC_0_-563686-2&sec=Worldupdates]

The Obama administration is making a big push to get Russia into the World Trade Organization by the end of the year and to persuade Congress to approve permanent normal trade relations with the former Cold War enemy, a top White House official said on Friday. "It's not a gift to Russia. We think it's in our national interest," White House national security official Michael McFaul said in a speech at the Peterson Institute for International Economics. Getting Russia in the WTO and establishing PNTR "is the top priority in our entire bilateral relation," he said. Russia, the largest economy still outside the WTO, has been negotiating for about 18 years to join the world body. Helping Russia to complete those negotiations would boost economic ties, which have not made as much progress as other issues under a "reset" of the relationship, McFaul said. The United States needs Russia's cooperation on a number of geopolitical issues, including those concerning Iran. Stronger U.S. economic ties with Russia would make it easier for Moscow to see the benefits of siding with Washington, McFaul said. Once Russia has finished its accession to the WTO, Congress would be required to approve PNTR by removing it from a human rights provision known as the Jackson-Vanik amendment. That 1974 law tied normal trade relations with communist countries to the rights of religious minorities to emigrate freely. The White House has waived the measure each year since 1994, but it remains on the book. McFaul acknowledged President Barack Obama cannot realistically ask lawmakers to approve PNTR until there is a final WTO accession deal. But the administration wants Congress to vote as soon as possible after a final deal, he said.

Politics Disadvantage 1NC (2/3)

B) Link: Space policy is controversial because it is viewed as trading off with other priorities, like national defense and the economy.

VEDDA, 2008
[Dr. James, senior policy analyst at the Aerospace Corporation's Center for Space. Policy & Strategy in Arlington, Virginia, "Challenges to the Sustainability of Space Exploration," *Astropolitics,* v.6 n.1]

Space exploration does not hold the same strategic importance and priority on the national agenda as it did four decades ago. In 1961, NASA Administrator James Webb and Secretary of Defense Robert McNamara suggested that Apollo was "part of the battle along the fluid front of the Cold War,"4 a view that was largely shared by the executive branch,5 the Congress, and the public. No such strategic imperative exists for human spaceflight today. In his 14 January 2004 speech announcing the exploration initiative, President George W. Bush called it "a journey, not a race,"6 and generally emphasized human destiny and the desire to explore rather than any kind of national imperative. This lack of imperative was reinforced by a lack of new resources, a sharp contrast to the NASA budget of the early 1960s, which multiplied several times to accommodate Apollo. As a result, media and public response has been less enthusiastic than it was for Apollo in 1961, and expressions of disinterest and disapproval have been common from an electorate more concerned about overseas military conflict, health care, the economy, and the environment.

C) Internal Link: The vote will be close, so Obama's political capital and lobbying efforts are necessary to overcome Congressional opposition.

REUTERS, 2011
[Doug Palmer, staff writer, "Obama wants Russia trade vote before WTO deal: trade official" 6/22, http://www.reuters.com/article/2011/06/22/us-usa-russia-trade-idUSTRE75L6Q720110622]

But many lawmakers see a vote on PNTR as a proxy for a vote on Russia's WTO accession and have resisted past efforts to approve PNTR before a final WTO deal is struck. They have taken that line even though Jackson-Vanik was originally passed to encourage Russia to allow Jews to emigrate freely, and Washington has judged Moscow to be in compliance with that requirement since 1994. In addition, concern over Russia's record on human rights and its commitment to the rule of law are expected to enter into the debate on PNTR, requiring the Obama administration to mount a major lobbying effort with Congress if it serious about winning approval, one congressional aide said.

Politics Disadvantage 1NC (3/3)

D) Impact: Strong U.S./Russian relations are critical to solving proliferation, global warming, and economic collapse. The impact is extinction.

THE ATLANTIC, 2008
[Jeffrey Tayler, staff writer, "Medvedev Spoils the Party" Nov, http://www.theatlantic.com/magazine/archive/2008/11/medvedev-spoils-the-party/7130/

Like it or not, the United States cannot solve crucial global problems without Russian participation. Russia commands the largest landmass on earth; possesses vast reserves of oil, natural gas, and other natural resources; owns huge stockpiles of weapons and plutonium; and still wields a potent brain trust. Given its influence in Iran and North Korea, to say nothing of its potential as a spoiler of international equilibrium elsewhere, Russia is one country with which the United States would do well to reestablish a strong working relationship—a strategic partnership, even—regardless of its feelings about the current Kremlin [Russian government] government. The need to do so trumps expanding NATO or pursuing "full-spectrum dominance." Once the world financial crisis passes, we will find ourselves returning to worries about resource depletion, environmental degradation, and global warming – the greatest challenges facing humanity. No country can confront these problems alone. For the United States, Russia may just prove the "indispensable nation" with which to face a volatile future arm in arm.

2NC/1NR Extensions: Answers To 2AC #1: "Non-Unique: Jackson-Vanik Won't Pass" (1/2)

They say we're not unique because Republicans will block Jackson-Vanik, but…

____ Extend the 1NC REUTERS 2011 evidence. Obama has made passing trade relations legislation his top priority and will spend all his political capital to get it through Congress. Empirically, Obama has successfully gotten Congress on board with his policies; Healthcare proves.

____PNTR will pass because important U.S. businesses are lobbying.

MOSCOW TIMES, 2011
[Nikolaus von Twickel , staff writer, "Medvedev Leaves Investors Inspired" 6/20, http://www.themoscowtimes.com/business/article/medvedev-leaves-investors-inspired/439153.html]

Participants were also buoyant about the prospect of the country's accession to the World Trade Organization by the end of the year. Medvedev provided one of his strongest arguments for accession so far by saying the economy could not function without free trade. "Markets are like parachutes — they work only when open. Without an open economy, we will fall very badly," he said in his speech. He said admission was realistic by year-end, but warned of "political games" that could hamper the process. He also stressed that Moscow would only join under acceptable terms. Five U.S. business leaders on Friday handed Medvedev a letter in which 35 CEOs from both the United States and Russia offered their help to facilitate the admission process, which has been ongoing for 18 years. A copy of the letter was also sent to U.S. President Barack Obama, the Kremlin [Russian government] said on its web site. Kleinfeld, who was among the five CEOs who gave Medvedev the letter at a meeting, said Russia's WTO accession is a top priority for U.S. business. "We want to make sure that that is well understood not only in Russia but also around the world," he said.

____Obama is accelerating negotiations and creating momentum to pass PNTR quickly.

COALITION FOR U.S.-RUSSIA TRADE, 2011
["USTR Reiterates Commitment to Securing PNTR with Russia in 2011," 3/09, http://www.usrussiatrade.org/admin_download.php?f=2011-03-09_USTR_Reiterates_Commitment_to_Securing_PNTR_with_Russia_in_2011.pdf]

At a hearing held today to discuss the Obama Administration's trade policy agenda for 2011, U.S. Trade Representative Ron Kirk told members of the Senate Finance Committee that the Administration intends to work with Congress to pass legislation this year establishing permanent normal trade relations (PNTR) with Russia in connection with Russia's accession to the World Trade Organization (WTO). Kirk's comments come one month after he first announced before members of the House Ways and Means Committee that the Administration plans to seek a vote on PNTR in 2011. The Administration has committed to resolving outstanding issues in negotiations on Russia's WTO accession, so that the 10th-largest economy in the world can be ushered into the rules-based system of international trade. However, U.S. businesses will be unable to take advantage of the terms of Russia's WTO accession unless Congress passes legislation extending PNTR. With accession talks advancing at an accelerated pace in recent months, Russia may join the WTO later this year, meaning that a vote on PNTR could become necessary within a matter of months.

2NC/1NR Extensions: Answers To 2AC #1: "Non-Unique: Jackson-Vanik Won't Pass" (2/2)

____The appointment of influential ambassador McFaul to Russia will push PNTR through Congress.

TRENIN, 2011
[Dmitry, director of the Carnegie Moscow Center "Ambassador 'Mike' McFaul Could Help Reset," *The Moscow Times*, 6/02, http://www.themoscowtimes.com/opinion/article/ambassador-mike-mcfaul-could-help-reset/438048.html]

Finalizing Russia's entry into the World Trade Organization may now look almost imminent, after 18 years of negotiations. But even if accession is granted, it may lead to a lot of legal wrangling once Russia becomes a member. In addition, McFaul may play an important role in helping to clear the long-surviving relic of the Cold War in the economic realm, the Jackson-Vanik amendment, and institute a permanent normal trade relationship between the United States and Russia. After this, helping Russia join the Organization for Economic Cooperation and Development would be the obvious next objective. Full and equal inclusion into the global economy works wonders to bind and strengthen relations between countries. Meanwhile, one of McFaul's chief tasks will be to inform the U.S. government about Russia's domestic politics. His previous stay in Moscow, when he served as senior associate with the Carnegie Moscow Center, coincided with the 1995-96 election cycle, as the early hopes were receding and new disappointments were setting in. Russia has certainly changed a lot since the mid-1990s, but it is hardly impervious to more change. When it comes, of course, it will be driven by domestic factors rooted in the country's increasingly mature society and the demands of its economy. To many Muscovites, Ambassador McFaul would be simply "Mike." He has lots of friends here — many of whom are not friends among themselves — and he enjoys easy access to virtually all the movers and shakers on the Russian political, economic and diplomatic scene. His Russian interlocutors would inevitably see their "friend Mike" as someone who has the ear of the U.S. president. Indeed, this would be a rare case of an ambassador who is actually what ambassadors are formally supposed to be: a personal representative of the head of state. Thus, he would hear an earful and would have to use all his expertise and good judgment to say and do the right thing.

2NC/1NR Extensions: Answers To 2AC #2: "No Link – Space Policy Not Controversial"

They say we have no link because space policy isn't controversial, but…

____Extend the 1NC REUTERS 2011 evidence. Obama will have to use all of his political capital to convince skeptical Republicans that Russia deserves normalized trade relations.

_____ And their evidence assumes small things like shuttle missions, not spending trillions on drastic changes in our space policy like the affirmative plan.

2NC/1NR Extensions: Answers To 2AC #3: "Link Turn"

They say they turn our link and increase Obama's political capital, but…

____ Extend the 1NC VEDDA 2008 evidence, space policy is controversial because it is perceived as being too long-term and requiring too much immediate money that trades off from other policy priorities such as trading with Russia.

[Read more Plan-specific Links here from 2NC/1NR Link Extensions]

2NC/1NR Extensions: Answers To 2AC #4: "No Internal Link – Russia Won't Open to Trade" (1/3)

They say we have no internal link because Russia won't open to trade, but…

___Extend the 1NC REUTERS 2011 evidence. Passing PNTR gives Russia the incentive to begin trading openly with the United States, as well as working with us on non-trade issues like proliferation. Their evidence is describing the status quo where we treat Russia like criminals instead of partners.

____Passing PNTR is the only way to get U.S. companies access to the huge Russian market, while failing will collapse economic ties for years.

REUTERS, 2011
[Doug Palmer, staff writer, "U.S. needs Russia in WTO - White House aide" 4/16, http://thestar.com.my/news/story.asp?file=/2011/4/16/worldupdates/2011-04-16T013450Z_01_NOOTR_RTRMDNC_0_-563686-2&sec=Worldupdates]

A draft study released by the Peterson Institute on Friday estimated U.S. goods exports to Russia could double to $19 billion after Russia joins the World Trade Organization. But it warned U.S. exporters could lose sales if Congress refuses to grant PNTR to keep pressure on Moscow to improve its human rights record or address other concerns. Consequently, "the U.S. congressional vote on extending permanent normal trade relations could set the tone for economic relations between the United States and Russia for the next decade to come," the report said. McFaul and Russian Finance Minister Alexei Kurdin, in a separate speech earlier on Friday, said Russia was very close to finishing its accession process. That could set the stage for a congressional vote in coming months. Russia's WTO entry would create export opportunities for U.S. poultry, pork and beef as well as other items such as wine, fruits and nuts, the report said. U.S. drug and medical device manufacturers also should profit, as should exporters of heavy industrial machinery such as tractors and oil and natural gas field equipment, it said. U.S. services companies in sectors ranging from telecommunications to finance to express delivery also should see increased business in Russia. Refusing to grant permanent normal trade relations to Russia would put the United States at odds with a WTO rule requiring members to "unconditionally" provide all other members the same market access. Russia could respond by denying U.S. farmers and companies the market-opening benefits of its accession to WTO, putting them at a disadvantage to European, Chinese, and other competitors. McFaul said he did not believe withholding PNTR would be an effective way to pressure Moscow on human rights. Congress should explore other avenues to do that, he said.

2NC/1NR Extensions: Answers To 2AC #4: "No Internal Link – Russia Won't Open to Trade" (2/3)

____Russia wants to join the WTO and is only waiting on Jackson-Vanik

BBC MONITORING, 2011
["Russian deputy premier advocates greater trade, more MP ties with USA," 4/08, lexis-nexis]

It was specifically on questions of the economy - and primarily the prospects of Russia's membership in WTO - that the emphasis of the visit by the Russian Deputy Prime Minister to America was placed. On the part of the incumbent US Administration, Sergey Ivanov explained to Russian journalists, he felt support in resolving the questions of Russia's accession to the WTO and removal of the Jackson-Vanik Amendment, which hinders normalization of trade relations between Moscow and Washington. However, we know that a number of Republican congressmen hold opposite views, and perhaps they will pose various obstacles in this path. Then again, Moscow is ready for this, Ivanov said, and it is aware of the fact that "there will be heated debates on Capitol Hill, but these are questions of the American domestic political kitchen, in which we will not interfere." Nevertheless, Russia plans to step up dialogue with the US in the nearest time on economic problems and questions of mutual investments, Sergey Ivanov announced in the US. Very soon, Minister of Finance Aleksey Kudrin will visit Washington, and after that a visit by First Deputy Prime Minister Igor Shuvalov is also possible. According to Ivanov, Russia is expecting an influx of foreign - including American - investments, and "the situation for this is developing most successfully.

2NC/1NR Extensions: Answers To 2AC #4: "No Internal Link – Russia Won't Open to Trade" (3/3)

____If the U.S. doesn't have normalized trade when Russia enters the WTO, it will be in violation of global trading rules.

CHARAP, 2011
[Samuel, director for Russia and Eurasia at the Center for American Progress, "Congress deserves a voice on human rights in Russia" 6/22, http://thehill.com/blogs/congress-blog/foreign-policy/167823-congress-deserves-a-voice-on-human-rights-in-russia]

If Russia's WTO accession talks conclude soon as hoped, Congress is likely to consider legislation exempting Russia from the amendment's provisions - although it has had no practical impact since the Soviet period, if Jackson-Vanik stays on the books, the US will be in violation of WTO rules and American firms would stand to lose big.

____Passing PNTR will allow U.S. businesses to operate freely in Russia, which boosts our trade relationship.

TIMES PICAYUNE, 2011
[Allison Good, staff writer, "U.S. and Russia are strengthening their relationship, Ambassador says" 6/21, http://www.nola.com/business/index.ssf/2011/06/us_and_russia_are_strengthenin.html]

Beyrle, however, noted that there are still significant obstacles overshadowing the U.S.-Russia economic relationship. "Russia is still a tough place to do business because there are bureaucratic obstacles and corruption is an enormous problem," he continued. "For example, the United States is constantly fighting protectionist lobbies that want to keep American beef and poultry out of Russia." American initiatives to improve trade relations with Russia include working to support Russia's membership in the World Trade Organization. According to Beyrle, this will "allow the United States to benefit from the free movement of goods and services."

____Passing Normal Trade Relations is critical to get U.S. access to Russian trade deals when Russia joins the World Trade Organization in December.

REUTERS, 2011
[Doug Palmer, staff writer, "Obama wants Russia trade vote before WTO deal: trade official" 6/22, http://www.reuters.com/article/2011/06/22/us-usa-russia-trade-idUSTRE75L6Q720110622]

President Barack Obama wants Congress to approve "permanent normal trade relations" with Russia this year, before the former Cold War enemy finishes its negotiations to join the World Trade Organization, a U.S. trade official said on Wednesday. "It's clear that Russia's ambition is to complete the accession process and become a WTO member by the end of the year," said Chris Wilson, assistant U.S. trade representative for the WTO and multilateral affairs. "Our focus is on trying to achieve a vote before" that happens, Wilson said during a panel discussion of remaining issues blocking Russia's entry into the world trade body. Wilson said it was important that Congress approve permanent normal trade relations, or PNTR, before a final WTO accession deal is reached to ensure U.S. exporters immediately get the full benefits of Russia's entry, which could occur this December at a WTO ministerial meeting. If lawmakers fail to approve PNTR and revoke a Cold War-era provision known as the Jackson-Vanik amendment, WTO rules would allow Moscow to deny the United States the new access it has negotiated in the Russian market while providing it to other WTO members, he said.

2NC/1NR Extensions: Answers To 2AC #5: "Impact Non-Unique: Russian Relations Already High" (1/2)

They say our impact isn't unique because relations with Russia are high now, but…

___Extend the 1NC REUTERS 2011 evidence, Russia and the U.S. aren't cooperating on critical issues because our economic ties aren't strong enough. This is more comparative of the linkage between issues than their evidence, which is taking a snapshot of relations rather than an overall analysis.

____Even if Jackson-Vanik is no longer active, its existence destroys U.S./Russian relations.

IYANOV, 2011
[Eugene, Massachusetts-based political analyst who blogs at The Ivanov Report, "The amendment that came in from the Cold War," 5/19,
http://rbth.ru/articles/2011/05/19/the_amendment_that_came_in_from_the_cold_war_12895.html

Yet everyone seems to agree that Jackson-Vanik remains a powerful irritant for the whole body of U.S.-Russia relations, especially on the Russian side, with Moscow loudly arguing that the annual review process is discriminatory and humiliating. Even in the United States, there are not many fans of Jackson-Vanik outside Congress. Some Jewish organizations, for example, have repeatedly expressed their uneasiness with the fact that the amendment, which they consider a landmark accomplishment in the area of human rights, is being used to sell more American chickens.

____The appointment of a new ambassador to Russia makes now a key time to revamp relations.

BBC MONITORING, 2011
["New US envoy to Russia expected to give reset "second wind"" 6/03, lexis-nexis]

Incidentally, for Michael McFaul the appointment to Moscow can hardly be described as a secure. The point is that the reset process launched by him has actually started to fizzle out. As Mr Obama acknowledged in Deauville, "the reset has taken place." "There is nothing further to reset. So now it is necessary to go further and impart real content to relations," Dmitriy Trenin says. Progress on the question of setting up a missile defence system in Europe will become one of the new ambassador's main assignments. After the brakes were silently put on the Russian initiative for a "sectoral approach" by NATO, Washington will have to seek new means of reaching agreement with Moscow, in order not to give rise to a spiral of tension. Secondly, questions about Russia's delayed entry into the WTO (Moscow is expecting the United States to help resolve problems with Georgia) and the lifting of the Jackson-Vanik amendment have as before not been removed from the agenda. Dmitriy Trenin is convinced that Michael McFaul's arrival in the Russian Federation will help Moscow and Washington establish a real partnership. "Michael has worked a lot in Moscow; he has an enormous circle of interlocutors, many of whom are influential people and trust him," he says. "Furthermore, he has personal and trusting contact with President Obama, so he will be able to really influence decisionmaking." Michael McFaul has good relations with US Assistant Secretary of State Rose Gottemoeller, who headed the Carnegie Moscow Centre from 2006 to 2009, and also with Under Secretary of State William Burns, who worked as ambassador to Moscow from 2005 to 2008. "This triangle of American diplomats in the Russian direction gives a chance to go further than the reset," Dmitriy Trenin notes.

2NC/1NR Extensions: Answers To 2AC #5: "Impact Non-Unique: Russian Relations Already High" (2/2)

____A unique opportunity has opened to solidify US/Russian relations which won't come again.

KARAGANOV, 2011
[Sergey, dean of the Faculty of World Economics and Politics at the National Research University-Higher School of Economics "Pundit sees 18-month "window of opportunity" for US-Russian relations" BBC Monitoring, 5/18, lexis-nexis]

A strategic "window of opportunity" may open up in America's relations with the world, including Russian-American relations. Such a window - for its own reasons - has already opened up in Russia-EU relations. And Russia, having seized the initiative extremely successfully, is beginning to fill it. With Medvedev's European security treaty, his joint proposal with A. Merkel to create a council to coordinate Russian and EU foreign policy, and, furthermore, Putin's proposal for the creation of a single European economic, energy, and human complex stretching from the Atlantic to the Pacific - a kind of "Union of Europe." An external situation has taken shape for Russia that is unique in its thousand-year history. For the first time, nobody is seriously threatening it right now. If this trend is successfully established in the West through the proposal for a new agenda for both Europe and the United States, a system whereby they would pose no threat either could be created. And, in addition to an already friendly China, a friendly America would also emerge here and there. And Europe might well also become more mature. And an opportunity would emerge to create two geopolitical triangles of relationships that would be optimal for Russia - CAR (China-America-Russia), which high-ranking Chinese theorists are already proposing, and ARE (America-Russia-Europe). Then Russia would indeed acquire a period of protracted and relatively calm development. At least in terms of foreign encirclement. What would happen internally depends on us alone. So it is necessary not only to get involved in not very enthralling pre-election battles but also to prepare a new agenda for relations with the United States. Before the standstill ends in, I would remind you, a year or a year and a half's time. An attempt must be made.

2NC/1NR Extensions: Answers To 2AC #6: "Link Turn – Plan Creates Momentum for Obama"

They say Obama turns controversies like the plan into political capital, but…

____ 1. The plan is not a victory. Congress would be angry at Obama forcing through an expensive, long-term space policy and would look to backlash at the next major Obama policy priority which is Russian trade. It isn't logical for politicians who hate the plan to suddenly support Obama because of it.

____ 2. Our links are more specific. This evidence is about turning Healthcare into foreign policy credibility, but our argument is about Congress. Foreign diplomats don't have to feel the effects of domestic policies, so their reaction would be different and isn't applicable to the plan.

2NC/1NR Extensions: Answers To 2AC #7: "No Impact – Russia Won't Challenge"

They say we have no impact because Russia won't challenge us, but…

____Extend the 1NC ATLANTIC 2008 evidence, it isn't enough for Russia to not challenge the U.S. Instead, we need active cooperation in order to solve global problems.

____This evidence is specific to military responses, not any of our impacts. Just because Russia isn't spending on military upgrades does not mean they will help us on nonproliferation efforts or on climate change.

____Cooperation with Russia is necessary to gain access to intelligence and assistance on every problem, including terrorism, nuclear proliferation, and Chinese aggression.

SIMES, 2003

[Dr. Dmitri, foreign policy analyst and author who serves as president of The Nixon Center and publisher of the foreign policy journal The National Interest, "Advancing American Interests and the U.S.-Russian Relationship Interim Report," *The Commission on America's National Interests and Russia*, Sep, http://www.globalsecurity.org/military/library/congress/2003_hr/sim093003.htm]

As the Report of the Commission on American National Interests (2000) concluded, Russia ranks among the few countries whose actions powerfully affect American vital interests. Why? First, Russia is a very large country linking several strategically important regions. By virtue of its size and location, Russia is a key player in Europe as well as the Middle East and Central, South and East Asia. Accordingly, Moscow can substantially contribute to, or detract from, U.S. efforts to deal with such urgent challenges as North Korea and Iran, as well as important longer term problems like Iraq and Afghanistan. In addition, Russia shares the world's longest land border with China, an emerging great power that can have a major impact on both U.S. and Russian interests. The bottom line is that notwithstanding its significant loss of power after the end of the Cold War, Moscow's geopolitical weight still exceeds that of London or Paris. Second, as a result of its Soviet legacy, Russia has relationships with and information about countries that remain comparatively inaccessible to the American government, in the Middle East, Central Asia and elsewhere. Russian intelligence and/or leverage in these areas could significantly aid the United States in its efforts to deal with current, emerging and still unforeseen strategic challenges, including in the war on terrorism. Third, today and for the foreseeable future Russia's nuclear arsenal will be capable of inflicting vast damage on the United States. Fortunately, the likelihood of such scenarios has declined dramatically since the Cold War. But today and as far as any eye can see the U.S. will have an enduring vital interest in these weapons not being used against America or our allies. Fourth, reliable Russian stewardship and control of the largest arsenal of nuclear warheads and stockpile of nuclear materials from which nuclear weapons could be made is essential in combating the threat of "loose nukes." The United States has a vital interest in effective Russian programs to prevent weapons being stolen by criminals, sold to terrorists and used to kill Americans. Fifth, Russian stockpiles, technologies and knowledge for creating biological and chemical weapons make cooperation with Moscow very important to U.S. efforts to prevent proliferation of these weapons. Working with Russia may similarly help to prevent states hostile to the United States from obtaining sophisticated conventional weapons systems, such as missiles and submarines.

2NC/1NR Impact Extensions - Turns case: Economy

____Trading with Russia is critical to the United States economy.

TIMES PICAYUNE, 2011
[Allison Good, staff writer, "U.S. and Russia are strengthening their relationship, Ambassador says" 6/21,
http://www.nola.com/business/index.ssf/2011/06/us_and_russia_are_strengthenin.html]

The ambassador also emphasized that relations with Russia are not only politically advantageous for the United States, but also economically essential. "Good political relations are not enough, and we need more solid foundations of trade and business. Our prosperity is closely intertwined with Russia, since it's a major market for U.S. goods and services," he said during the luncheon program, which was called "The Current State of U.S.-Russia Relations." While trade between the United States and Russia has doubled over the past four years, the scope of economic cooperation between Russia and New Orleans has also expanded. "Our exports to Russia from New Orleans grew exponentially between 2006 and 2010," said Mayor Mitch Landrieu. "There's a great partnership between New Orleans and Russia." American companies have taken the reset to heart, added Beyrle. "U.S. companies are now well-established in Russia and are creating jobs," he explained, citing the recent activities of Ford, General Motors, and high-tech entities such as Microsoft, Cisco and Boeing.

2NC/1NR Impact Extensions - Turns case: Russian Expansionism (1/2)

____Obama has already nominated moderates to his Russia positions, and Congress is looking to enforce human rights legislation. Passing Trade Relations legislation is the critical last step to ensure Russia remains stable.

BONICELLI, 2011
[Paul, served in the Bush administration as assistant administrator for Latin America and the Caribbean at the United States Agency for International Development, overseeing all foreign assistance programs in the region, "How Obama should handle Russia and the Putin factor" 6/20, http://shadow.foreignpolicy.com/posts/2011/06/20/how_obama_should_handle_russia_and_the_putin_factor l]

President Obama has before him an opportunity to promote U.S. values and a more comprehensive policy toward Russia because of the political and economic needs of Vladimir Putin and his "court." The right action now will promote U.S. interests, arguably the interests of the Russian people, and make it possible for the United States to have a better relationship with what we hope will be a more democratic Russian government in the not too distant future. Russia's Prime Minister and de facto power center, Putin, currently finds his position not as stable as he'd like it to be. Poll numbers for his party remain low, cynicism remains high, all around him many of the world's autocrats and corrupt regimes are collapsing or wobbling, and the Russian economy and standard of living is stagnating even in a time of high oil prices. This perhaps explains Russia's renewed effort to gain entrance into the WTO. This is good news in and of itself as free trade is a boon to all countries, but the U.S. policy should not be simply to say "amen" and push for Russia's accession with no other considerations. Russia's desire to join the WTO is just one of several levers that the president can use as part of a strategy to support Russia's becoming a more democratic country and the delegitimization of those trying to return it to tsarism. The strategy the president should pursue could be comprised of three parts. First, a "reset" on U.S. policy toward Russia in terms of how we react to the government's treatment of dissidents and democratic activists. This effort is actually already in motion in that the president plans to nominate Michael McFaul to be the next ambassador to the Russian Federation. Dr. McFaul is a well-known and respected expert on Russia; but more importantly, he is an expert on democratic development and a firm supporter of same. His nomination alone sends a strong signal that the Obama administration is serious about its concerns regarding Russian politics. McFaul should go to Moscow with the full backing of the president to be an influential voice for democratic governance; he should be instructed to meet with dissidents and democratic activists. The timing is excellent: some of the best known democratic leaders in Russia have formed a new party and petitioned the government to allow it to participate officially. The U.S. position should be clear that such a party should be welcomed. Perhaps Putin will grasp that doing this makes Russia look good for WTO purposes if he needs a reason beyond just doing the right thing. Second, the president also has at his disposal the Agency for International Development and the State Department's bureau for Democracy, Human Rights and Labor that fund various worthy institutions of the National Endowment for Democracy, such as the International Republican Institute and the National Democratic Institute. These have not been the workhorses in support of democracy and economic and political rights that they were under

[This evidence continues on the next page, with no text deleted...]

2NC/1NR Impact Extensions - Turns case: Russian Expansionism (2/2)

[The Bonicelli evidence continues, with no text deleted…]

the previous two administrations due to President Obama's greater interest in using foreign aid to combat poverty and disease. (NB: The latter are certainly worthy causes, but there is a reason that many countries are now in their 50th year of accepting help from the West to combat these problems: as non-democracies, they are unable -- or unwilling -- to apply their resources to those basic needs of their citizens. Stable and prospering democracies that respect property rights and the citizen's right to self-government do not need much help combating mosquitoes, securing clean drinking water and other rather vital but mundane tasks.) The Obama administration should reinvigorate USAID and DRL and in particular, the programs relevant to Russian democrats who want and need the support of the West. The president doesn't have to call it the "Freedom Agenda" if he doesn't want to, but if Putin and his ilk's slide continues such that true democrats actually get a shot at power, it would be good for them to have a favorable view of a United States because we stood with them, the democrats, and not the autocrats and kleptocrats. And finally, the president will have some help from the Congress: Senators Ben Cardin (D-MD) and Joe Lieberman (I-CT) introduced legislation in May to restrict visas for corrupt and human rights abusing Russian officials. Gary Kasparov, chess master turned democratic activist, notes that enactment of this bill would be a significant blow to Putin and his forces of autocracy who have heretofore been understood as immune from prosecution or consequences for their actions. Of course, many in the State Department and certain White House officials oppose the bill, but the president should at least show great interest in it even if he cannot bring himself to support it ultimately in its current form. U.S. values should be upheld in our foreign policy; besides, who really will want to go to bat for those in the Kremlin [Russian government] who engage in corruption, human rights abuses and political murder? So the president should support Russian accession to the WTO (as long as Russia complies with all WTO stipulations), but not without taking advantage of some of the levers at his disposal to influence Russia for the good of democracy and in support of U.S. values. Putin's machine is searching for ways to improve its performance in the eyes of the public and finally being let in to the trading club will help him. But at the same time that we support this, we should also make sure there are consequences for Russian leaders who abuse human rights and practice kleptocracy and we should find ways to encourage and support Russian democrats who put their lives on the line, literally, every day.

2NC/1NR Impact Extensions - Turns case: U.S. Leadership

____Russia's influence will either be used to increase U.S. leadership or destroy it, and cooperation is the most important variable.

SIMES, 2003
[Dr. Dmitri, foreign policy analyst and author who serves as president of The Nixon Center and publisher of the foreign policy journal The National Interest, "Advancing American Interests and the U.S.-Russian Relationship Interim Report," *The Commission on America's National Interests and Russia*, Sep, http://www.globalsecurity.org/military/library/congress/2003_hr/sim093003.htm]

At the same time, U.S. leaders increasingly recognized the emerging, inter-related threats of terrorism and proliferation. Though policy makers and experts had devoted some attention to these issues earlier, the tragic events of September 11 rapidly crystallized American thinking about these threats and transformed the struggle to contain them into the principal aim of American foreign policy. Notwithstanding its diminished status and curtailed ambition, Russia has considerable influence in its neighborhood and a significant voice elsewhere as well. Moscow can contribute importantly to U.S. interests if it chooses to do so. Accordingly Russia can markedly decrease, or increase, the costs of exercising American leadership both directly (by assisting the United States, or not) and indirectly (by abetting those determined to resist, or not).

2NC/1NR Impact Extensions - Turns case: China Cooperation

____U.S./Russian cooperation is key to engage China because they won't trust the U.S. alone due to prior military actions.

LEVGOLD, 2003
[Robert, Marshall D. Shulman Professor Emeritus at Columbia University, "All the way: crafting a U.S.-Russian alliance," *The National Interest*, Winter 02/03, http://findarticles.com/p/articles/mi_m2751/is_2002_Winter/ai_95841626/pg_6/]

Not only are the United States and Russia directly but separately implicated in the stability of this region, but China is as well. This raises the third aspect of a U.S.-Russian alliance to enhance Eurasian stability. China will be a decisive actor in Inner Asia, not the least because it forms an integral part of the region. Unfortunately, China enters through its underdeveloped northwest territories, including Xinjiang-precisely where it feels most vulnerable. In part because of this sense of vulnerability, and in part because of the general state of Sino-American relations, China has not welcomed the arrival of American military power in Central Asia. On the contrary, while excusing a temporary deployment in the context of a war that it supports, China's leadership has opposed an extended U.S. presence there as an element of a hostile encirclement stratagem. Russia and the United States have good reason to act jointly, not only to enhance their common stake in regional stability, but to draw China into a constructive dialogue over the role all three will play in Central Asia. Russia, with the Shanghai Cooperation Organization, is already engaged in such an effort. Talking to the Russians about U.S. military activities in Central Asia (and Georgia) builds mutual confidence by promoting transparency, but it is not so far-fetched to imagine a far more ambitious trilateral dialogue among Russia, China, and the United States. Much as the United States and its European allies share assessments of threats at the edges of Europe, plan for coordinated action, and struggle to create the necessary machinery to carry it out, so can and should Russia and the United States do the same in Eurasia with Chinese participation when appropriate.

2NC/1NR Impact Extensions - Turns case: Colonization

____The most recent studies prove that nuclear war causes extinction through climate change and famine.

ROBOCK, 2008
[Alan, professor of climatology in the Department of Environmental Sciences at Rutgers University and the associate director of the Center for Environmental Prediction; "Nuclear winter," entry in The Enyclopedia of Earth, 3/28, http://www.eoearth.org/article/Nuclear_winter]

Nuclear winter is a term that describes the climatic effects of nuclear war. In the 1980's, work conducted jointly by Western and Soviet scientists showed that for a full-scale nuclear war between the United States and the Soviet Union the climatic consequences, and indirect effects of the collapse of society, would be so severe that the ensuing nuclear winter would produce famine for billions of people far from the target zones. There are several wrong impressions that people have about nuclear winter. One is that there was a flaw in the theory and that the large climatic effects were disproven. Another is that the problem, even if it existed, has been solved by the end of the nuclear arms race. But these are both wrong. Furthermore, new nuclear states threaten global climate change even with arsenals that are much less than 1% of the current global arsenal. What's New Based on new work published in 2007 and 2008 by some of the pioneers of nuclear winter research who worked on the original studies, we now can say several things about this topic. New Science: A minor nuclear war (such as between India and Pakistan or in the Middle East), with each country using 50 Hiroshima-sized atom bombs as airbursts on urban areas, could produce climate change unprecedented in recorded human history. This is only 0.03% of the explosive power of the current global arsenal. This same scenario would produce global ozone depletion, because the heating of the stratosphere would enhance the chemical reactions that destroy ozone. A nuclear war between the United States and Russia today could produce nuclear winter, with temperatures plunging below freezing in the summer in major agricultural regions, threatening the food supply for most of the planet. The climatic effects of the smoke from burning cities and industrial areas would last for several years, much longer than we previously thought. New climate model simulations, that have the capability of including the entire atmosphere and oceans, show that the smoke would be lofted by solar heating to the upper stratosphere, where it would remain for years. New Policy Implications: The only way to eliminate the possibility of this climatic catastrophe is to eliminate the nuclear weapons. If they exist, they can be used. The spread of nuclear weapons to new emerging states threatens not only the people of those countries, but the entire planet. Rapid reduction of the American and Russian nuclear arsenals will set an example for the rest of the world that nuclear weapons cannot be used and are not needed.

____Nuclear war will make space exploration impossible for millions of years.

WHITE, 1998
[Frank, American Institute of Aeronautics and Astronautics; *The Overview Effect*, p. 115]

That human beings will want to populate the space frontier is a near certainty. It is going to happen, and the issues concern clarity of vision and objectives. At the same time, many are concerned that if we do not get into space soon, a catastrophic event, such as a nuclear war, will set back civilization and the space exploration effort irretrievably. War and space exploration are alternative uses of the assertive, exploratory energies that are so characteristic of human beings. The two may also be mutually exclusive because if one occurs on a massive scale, the other probably will not. A nuclear war would either lead to the extinction of the human species or set civilization back so far that will take millions of years to achieve spaceflight again.

2NC/1NR Link Extensions - Space Policy (General)- Expense

____Space policy is unpopular because it is too expensive.

VEDDA, 2008
[Dr. James, senior policy analyst at the Aerospace Corporation's Center for Space. Policy & Strategy in Arlington, Virginia , "Challenges to the Sustainability of Space Exploration," *Astropolitics,* v.6 n.1]

A combination of public apathy and negative perceptions may already be taking its toll. A recent Harris poll on fixing the U.S. budget deficit held a warning message for space exploration. Among the questions in the March 2007 poll, respondents were asked to pick two federal programs, from a list of 12, that should be cut to reduce government spending. The space program was chosen by 51% of respondents, topping the list by a wide margin, and more than 13 percentage points above the second choice.17 This result indicates that approximately half of the U.S. votingage population views the civil space program as either a waste of resources or simply a non-essential activity. If other polling results, such as the Gallup surveys discussed earlier, accurately portray two-thirds of the population as supporters of space exploration, then a significant percentage of those supporters see the space program as a luxury item that could be sacrificed in a constrained budget environment.

2NC/1NR Link Extensions - Space Policy (General)– No Constituency

____The most influential constituents no longer support space exploration.

VEDDA, 2008
[Dr. James, senior policy analyst at the Aerospace Corporation's Center for Space. Policy & Strategy in Arlington, Virginia , "Challenges to the Sustainability of Space Exploration," *Astropolitics,* v.6 n.1]

Judging from surveys on the space program over the past three decades, the changing demographics18 of U.S. voters in the coming decades may shift the balance of support for civil space programs, especially those involving human spaceflight. At least as far back as the work of Sylvia Fries in 1992,19 it has been noted that the segments of the voting population likely to increase their influence on the political landscape in the coming years (e.g., women and minorities) are the same ones that typically number among non-supporters in opinion polls. This does not necessarily mean that organized opposition to the space program will emerge from these groups, but it does imply an electorate less concerned about the health of the program.

____Space policy is especially vulnerable to Congressional controversy because of expense and the lack of a political constituency.

ELHEFNAWYA, 2004
[Dr. Nader, English professor at University of Miami , "Viewpoint: Feeling the Pinch: Societal Slack and Space Development," *Astropolitics,* v.2 n.3]

Space is especially vulnerable to the budgetary axe, as the figures demonstrate. At its peak in the 1964–1966 period, NASA's budget was over $5 billion a year.20 Adjusted for inflation it would be roughly $30 billion in 2004 dollars, and an equally large slice of the Federal budget today would come to over $100 billion – compared with the less than $15 billion spent on NASA in recent years. This did not continue for long, however, and by 1970 the budget was roughly equal to what it is now in inflation-adjusted dollar terms. As a share of the government's budget, however, it has continued to fall to a mere 16 per cent of what it was in 1966, with the last increase occurring after the Challenger disaster.21 Given its comparatively small size it can be argued that even a doubling of NASA's budget would have only a very modest effect on the country's overall macroeconomic and fiscal situation, and that even with its problems the United States could fund a much more ambitious space program. Additionally, in some circles it was expected that after the hype about a borderless world where states would be marginalized proved hollow, politics would go in the opposite direction of a far more activist state which would be more willing to undertake such a project. Nothing of the kind, however, has actually emerged. Even in the United States, the country whose political discourse and activity has been most influenced by the war on terror, such activism has been limited to security in its most traditional sense of protection from physical threats. Moreover, that activism has manifested itself principally in curtailed civil rights and expanded defense budgets and surveillance capabilities. There has simply been no enthusiasm for 'big science' in the way that the Cold War generated, despite some increases in Federal funding for research and development.22

2NC/1NR Link Extensions - Space Policy (General)– No Credit, Only Blame

____Politicians can't take credit for space policy because the benefits are too long-term; this means only blame matters.

VEDDA, 2008
[Dr. James, senior policy analyst at the Aerospace Corporation's Center for Space. Policy & Strategy in Arlington, Virginia , "Challenges to the Sustainability of Space Exploration," *Astropolitics,* v.6 n.1]

Space exploration must compete in a tough fiscal environment for a limited pool of public resources. Public investment in an expensive and highly visible civil space project like human space exploration may or may not yield quantifiable benefits adequate to justify the cost. If it does, those benefits are likely to be far in the future, widely dispersed, disassociated from their origin, and impossible to measure. Such a situation provides little incentive for policy-makers to invest their own political capital in fighting for these projects, and the taxpayers' resources in funding them. As a result, achieving long-term sustainability requires more than just getting the technical details right and requesting a sufficient annual NASA exploration budget. Current events, changing political and economic conditions, proliferation of space capabilities in other nations and the private sector, and a host of other factors combine to present a constantly shifting set of variables, requiring continuous forward thinking about non-technical considerations.

____Space policy is especially vulnerable to Congressional controversy because of expense and the lack of a political constituency.

ELHEFNAWYA, 2004
[Dr. Nader, English professor at University of Miami , "Viewpoint: Feeling the Pinch: Societal Slack and Space Development," *Astropolitics,* v.2 n.3]

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2NC/1NR Link Extensions - China Cooperation Aff – Cold War Competition

____Congress and key lobbies will knee-jerk to oppose any cooperation with China in space because they are stuck in a Cold War mindset.

JOHNSON-FREESE, 2006
[Dr. Joan, Professor of National Security Affairs at Naval War College and former Director of the Center for Space Policy & Law at the University of Central Florida , "A New US-Sino Space Relationship: Moving Toward Cooperation," *Astropolitics,* v.4 n.2]

Breaking the established containment space paradigm will be especially hard as schizophrenic views toward China are there combined with knee-jerk reactions to what is considered a "new threat." A Defense Science Board (DSB) report in 2004, observed: "Washington policy and defense cultures still seek out cold-war models."25 In that report, the DSB was specifically looking at strategic communication and the war on terror. Its comments, however, apply more generally to responses involving "new threats" as well, such as space. The report states, ". . .the U.S. government reflexively inclined toward cold-war-style responses to the new threat, without a thought or a care as to whether these were the best responses to a very different strategic situation."26 At present, space is one of the last remaining venues of Cold War politics.

2NC/1NR Link Extensions - China Cooperation Aff – Defense Lobbies

____Defense lobbies and Congress will frame the plan as a national security threat, and this causes controversy.

SADEH, 2007
[Eligar, Eisenhower Center for Space and Defense Studies, United States Air Force Academy, "Viewpoint: Bureaucratic Politics and the Case of Satellite Export Controls," *Astropolitics,* v.5 n.3]

The crux of the political issue revolves around bureaucratic control and jurisdiction over the licensing process for export of commercial satellites. Since commercial satellites represent a dual-use space technology,2 bureaucratic politics exist between the framing of export controls as a matter of national security versus a matter of business and commerce. The national security advocates, among them the president, congress, State, and DOD, view commercial satellites and the related technologies as items to be controlled for export within the same legal regime that controls export and trafficking of arms. State, through the Office of Defense Trade Controls Policy, is the bureaucratic entity that governs this regime, known as the International Traffic in Arms Regulations (ITAR) and the associated Munitions Control List (MCL). DOD, through the Defense Threat Reduction Agency (DTRA), assists State in implementing its regulatory authority.

2NC/1NR Link Extensions - China Cooperation Aff – National Security

____Empirically, national security concerns have influenced Congress on satellite exports more than commercial concerns.

[EAA = Export Administration Act]

SADEH, 2007
[Eligar, Eisenhower Center for Space and Defense Studies, United States Air Force Academy, "Viewpoint: Bureaucratic Politics and the Case of Satellite Export Controls," *Astropolitics,* v.5 n.3]

Within the context of the post 9-11 environment and the resulting emphasis on national security—at times to the detriment of commercial interests—the congressional failure to act on the EAA further strengthens and maintains the State-led ITAR regime for control of commercial satellites. Furthermore, the origins of the EAA are Cold War related and originate from the Export Control Act of 1949. Even though the EAA of 1979 represents a lessening of restrictive export control in comparison to the Export Control Act and subsequent amendments to that Act, the legal regime is a relic of Cold War international politics and national security rivalries. 5 As a result, EAA has not been sufficiently adapted as an export control regime for the post Cold War international environment of non-traditional security concerns, developments in space technologies, capabilities and applications, and the emergence of global commercial space activities.

____National security concerns are more important to Congress than economic concerns, and this means the plan will be unpopular.

SADEH, 2007
[Eligar, Eisenhower Center for Space and Defense Studies, United States Air Force Academy, "Viewpoint: Bureaucratic Politics and the Case of Satellite Export Controls," *Astropolitics,* v.5 n.3]

The commercial satellite export case posits damaging consequences for U.S. technology and business leadership in space. The political process began with the incremental political liberalization of export controls in response to the changing international post Cold War environment and the rapid increase in space commerce globally. The process then transitioned to congressional action to overturn the then existing satellite export control regime in favor of Commerce jurisdiction. All the while, the process was driven by bureaucratic politics between Commerce and State. In the context of the post 9=11 world and the security concerns the attack generated, the general sense was that U.S. business and commercial interests should never trump national security interests. State succeeded in advancing their national security worldview as the U.S. national interest, a costly situation for commercial space and their advocates.

2NC/1NR Link Extensions - China Cooperation Aff – Too Many Stakeholders

____There are too many stakeholders involved in reforming export controls, and no momentum for pro-trade space policies toward China.

NOBLE, 2008
[Michael, United States Air Force, "Export Controls and United States Space Power," *Astropolitics,* v.6 n.3]

The U.S. export regime "enjoys" the shared purview of both the executive and legislative branches. Within the executive, no fewer than three departments, State, Commerce, and Defense, have a regular role, with others involved as necessary. Within the legislative, not only does Congress write the laws underpinning the regime, but it becomes involved in reviewing individual cases when they exceed certain thresholds.188 The upshot is that substantive change is unlikely simply by virtue of the number of stakeholders who would have to accede to change. As the U.S. economy suffers and protectionist sentiment grows, the political climate will likely cool toward international trade and the necessary momentum required to enact export control reform may dissipate. Many of U.S. friends' and allies' export policies and attitudes are considerably divergent from those of the USG. In fact, it is the more liberal export control policies at the international level that beholden the USG to more stringent approaches nationally.189 The fissures that must be closed are in some cases large. One significant issue is technology sharing with China.

2NC/1NR Link Extensions - Lunar Mining Aff - Spending

____Any mission to the Moon will be controversial because the public is against spending on long-term lunar projects.

JAKHU AND BUZDUGAN, 2008
[Ram and Maria, Institute of Air and Space Law, McGill University; "Development of the Natural Resources of the Moon and Other Celestial Bodies: Economic and Legal Aspects," *Astropolitics,* v.6 n.3]

In addition, it appears unlikely that taxpayers are in favor of funding a large-scale lunar or Mars mission that does not give direct economic payback.37 The need to spare taxpayer money from being spent for Moon and Mars missions was pointed out by Citizens Against Government Waste (CAGW), a non-profit organization in the U.S.38 According to this group's president, Tom Schatz, Mankind's future in space no longer depends on politicized bureaucracies and tax-funded boondoggles. The success of SpaceShipOne, startup space companies, and the advent of space tourism have opened the door to an exciting future of private enterprise in space. Such endeavors are economical, realistic, and more likely to yield tangible benefits for mankind and taxpayers.38 The group challenged the usefulness of a U.S. House of Representatives appropriation for NASA's budget of $16.5 billion, including $3.1 billion for the Moon/Mars initiative. The CAGW pointed out that the International Space Station (ISS) is "expected to be finished in 2010, 16 years behind schedule, $92 billion over budget, with perhaps one-eighth of the capability that engineers had hoped." This group found a worrisome trend of wasteful government spending in the space arena: "The ISS is a glaring link in a continuous chain of space projects that are either abandoned, end in disaster, or deliver far less than promised." 39

2NC/1NR Link Extensions - Lunar Mining Aff – No Constituency

____Congress will never support the plan, it is too expensive and there is no lobbying constituency.

SCHMITT, 2003
[Harrison, CHAIRMAN INTERLUNE-INTERMARS INITIATIVE, INC; "Testimony of Hon. Harrison H. Schmitt: Senate Hearing on "Lunar Exploration"," 11/06, http://www.spaceref.com/news/viewsr.html?pid=10924]

It is doubtful that the United States or any government will initiate or sustain a return of humans to the Moon absent a comparable set of circumstances as those facing the Congress and Presidents Eisenhower, Kennedy, and Johnson in the late 1950s and throughout 1960s. Huge unfunded "entitlement" liabilities and a lack of sustained media and therefore public interest will prevent the long-term commitment of resources and attention that such an effort requires. Even if tax-based funding commitments could be guaranteed, it is not a foregone conclusion that the competent and disciplined management system necessary to work in deep space would be created and sustained. If Government were to lead a return to deep space, the NASA of today is probably not the agency to undertake a significant new program to return humans to deep space, particularly the Moon and then to Mars. NASA today lacks the critical mass of youthful energy and imagination required for work in deep space. It also has become too bureaucratic and too risk-adverse. Either a new agency would needed to implement such a program or NASA would need to be totally restructured using the lessons of what has worked and has not worked since it was created 45 years ago. Of particular importance would be for most of the agency to be made up of engineers and technicians in their 20s and managers in their 30s, the re-institution of design engineering activities in parallel with those of contractors, and the streamlining of management responsibility. The existing NASA also would need to undergo a major restructuring and streamlining of its program management, risk management, and financial management structures. Such total restructuring would be necessary to re-create the competence and discipline necessary to operate successfully in the much higher risk and more complex deep space environment relative to that in near-earth orbit.

2NC/1NR Link Extensions - Missile Defense Aff – Influential Lobbyists

____Loud and active lobbyists oppose space-based missile defense, and empirically they are more influential than supporters.

PFALTZGRAF AND VAN CLEAVE, 2009
[Dr. Robert, Shelby Cullom Davis Professor of International Security Studies The Fletcher School, Tufts University and President Institute for Foreign Policy Analysis; and Dr. William, Professor Emeritus Department of Defense and Strategic Studies Missouri State University; "Missile Defense, The Space Relationship, and the 21st Century," Independent Working Group, http://www.ifpa.org/pdf/IWG2009.pdf]

The key impediments to the development of a more robust layered system that includes space-based interdiction assets have been more political than technological. A small but vocal minority has so far succeeded in driving the debate against missile defense and especially space-based missile defense. The outcome has been that political considerations have by and large dictated technical behavior, with the goal of developing the most technologically sound and cost-effective defenses subordinated to other interests.

2NC/1NR Link Extensions - Missile Defense Aff – Spending (1/2)

____Concerns about spending create massive Congressional resistance to space-based missile defense.

MARSHALL, 2008
[Dr. Will, Academic Advisor in Small Spacecraft Office at Singularity University, and NASA Ames Research Center; "Reducing the Vulnerability of Space Assets: A Multitiered Microsatellite Constellation Architecture," *Astropolitics,* v.6 n.2]

Alternatively, the Air Force might feel compelled to invest more heavily into the kinds of technology needed for space control programs; but, will it get "new money" from Congress to do so, or must it take that money from the existing budget? If the latter, it would likely meet significant organizational resistance. Will Congress be willing to increase funding for space control programs, which come to, if not cross, the precariously kept line against overt development of space weapons? As much as anything else, the response of the U.S. to the Chinese anti-satellite weapon test may be as much a function of organizational and bureaucratic politics as it is doctrine. Space technology is inherently expensive. The quest for unassailable space technology, arguably an impossible goal, will certainly be obscenely expensive. Whether there is political will to follow that course remains to be seen. Clearly, the space community within the Air Force is keen to bolster its own organizational position, and the Chinese anti-satellite weapon test will likely serve them well. Air Force Space Command has sent officers to the U.S. Air Force Weapons School at Nellis Air Force Base since 1996, making up approximately 10% of the class. Officers who complete the course are awarded a "W" to their specialty codes. General Kevin Chilton, as commander of the Air Force Space Command, said "I want a "W" in every squadron on my watch. I want our people to aspire, compete, and come back and run a weapons and tactics shop."43 Political support for making General Chilton's goal a priority will likely be enhanced consequent to the Chinese test.

____Democrat control and funding concerns make missile defense uniquely controversial.

HAGT, 2007
[Eric, director of the China Program at the World Security Institute, "China's anti-satellite weapon Test: Strategic Response" *China Security*; Winter; http://www.wsichina.org/cs5_3.pdf]

American scholars closely monitoring the situation correctly note that the future of the U.S. space weapons program is far from certain and that China's anti-satellite weapon test has only fanned the flames of its proponents in the United States.64 Significant political, budgetary and even technological obstacles constantly threaten to derail the program.65 For instance, in the past several years a number of space weapons systems have had their funding cut or the program shelved altogether and the U.S. Air Force is under increasing pressure to prove economic viability of its military space programs.66 Numerous technological difficulties continue to plague the National Missile Defense program.67 Also important is the perennial domestic political debate over whether such systems will enhance America's security or threaten to undermine it. With Congress now under control of the Democrats, and U.S. military quagmired in Iraq, Bush's mil

2NC/1NR Link Extensions – Colonization Aff - Spending

____Human exploration projects are too long-term and expensive, and this generates Congressional opposition.

VEDDA, 2008
[Dr. James, senior policy analyst at the Aerospace Corporation's Center for Space. Policy & Strategy in Arlington, Virginia , "Challenges to the Sustainability of Space Exploration," *Astropolitics,* v.6 n.1]

By the time the quote above was published in 1992, there already was wide recognition that the nation's "social contract with science," as some have called it, was evolving in ways that increased its interdependence with broader society, increasing demands for relevance to societal needs and for transparency in decision-making and agenda-setting. Generally, since World War II, American society has seen the pursuit of scientific and technical knowledge as intrinsically good and useful—as long as the nation maintains its input into the reservoir of knowledge, the system is working and the application of that knowledge will take care of itself. The political and economic environment that has developed since the early 1980s, however, undermines the sustainability of this paradigm. Large science and technology budgets are increasingly difficult to justify, if the enterprise is isolated from societal needs.2 Political leaders and their constituents expect measurable results that contribute to problem resolution. Sustainable investment in science and technology on this scale requires accountability to societal goals to maintain political support. NASA's human space exploration programs, as currently envisioned and implemented by the agency's Exploration Systems Mission Directorate (ESMD), clearly will undergo the continuous scrutiny that is characteristic of today's political environment. Exploration projects span decades, covering numerous presidential and congressional terms and multiple generations of scientists and engineers. Moon-Mars exploration is often discussed as a 30-year effort, but in reality, it should be viewed as an open-ended project. NASA's history demonstrates that the agency's greatest successes, even in the wake of serious setbacks, have been on programs with limited, well-defined objectives and finite durations (e.g., Apollo, Skylab, numerous space science missions). On the other hand, open-ended programs with less clearly defined (or too many) objectives have proven problematic, undermining their political and economic sustainability (e.g., shuttle, space station, next-generation space transportation systems). Human exploration of the solar system, starting with the Moon, is the ultimate open-ended program. To ensure its sustainability, NASA must approach it in a different manner than anything in its previous experience by planning from the beginning for ongoing operations in cooperation with a variety of domestic and international partners.

2NC/1NR Link Extensions - Colonization Aff– Impractical Science

____Even if the public and Congress support pure space science and applications, this support does not spillover to exploration.

VEDDA, 2008
[Dr. James, senior policy analyst at the Aerospace Corporation's Center for Space. Policy & Strategy in Arlington, Virginia , "Challenges to the Sustainability of Space Exploration," *Astropolitics,* v.6 n.1]

If NASA budgets grow at rates that do little more than accommodate inflation, and exploration expenditures jump as new development projects (e.g., lunar lander, Ares 5, lunar base elements) begin in the next decade, other NASA activities will be squeezed, raising objections in scientific and political circles—a reaction that has already begun to manifest itself. Moreover, Congress is likely to compel NASA to pursue a "balanced portfolio" approach. Throughout the agency's history, such an approach has produced a wide variety of societal benefits in addition to the space spectaculars for which the agency is famous. It is important to remember that at the same time Apollo was aiming for the Moon, NASA was developing communications satellites, weather satellites, deep space probes, and entirely new scientific disciplines. Decisionmakers and the public will not abandon their expectations that NASA should continue work on space science and applications even as it devotes more energy to human spaceflight.

2NC/1NR Link Extensions – Colonization Aff – Tax Increases

____Funding space exploration programs is hugely unpopular with the public because of tax concerns.

ENGDAHL, 2006
[Sylvia, taught graduate courses on the Web for Connected Education, and winner of Newbery Honor for *Enchantress from the Stars*, "Space and Human Survival: My Views on the Importance of Colonizing Space," 11/02, http://www.sylviaengdahl.com/space/survival.htm]

Not so with space humanization. We can't rely on the drive toward exploration because, by the population at large, it's not considered a top priority. It never was, in any society. If the people of Columbus' time had had to vote to tax themselves in order to fund his ships, he wouldn't have gotten anywhere; most of them felt he would fall off the edge of the world, and even the educated minority, who knew better, felt there was better use for their money. Even in that era, the most altruistic would no doubt have preferred to give Isabella's jewels to the poor. There were some myths, travelers' tales, about riches to be found in new lands; but just as in our time, rational, hardheaded skepticism ruled the majority.

2NC/1NR Link Extensions – Colonization Aff – Public doesn't support

____Even if the public used to support exploration, that support is rapidly trending downward.

VEDDA, 2008
[Dr. James, senior policy analyst at the Aerospace Corporation's Center for Space. Policy & Strategy in Arlington, Virginia , "Challenges to the Sustainability of Space Exploration," *Astropolitics,* v.6 n.1]

A closer look at the detailed results reveals a more nuanced and less optimistic interpretation. The three Gallup surveys were performed in June 2005, March 2006, and August 2006. Press coverage failed to note that between the first and last survey, there were significant negative changes in the results. Responses of "support" and "strongly support" dropped 11 points (from 77 to 66%) and responses of "oppose" and "strongly oppose" increased 8 points (from 20 to 28%). A possible explanation for the downturn in support is that the first survey was conducted a month prior to the space shuttle's long-anticipated post-Columbia return to flight, causing a temporary positive bump, but this was followed by nearly a year without shuttle flights due to continuing problems with insulation foam shedding.

Politics Disadvantage 2AC (1/3)

1. Non-Unique: Republicans in the House will block any effort to repeal Jackson-Vanik and extend trade relations to Russia.

IYANOV, 2011
[Eugene, Massachusetts-based political analyst who blogs at The Ivanov Report, "The amendment that came in from the Cold War," 5/19, http://rbth.ru/articles/2011/05/19/the_amendment_that_came_in_from_the_cold_war_12895.html

On a number of occasions, the Obama administration, too, promised to get rid of Jackson-Vanik. The latest such promise came from Vice President Joe Biden—incidentally, an active supporter of the amendment in the past—during a spring visit to Moscow. The consensus, however, has been that the problem lies in Congress: With the Republican majority in the House of Representatives, there is virtually no chance that the amendment would be repealed before Russia joins the World Trade Organization. The situation seemed completely at a stalemate.

2. No Link: Space policy is not controversial because public has no interest.

VEDDA, 2008
[Dr. James, senior policy analyst at the Aerospace Corporation's Center for Space. Policy & Strategy in Arlington, Virginia , "Challenges to the Sustainability of Space Exploration," *Astropolitics,* v.6 n.1]

Space policy is what political scientists would call a "low salience" issue. Civilian space projects have never been significant issues in U.S. election campaigns, and the political parties have not engaged in organized efforts to take sides, at least not in ways that would be visible to voters. As a result, the U.S. public—even the attentive public outside of active members of the space community—has little incentive to get involved in the political process for space issues. In other words, the public typically has depended on political and technical elites to set the government's space agenda.7

3. Link turn –

[Insert Plan-specific Link Turn module]

Politics Disadvantage 2AC (2/3)

4. No internal link: Russia isn't willing to make the policy changes necessary to open trade with the United States.

RIA NOVOSTI, 2011
["WTO: Wish, Trouble, Opportunity" 6/22, http://en.rian.ru/analysis/20110622/164758711.html]

Regardless of the optimism Obama's administration radiates, it is still uncertain whether Russia will join the World Trade Organization by the end of the year. Too many problems are in one knot to be untangled in such a short time. The first and, to a large extent, the key factor is Russia's willingness to pursue this goal. The most recent factor sounded during the St. Petersburg Economic Forum, when Deputy Prime Minister Igor Shuvalov expressed his confidence that the remaining issues would be resolved within a few weeks. He warned that otherwise Russia's accession to the WTO could be drawn out. Following him, Russia's Economic Development Minister Elvira Nabiullina echoed this sentiment and added that authorities responsible for the negotiations "are doing their best to reach an agreement." However, it seems that in reality Russia is willing to enjoy the benefits of the world trade network while not ready to give any rebates required of such a multilateral membership. The recent case of Russia imposing a ban on European vegetables after the e-coli infection outbreak in Germany demonstrated this. This measure was severely condemned by the EU representative in Moscow, who said that the ban does not comply with the spirit of the WTO. According to him, Russia should follow the rules if it wants to join the organization this year. A strong response swiftly followed. Prime Minister Vladimir Putin declared that the Russian government would not poison its citizens for the sake of spirit. And reiterated "what he said a hundred times," that Russia would not place restrictions or bear the costs until it had received the real benefits of membership. This generally reflects the country's attitude toward doing business, first demanding concessions from others and only then making clear that it will consider whether to give something in return.

5. The impact is not unique: Obama has already reset relations with Russia through numerous agreements and treaties.

TIMES PICAYUNE, 2011
[Allison Good, staff writer, "U.S. and Russia are strengthening their relationship, Ambassador says" 6/21, http://www.nola.com/business/index.ssf/2011/06/us_and_russia_are_strengthenin.html]

The Obama administration has experienced a positive reset in U.S.-Russian relations both politically and economically, U.S. Ambassador to the Russian Federation John Beyrle said during a speech in New Orleans on Tuesday. "This relationship has been reset over the last two to three years," Beyrle said at an event at the World War II Museum sponsored by the World Trade Center of New Orleans and other organizations. "We're on the threshold of a new and better period of relations." Beyrle noted recent U.S.-Russia accomplishments such as the signing of the START Treaty to reduce nuclear arms in both countries, increasing Russian support for NATO troops in Afghanistan and increased cooperation and coordination within the United Nations Security Council to curb Iran's nuclear program.

Politics Disadvantage 2AC (3/3)

6. Turn: Getting victories out of controversies generates political capital for Obama.

REUTERS, 2010
[Jeff Mason, staff writer, "Obama's health win could boost foreign policy," 3/26, http://www.reuters.com/article/2010/03/26/us-obama-momentum-foreignpolicy-analysis-idUSTRE62P0P320100326]

President Barack Obama's domestic success on healthcare reform may pay dividends abroad as the strengthened U.S. leader taps his momentum to take on international issues with allies and adversaries. More than a dozen foreign leaders have congratulated Obama on the new healthcare law in letters and phone calls, a sign of how much attention the fight for his top domestic policy priority received in capitals around the world. Analysts and administration officials were cautious about the bump Obama could get from such a win: Iran is not going to rethink its nuclear program and North Korea is not going to return to the negotiating table simply because more Americans will get health insurance in the coming years, they said. But the perception of increased clout, after a rocky first year that produced few major domestic or foreign policy victories, could generate momentum for Obama's agenda at home and in his talks on a host of issues abroad. "It helps him domestically and I also think it helps him internationally that he was able to win and get through a major piece of legislation," said Stephen Hadley, former national security adviser to Republican President George W. Bush. "It shows political strength, and that counts when dealing with foreign leaders." Obama's deputy national security adviser Ben Rhodes said the Democratic president's persistence in the long healthcare battle added credibility to his rhetoric on climate change, nuclear nonproliferation and other foreign policy goals. "It sends a very important message about President Obama as a leader," Rhodes told Reuters during an interview in his West Wing office. "The criticism has been: (He) sets big goals but doesn't close the deal. So, there's no more affirmative answer to that criticism than closing the biggest deal you have going."

7. No impact: Russia can't afford to challenge U.S. interests.

ARON, 2006
[Leon, director of Russian Studies at the American Enterprise Institute, "What Does Putin Want?" *Commentary Magazine,* Dec, http://www.commentarymagazine.com/article/what-does-putin-want/]

This is not to suggest that Putin has sought to re-create Soviet foreign policy outright. Despite the muscular rhetoric emanating from the Kremlin, Russia is not a "revisionist" power like the Soviet Union or present-day China. It is not intent on reshaping in its favor the regional or global balance of forces. In the geopolitical competition, Moscow may complain about the score, but it is unlikely to take the risks associated with changing the rules of the game. Nor is Russia willing to commit the resources needed to sustain any such endeavor — unlike China, for instance, whose defense appropriations have grown annually by double-digit percentages over the past twenty years. Even in today's Russia, flush with petrodollars, the share of the GDP devoted to defense — just 2.9 percent in 2005 — is at least ten times smaller than during the days of the Soviet Union.

1AR Extension Evidence To 2AC #1: "Jackson-Vanik Won't Pass" (1/2)

Extend the 2AC #1, our evidence shows their Disadvantage is Non-Unique because Jackson-Vanik won't pass now due to Republican opposition.

____PNTR won't pass, there is bipartisan opposition to expanding trade with Russia, and this overcomes economic concerns.

RIA NOVOSTI, 2011
["WTO: Wish, Trouble, Opportunity" 6/22,
http://en.rian.ru/analysis/20110622/164758711.html]

This is the key argument the Obama administration has put forth in its debates with the Hill. Unfortunately, Russia's share in U.S. trade is too insignificant to draw Congress to act. According to the Office of the U.S. Trade Representative, Russia was in 2010 the 24th largest goods trading partner of the United States with $31.7 billion in total goods trade and the 37th largest goods export market. The only truly considerable trade issue for the United States is poultry. "For U.S. poultry and meat producers, the economic stakes of Russian import actions are significant," according to the Congressional Research Service, which ranks Russia as one of the largest export markets with 18% of total U.S. poultry exports. However, this argument is unlikely to be determinative for all lawmakers. And a bill recently introduced by Senator Ben Cardin (D-MD) serves as evidence. The Co-Chairman of the Commission on Security and Cooperation in Europe along with 15 other senators introduced a bill that would freeze assets and block visas of individuals who commit, according to the authors, human rights violations in Russia. It has already been called "the Magnitsky Bill" in honor of a lawyer at an investment company accused of tax fraud. He was arrested for collusion with the fraudsters and died in custody under suspicious circumstances in a pre-trial detention center at the age of 37. Russian President Dmitry Medvedev has promised a full inquiry into his death. The bill was introduced in May and coincided with the efforts of the U.S. administration to call for the Jackson-Vanik Amendment to be repealed and to enliven U.S.-Russian economic relations. Those who understand the workings of Congress advise taking the bill seriously, as it was co-sponsored not only by hardline Republicans but also by eight Democrats. And unlike the Jackson-Vanik Amendment, which formally has not been repealed and does not apply because of a year-long presidential waiver, the newly introduced bill provides formidable mechanisms that can significantly complicate bilateral relations.

1AR Extension Evidence To 2AC #1: "Jackson-Vanik Won't Pass" (2/2)

____The bill won't pass because key lawmakers have concerns about Russian human rights abuses.

FORWARD, 2011
[Nathan Guttman, staff writer, "Russia Seeks Exemption From Cold War-Era Law Aimed at Soviet Repression" 6/01, http://www.forward.com/articles/138291/]

But in Congress, which is, according to the current interpretation of the law, the body authorized to exempt nations from Jackson-Vanik, action has been stymied by a mixture of anti-Russian sentiments, concerns regarding the country's struggling democracy and business interests opposed to opening up American markets to Russia. Several key lawmakers, among them Senator John McCain, an Arizona Republican, have been discussing the possibility of transforming Jackson-Vanik into a broader vehicle for punishing Russia for its actions against internal democratic opposition and for the limits the government has imposed on civil society groups.

____The business lobby is split on the bill, but most oppose it.

FORWARD, 2011
[Nathan Guttman, staff writer, "Russia Seeks Exemption From Cold War-Era Law Aimed at Soviet Repression" 6/01, http://www.forward.com/articles/138291/]

The business community is split. One faction would like to see restrictions on Russia lifted to open new markets, especially if Russia joins the World Trade Organization. Other sectors, such as the poultry industry, seek to limit Russia's access to American markets and therefore oppose a change. But most see Russia's infringements on democratic life under the government of President Dmitry Medvedev and Prime Minister Putin as the key factor. "If they want to graduate from Jackson-Vanik, they need to act like a graduate," Talisman said, referring to the policies of the current Russian leadership. "Even a rudimentary graduate would be enough."

1AR Extension Evidence To 2AC #4: "No Internal Link – Russia Won't Open to Trade"

____Russia isn't interested in free trade – they have too many issues with tariffs and other negotiations.

REUTERS, 2011
[Doug Palmer, staff writer, "Obama wants Russia trade vote before WTO deal: trade official" 6/22, http://www.reuters.com/article/2011/06/22/us-usa-russia-trade-idUSTRE75L6Q720110622]

Russia has already made a lot of progress on that front but two big remaining issues involve how Russia will harmonize its food, plant and animal import safety rules with global standards and Russian rules for investing in the automotive sector that have raised some concern, Wilson said. Separately, Russia must consolidate all the tariff cuts it agreed to make in bilateral negotiations with the United States and some 50 other WTO members into a single tariff schedule. Related to that, Russia hopes to finish negotiations this month with the United States, the EU, Australia, Brazil and other WTO members on new tariff-rate quotas for imported poultry, pork and beef, Wilson said. Washington also wants further evidence Moscow is serious about enforcing intellectual property rights, he said. Russia has been working to resolve trade concerns with Georgia, with which it fought a brief war in 2008, so the Caucasus nation will not block its entry into the WTO.

1AR Extension Evidence To 2AC #5: "Impact Non-Unique: Russian Relations Already High"

____Relations are already sky-high, and Jackson-Vanik doesn't matter anymore.

KARAGANOV, 2011

[Sergey, dean of the Faculty of World Economics and Politics at the National Research University-Higher School of Economics "Pundit sees 18-month "window of opportunity" for US-Russian relations" BBC Monitoring, 5/18, lexis-nexis]

By the Spring, Russian-American relations had reached a frontier. They had normalized. The Strategic Offensive Reductions Treaty had been signed. The grand presidential commission with its proliferating subcommissions had started work. They are generating a positive momentum: Bureaucrats will have to demonstrate results. And they will be forced to produce them. Russia - in the context of its interests - is helping the United States and NATO in Afghanistan. It has stopped opposing the United States, as often used to be the case, simply out of principle. A recent example was the refusal to veto the resolution on Libya. But Moscow had no alternative. The League of Arab States had agreed. China did not want to block the resolution. And it would have been extremely stupid for Russia to do this alone and then bear before the entire world the responsibility for the blood of suppressed insurgents. Now it is the NATO Europeans who bear the responsibility for the blood in Libya and the continuously growing civil war there. The United States has extremely elegantly almost distanced itself from the responsibility. It is not only Moscow that has made a concession to Washington. Washington has virtually ceased or drastically reduced its support for anti-Russian forces and tendencies on the territory of the former USSR. The Obama administration is actually trying to secure Russia's speediest admission to the WTO and even the abolition of the Jackson-Vanik amendment, which has already become a joke.

2AC #3: Link Turn - Missile Defense – China Fears

____Military and Congressional leaders support missile defense plans to counter China's space threat.

MILOWICKI AND JOHNSON-FREESE, 2008
[Gene, Director, Aviation Programs, Aviation Center of Excellence at Florida State College at Jacksonville; and Joan, Professor of National Security Affairs at Naval War College and former Director of the Center for Space Policy & Law at the University of Central Florida "Strategic Choices: Examining the United States Military Response to the Chinese Anti-Satellite Test," *Astropolitics,* v.6 n.1]

Congressman Terry Everett has argued for a comprehensive space protection strategy, consequent to the Chinese test. He says: "as an advocate of vigilant defensive space policy, the Chinese anti-satellite weapon test is worrisome to me and warrants a clear and considered U.S. response. America must develop a comprehensive space protection strategy, rethink its national security space architecture, and reexamine its policies on space protection and the use of space."44 Again turning to primarily technology and the military for answers, many of the elements of Everett's strategy have broadbased appeal. He advocates enhancement of space situational awareness (SSA) capabilities, earlier described as space surveillance in the context of monitoring space debris. Besides space debris, with more countries having more assets in space, SSA becomes increasingly important to monitor activities of all sorts, nefarious, unintended, or otherwise. Increased attention to SSA has drawn support from military leaders such as General Chilton. Speaking at the 23rd National Space Symposium in 2007, Chilton said: "before you can start to address any of these threats and the sustainment of any of these capabilities, a commander in this domain must have the same tools that a commander in every other domain has and needs. Whether it's on land, sea or air, you need situational awareness."45 While there is broad support for increased SSA from across the spectrum of space communities—those advocating weapons and those that do not—it should be remembered that high levels of SSA are required for use of space weapons, so military support is not necessarily benign.

2AC #3: Link Turn - Missile Defense – Ballistic Missile Fears

____Missile defense is popular because Congress recognizes the threat.

LAMBAKIS, 2007
[Steven, national security and international affairs analyst specializing in space power and policy studies, and fellow at the National Institute for Public Policy; "Missile Defense From Space," *Policy Review*, 2/01, n. 141, http://www.hoover.org/publications/policy-review/article/6124]

After more than 60 years of advances in ballistic missile technologies, we have only just begun to address our vulnerability to them. Missile defense is a policy and budgetary reality today, and it enjoys strong bipartisan support. Current U.S. efforts to dissuade other countries from investing in ballistic missiles, to assure U.S. allies, and to deter aggression put missile defense in a place of prominence. Bush Administration policy is to evolve the fielded system incrementally to defend against these threats. The system is intended to adapt to new threats as they emerge and integrate advanced missile defense technologies as they are introduced.

2AC #3: Link Turn - Missile Defense – Public Support

____Missile defense has massive public political support.

EAGLEN, 2010
[Mackenzie, Research Fellow for National Security Studies at the Allison Center for Foreign Policy Studies at the Heritage Foundation; "Why Missile Defense," 8/03, http://www.heritage.org/Research/Commentary/2010/08/Why-Missile-Defense]

A comprehensive, multi-layered missile defense should be a priority. And the vast majority of Americans support the program. A poll conducted by Opinion Research Corporation this past May reveals that 88 percent of the respondents believe that the federal government should field a system for countering ballistic missiles capable of carrying weapons of mass destruction. However, many also mistakenly believe we already have what is needed to defeat a range of threats.

2AC #3: Link Turn - Missile Defense – Defense Lobby

____Key Congress people and the defense industry support missile defense, and this guarantees support.

INSTITUTE FOR POLICY STUDIES, 2006
[Frida Berrigan and William D. Hartung; "Missile Defense Program Wasteful and Unnecessary" 7/14, http://www.ips-dc.org/articles/missile_defense_program_wasteful_and_unnecessary]

So why does this irrelevant and unworkable program continue to receive billions in taxpayer money? Part of the answer lies in pork barrel politics. Boeing, Lockheed Martin, Raytheon and Northrop Grumman, the four largest military contractors, received nearly $15 billion in missile defense contracts between 2001 and 2004. These companies will go to great expense to keep missile defense funds flowing, using timely political contributions to "grease the wheels" for the program's survival. Two dozen missile defense contractors have given more than $4.1 million to just 30 key members of Congress in the 2001 through 2006 election cycles, according to data compiled by the Center for Responsive Politics. The top recipients of this contractor largess are members of key committees who are involved in funding missile defense programs or have missile defense facilities in their districts. The largest recipients of missile defense-related donations in the Senate are Alabama Republicans Richard Shelby ($204,334) and Jeff Sessions ($145,250).

2AC #3: Link Turn - China Cooperation – International cooperation

____International cooperation is immensely popular, and will shield the plan from any Congressional criticism.

RENDLEMAN AND FAULCONER, 2010
[James, Colorado Springs; and J. Walter, Strategic Space Solutions; "Improving international space cooperation: Considerations for the USA," *Space Policy*," v. 26]

International cooperation has the wonderful, if sometimes wasteful, capacity to increase the political will to sustain and fund space programs and associated budgets. As noted, cooperation provides a spacefaring state the basis to draw on additional resources. It also enables a program to weather attempts to rein it in even when faced with contentious and devastating cost-growth or budget realities (which most space programs invariably face). Thus, within the USA, a program often wins some sanctuary from cancellation threats or significant budget reductions to the extent that Congress and the administration feel compelled not to break, stretch, or withdraw from international agreements. Political good will is generated by funding these programs. As an example of the power of this good will, one only need look at the politics surrounding NASA's manned program. Money has been allocated to the program even when the perceived justification has collapsed. Now the new internationalist US president doesn't care much for the NASA manned mission, and has even less understanding of its science mission. But critics concede that the president sees value in the votes its engineering and contractor community represents, key especially in vote rich states such as Florida which serve as a nexus for manned US launches. Similarly, some reason the political and diplomatic integration of Russia into the ISS program may well have saved it and Space Shuttle programs from cancellation.25 Once cooperation has commenced, canceling a program becomes inconsistent with political sustainability as long as the utility cost associated with the loss of diplomatic benefits and the negative effects on reputation of terminating an international agreement is larger in magnitude than the utility cost that must be paid to maintain the system. In general, any unilateral action sends a signal that the actor is an unpredictable and therefore an unreliable and possibly disrespectful partner. This tends to sabotage the possibility of future cooperation.26 If significant cooperation has never previously occurred, its commencement is thought to be a defining event, delivering specific political rewards and diplomatic utility. This is why the recent pronouncements on space cooperation made by President Obama and Chinese officials during his November 2009 visits are being watched with special interest. The same attention is being paid to the discussions held with the Indian government and its space community.

2AC #3: Link Turn - Colonization – Job Creation

____Human exploration missions attract huge political support from key districts because they create jobs and pork projects.

LOGSDON, 2011
[John, Space Policy Institute, Elliott School of International Affairs, George Washington University, "A new US approach to human spaceflight?" *Space Policy*; v. 27]

President Obama proposed cancelling Constellation and instead relying on a private sector-NASA partnership to carry astronauts to the ISS. Under the 2004 vision, the USA had indicated that it might withdraw from involvement in the ISS after 2015; the Obama administration proposed extending its operations until at least 2020. Central to the proposed new strategy for human spaceflight was a pause in developing new flight systems, instead making substantial investments in developing and demonstrating new, "game-changing", technologies for several years and only then embodying them in a new heavy-lift launch vehicle and a crew-carrying spacecraft for deep space missions. The strategy, based on forecasts of likely future budgets, did not call for parallel development of a spacecraft capable of landing on a planetary (or lunar) surface. Future journeys would go to multiple destinations beyond Earth orbit, not just the Moon, with the first missions coming sometime after 2020. The Obama proposal came under immediate attack from members of Congress whose districts would be affected by the new strategy, firms that were threatened by the cancellation of their Constellation contracts, and spaceflight veterans, including several Apollo astronauts. The criticisms focused on the viability of relying on the private sector for crew transport to the ISS and the lack of specific goals and schedules for deep space exploration missions. Senator Richard Shelby (R-AL) succeeded in getting a provision written into law that prohibited NASA from cancelling any Constellation contracts and from starting the new programs proposed by the president until the Congress completed action on the FY2011 budget proposal and had either approved, rejected or modified the new human spaceflight strategy.

2AC #3: Link Turn - Colonization – Key Senators (1/2)

____Key senators and companies with huge lobbying budgets support expanding human spaceflight and overwhelm all opposition.

LOGSDON, 2011
[John, Space Policy Institute, Elliott School of International Affairs, George Washington University, "A new US approach to human spaceflight?" *Space Policy*; v. 27]

It should have come as no surprise to advocates of the new strategy that the relevant members and committees of Congress were skeptical, if not directly hostile, to the new strategy. Even in September 2009, when Norm Augustine had testified before both the House Committee on Science and the Senate Committee on Commerce, Science, and Transportation, almost all members had pushed Augustine to explain why his committee had not recommended increasing the budget for Constellation to get the program back on schedule, or close to it, rather than suggesting alternatives to the "program of record". Many members were more interested in making statements in support of their constituents' interests than they were in listening to Augustine's explanations. So when a new strategy reflecting the conclusions of the Augustine Committee's findings came before those same two committees after the release of the president's budget, there was a great deal of hostility evident among some members, such as Senators Richard Shelby (R-AL) and David Vitter (R-LA) and Representatives Bart Gordon (D-TN), Gabrielle Giffords (D-AZ) and Ralph Hall (R-TX). Gordon was chair of the House Committee on Science and Giffords the Chair of its Subcommittee on Space and Aeronautics. Senator Shelby was able to get written into law a prohibition against NASA cancelling any Constellation contracts. One sticking point among many members was that some $9 billion had already been spent on the program, and it seemed prudent not to write off that investment. Trying to find some form of compromise between the congressional concerns and the White House proposal were Senators Bill Nelson (D-FL) and Kay Bailey Hutchinson (R-TX). They were the chairman and ranking minority member of the Senate Science and Space Subcommittee, and were looked to by other senators without direct space interests for leadership in crafting the Senate reaction to the White House. Although many of those who had crafted the new space strategy were veterans of Washington politics, in developing the new approach there seems to have been little attention paid to its political feasibility - or at least, if political impacts were considered, they were not given much importance. Cancelling Constellation would mean terminating contracts worth billions of dollars and would influence the job prospects of thousands of NASA and contractor workers. The firms who would suffer from cancelled contracts quickly organized lobbying efforts against the president's proposal; they found allies among senators and representatives whose constituents would be most affected by the proposed changes. They were able to convince such revered figures as Apollo astronauts Neil Armstrong, James Lovell, and Eugene Cernan to testify against the president's proposals. Former administrator Griffin spoke skeptically about the changes to Constellation. The supporters of the new strategy were handicapped by the inability, or unwillingness, of NASA leaders to provide a coherent defense of the president's proposals and by the fact that those in the private sector who most stood to benefit from the new approach were relatively uninfluential politically. Thus the first round of congressional hearings on the new strategy and the NASA budget during the February-March period did not bode well for the initiative's success.

2AC #3: Link Turn - Colonization – Key Senators (2/2)

____Key Senators have publicly expressed support for expanded human spaceflight.

PACE, 2009
[Scott, Space Policy Institute, George Washington University, "Challenges to US space sustainability" *Space Policy*; v. 25]

Congress, on the other hand, sends signals through resolutions, statements to the press, etc. Many prominent members of Congress have expressed their support for NASA's human spaceflight activities [20,21]. Prominent Senators from both political parties have voiced their support for NASA's human spaceflight activities, and for minimizing the time between Shuttle retirement and Orion launch [12]. In addition, Senator Hutchison and her Democratic counterpart, Ranking Member Sen. Bill Nelson of Florida, submitted an amendment to the FY2006 Defense Authorization Bill "expressing the Sense of the Senate regarding the critical nature of human space flight to America's security"[22]. This amendment includes the following language: It is the sense of the Senate that it is in the national security interest of the United States to maintain uninterrupted preeminence in human spaceflight [23].

2AC #3: Link Turn - Colonization – Public Support

____The public overwhelmingly supports future exploration missions.

VEDDA, 2008
[Dr. James, senior policy analyst at the Aerospace Corporation's Center for Space. Policy & Strategy in Arlington, Virginia , "Challenges to the Sustainability of Space Exploration," *Astropolitics,* v.6 n.1]

Since 2004, there have been public opinion polls specific to the exploration mission that reveal new and ominous signs to policymakers and NASA. The most visible has been a series of polls commissioned from the Gallup organization by the Coalition for Space Exploration, an alliance of companies and professional organizations formed in 2004 to promote the exploration program.12 Numerous press reports and NASA's website13 have focused on the generally positive responses to the question: If NASA's budget did not exceed one percent of the federal budget, to what extent would you support or oppose this new plan for space exploration? Would you strongly support it, support it, oppose it, or strongly oppose it? Jeff Carr, chairman of the Coalition, summed up the responses this way: "Cumulative results indicate that, over the course of time and despite varying world and national circumstances, the American people still strongly support space exploration and are willing to support its funding at current levels or even slightly increased."14

2AC #3: Link Turn - Lunar Mining – Moon Return

____Lunar missions have bipartisan support in Congress.

HOUSTON CHRONICLE, 2009
[Stewart Powell, staff writer, "Moon mission gets help in Congress," 12/21, http://www.chron.com/disp/story.mpl/nation/6780240.html]

Fearful that the White House might scale back manned space exploration, a bipartisan group of lawmakers slipped a provision into a massive government spending package last week that would force President Barack Obama to seek congressional approval for any changes to the ambitious Bush-era, back-to-the-moon program. The little-noticed legislative maneuver could yield massive payoffs for the Houston area, which has tens of thousands of jobs tied to manned space exploration. The congressional action hands NASA supporters additional leverage in their behind-the-scenes campaign to persuade Obama to budget an extra $3 billion a year to finance the return of astronauts to the moon by 2020 rather than revamping — and cutting — the manned space effort.

2AC #3: Link Turn - Lunar Mining – Public/Private Cooperation

____There is empirical support for NASA policies that work with private companies.

FOUST, 2006
[Jeff, editor of the Space Review, "A progressive view of space exploration,"11/13; http://www.thespacereview.com/article/743/1]

The problem here is that few people in the space community are seriously talking about abandoning government-funded and -run space programs in favor of entirely private exploration ventures. The magazine presents a false choice: we can either have public space exploration or private space exploration, but not both, nor some combination of the two. And while Lobel is dismissive of the Vision for Space Exploration (saying that President Bush's announcement of it nearly three years ago "rang hollow"), it is NASA policy, having received strong bipartisan support in Congress to date, and it's providing opportunities for the private sector to cooperate with—not replace—the space agency.

European Union Counterplan – Table of Contents

Affirmative Answers

Background Notes: European Union Counterplan

European Union (EU): The European Union is a governing body that oversees interactions between European nations and creates common policies so that there is less overlap and confusion. For example, before the EU created a single, common form of money (the Euro) for all European countries, you would have to change types of money in every country. For more information on the countries in the EU and the policies it has enacted, they have set up this website: http://europa.eu/index_en.htm

European Space Agency (ESA): Established in 1975 (long before the EU was established), the European Space Agency is an organization of 18 nations, mostly European, who cooperate on space policies because space programs are too expensive for most countries to undertake individually. The European Space Agency is not a governing body like the EU, but is run through voluntary contributions from the countries that participate.

European Union Counterplan 1NC (1/2)

A) Text:

[insert appropriate text]

The European Union should enact a tax-incentivized property rights system for corporations which establish permanent mining settlements on the Moon.

OR

The European Union should substantially increase funding for the implementation of a space-based missile defense system.

OR

The European Union should engage the People's Republic of China on a joint navigation satellite development project in space beyond the Earth's mesosphere.

OR

The European Union should fully fund a sustained human spaceflight mission to explore and colonize space objects beyond the Earth's mesosphere.

European Union Counterplan 1NC (2/2)

B) Solvency: Bringing European space policy under the umbrella of the European Union solves political and financial concerns, and creates effective space missions.

HOERBER, 2009
[Thomas, Centre for European Integration, Ecole Supe´rieure des Sciences Commerciales d'Angers ; "ESA + EU: Ideology or pragmatic task sharing?," *Space Policy,* v. 25]

Alain Gaubert and Andre´ Lebeau first analyse the industrial underpinning of European space policy and outline its fragility, a fragility which somewhat moderates the call that government funding should be replaced by commercial involvement. They also correctly emphasise that up until now European space policy has been conducted almost exclusively on an intergovernmental basis, which was not to the detriment of European achievements in the space sector.16 "For all sorts of reasons that need not be rehearsed, a world-class space capability can only be established at the European level. It is out of reach of the individual members of the European Union. This means that governance must adapt itself to the present state of integration of the continent and accept that the lack of consensus on the ultimate aims of European construction is an overall constraint which must be realistically taken into account."17 What the authors call "mediocre power plays", they say, prevent Europe from using its space potential to its full capacity. That means national policies of limited liability, of saving money and of bargaining to reduce one's own share in the European Space Agency budget. It means also that most European states have continued to run their own national space programmes aside from their engagement in ESA, which can be seen as a waste in double administration and research efforts.18 The authors reject the idea of European Space Agency integration into the EU as an easy answer. "Dealing with it [harmonisation of the roles of European Space Agency and the EU] by saying that European Space Agency must become an agency of the Community would be like imagining the problem can be magicked away. The crux of the problem consists of establishing relations between two entities of profoundly different character so that European Space Agency can become the executive arm of Brussels in space matters without losing its own dynamism."19 From a political perspective, it is this narrowing gap between aspiration and what is feasible in space which makes space policies so intriguing. It is the combination of potential for profit, with all the positive repercussions for a competition driven economy, and the as yet untapped potential of increasing popular interest in space, which could eventually generate political support for grander space projects in the future. This is the strategic and political background to the debate concerning the relationship between European Space Agency and the EU. On the one hand, the EU has always been an eminently political organisation, sensitive to the political potential any innovation may offer. A European space strategy is only one of the most recent examples. On the other hand, European Space Agency has outgrown its bureaucratic roots and has acquired a political relevance which goes beyond merely administering limited national space investments.20 Hence the idea of bringing European Space Agency under the EU roof would be another political step which could well serve to further enhance the political influence of the EU in the future. It would also confer on space policies a political prominence which might be an indication of the importance this field will have in the future.21 A concerted and common European space strategy might be the next move, taking Europe forward to a position long enjoyed by the Americans.22 This would implement one element of further integration of all of Europe's public organisations.23

C) Competes through net benefits – the Counterplan avoids our Disadvantages.

2NC/1NR Extension: Answers To 2AC #1: "Permutation: Do Both"

They say we should permute to do both the plan and the counterplan, but …

____The permutation still links to the disadvantages. By acting simultaneously, the United States would still be perceived as acting unilaterally and this would trigger the link because no one would know the E.U. was acting at exactly the same time.

____There is no net-benefit to the permutation. Double-solvency is meaningless because the 1AC evidence proves that solving once is enough to prevent the impacts, and The U.S. and E.U. space programs are driven by competition, not cooperation. They can never truly work together.

WANG, 2009
[Sheng-Chih, Department of Political and Social Sciences, Free University of Berlin; "The Making of New 'Space': Cases of Transatlantic Astropolitics," *Geopolitics,* v.14, n. 3]

This article aims to establish two interconnected arguments. First, European and US cost-effective calculations cause their strategic variation in transatlantic astropolitics. Transatlantic astropolitics reveals an instrumental rationality that both sides pursue geopolitical interests from exploiting outer space with respective cost-effective calculation rather than collective identity, common culture, or shared discourse. To wit, transatlantic astropolitics represents an extension of classical geopolitics, in which sovereignty and geopolitical interests satisfaction play the determinant role in US and European outer space strategy. Robert A. Dahl defines interest as the opportunities to achieve maximum feasible freedom, develop full capabilities, and attain satisfaction of all other things that actors judge important.3 This definition is properly applicable to transatlantic astropolitics. Second, the transatlantic security community discourse has no constitutive effect on transatlantic astropolitics. The main content of this discourse is that the interaction between Europe and the US is guided by the 'logic of appropriateness' embedded in a highly institutionalised democratic community. Member states possess mutual trust, sympathy, and loyalty, which make this community a remedy for material power competition.4 Robert O. Keohane also argues that in this community, states would not worry about partner's relative economic gains, and would feel comfortable with partner's economic success because it means a stronger ally.5 The moral and geopolitical codes of this discourse make transatlantic security cooperation necessary in terms of their own interests. In the context of transatlantic security community, collective identities between Europe and the US are materialised through discursive construction, and therefore their outer space strategies can be understood as a process of making differentiation between 'us' and 'others'. However, this shared discourse can not overwhelm European and US concerns with individual geopolitical interests in transatlantic astropolitics. Obvious inconsistency between this shared discourse and individual practices explicates the nullified constitutive effect of transatlantic security community discourse on transatlantic astropolitics. For example, transatlantic launch capability competition was exactly caused by concerns of relative commercial and industrial gains derived from advanced transportation technology and concomitant prestige, control of outer space, and market profits. Other details will be elaborated in the case studies.

2NC/1NR Extension: Answers To 2AC #2: "Solvency Deficit: Counterplan Doesn't Solve the Case"

They say the EU Counterplan doesn't solve the case harms, but…

____ Extend the 1NC HOERBER 2009 evidence. The counterplan creates political momentum behind E.U. space policy that generates new funding and support from individual European countries. This overcomes technological reasons why the E.U. has failed in space in the past, and is more than enough to solve the Affirmative's Harms.

[Insert plan-specific evidence from 2NC/1NR Counterplan Solvency]

2NC/1NR Extension: Answers To 2AC #2: "Solvency Deficit: Counterplan Doesn't Solve the Case" - Plan-specific Solvency: China Cooperation Aff (1/2)

____The counterplan solves enough of the Aff to prevent their terminal impacts. If we win that E.U. cooperation can get China on board with multilateralism generally, then that means China would be willing to take action against global threats.

____Europe is better at cooperating with China than the United States – they have a history, and other issues prevent U.S. success.

NOBLE, 2008
[Michael, United States Air Force, "Export Controls and United States Space Power," *Astropolitics,* v.6 n.3]

China for the United States and Europe will increasingly be a space competitor–both commercially and politically in the Asia-Pacific region. It also means that China offers a whole new range of space co-operation options. Europe is already increasing space co-operation with China. Germany participated earlier in Chinese communications satellite development. In 1994, China Aerospace Company and Germany's Deutsche Aerospace (now DASA) formed joint venture, Euraspace, to build remote-sensing communication satellites. The first was launched in July 1998. Alcatel in France has signed an agreement with the Chinese wherein Alcatel will provide the communications payload for China's new communications spacecraft. The European Space Agency (ESA) has also begun work with China on the twin spacecraft Double Star Science Mission. For the United States, the same issues that have limited other exchanges (technology transfer, human rights and weapons sales) will have to be overcome before China can become a space partner 26.

____The European Union has experience consolidating different cultural viewpoints, and can bring all actors together for a common space policy.

SECARA AND BRUSTON, 2009
[Teodora and Jean, Eurisy (a European non-profit association of over 30 governmental space offices and space agencies, international organisations, research institutions, and private businesses involved or interested in space-related activities); "Current barriers and factors of success in the diffusion of satellite services in Europe," *Space Policy,* v. 25]

In order for all these actors to function as system, a shared view of the collective goal and of how their respective actions contribute to or, on the contrary, weaken the system, is essential. The EU, ESA, space agencies and other public authorities are the only actors who are not conditioned by short-term, individual interests and can therefore develop a shared, cross-cutting, holistic vision of the satellite service knowledge infrastructure and coordinate the actions of its actors in a coherent manner.

2NC/1NR Extension: Answers To 2AC #2: "Solvency Deficit: Counterplan Doesn't Solve the Case" - Plan-specific Solvency: China Cooperation Aff (2/2)

____The EU can cooperate with China on satellite policy, and this leads to broader economic and foreign policy moderation.

PETER, 2007

[Nicolas, Space Policy Institute, George Washington University; "The EU's emergent space diplomacy," *Space Policy,* v. 23]

While the USA is heavily divided on its China policy between proponents of containment and their opponents, who favour engagement, European countries have followed a policy of 'constructive engagement' towards China. The EEC established diplomatic relations with China in 1975, and since then its goals in China have been overwhelmingly oriented towards trade and investment relations. The main legal framework for relations with China are the 1985 EC–China Trade and Co-operation Agreement (TCA) covering economic and trade relations and the EU–China cooperation programme. Since then, the Commission has been the engine for developing various forms of economic cooperation between Western Europe and China [13], but a common policy on China was only defined in 1995; it followed the Commission's 1994 initiative 'Towards a New Asia Strategy'. The goal of this initiative was to develop relations with China on a longterm and comprehensive basis [13]. Current EU policy towards the country is based on the Commission's policy entitled 'EU–China: closer partners, growing responsibilities', released in October 2006, which sets the new agenda for EU–China relations for the coming years. The EU's fundamental approach to China is one of engagement and partnerships and includes strengthening bilateral cooperation in S&T. A dedicated S&T agreement was therefore signed in 1998 and entered into force in 2000; it was then reviewed in 2004. In addition, 2007 is 'China–EU S&T year' and is expected to strengthen relations and cooperation. 10.2.1. Euro–Chinese cooperation in space Cooperation with China in space has expanded over time from a limited involvement of individual European countries. European Space Agency has been the traditional European partner, with scientific collaboration beginning in 1980 with the signing of a document facilitating the exchange of information between European Space Agency and China's Commission for Science and Technology. In 1992, the Chinese Academy of Science signed an agreement with European Space Agency to collaborate on the Cluster mission. And in July 2001, a collaborative agreement on the Double Star programme was signed in Paris.20 European Space Agency has also been cooperating with China's National Remote Sensing Centre (NRSCC) in the development of Earth observation (EO) applications over the past decade. In April 2004, this cooperation was reinforced with the creation of a dedicated 3-year EO exploitation programme called Dragon, which establishes joint Sino–European teams for the exploitation of data from ESA's ERS and Envisat satellites for science and applications development [14]. 10.2.2. EU–China cooperation in space Through European Space Agency Europe and China thus already have a long record of cooperation stretching back 25 years and, despite some fears about reinforcing a competitor and facilitating technology transfer to China, the EU seems willing to engage the country in concrete space projects in line with its overall foreign policy. Space-based navigation is currently the domain of most intense cooperation. In September 2003, the China–Europe Global Navigation Satellite System Technical Training and Co-operation Centre (CENC) was inaugurated in Beijing's Zhongguancun Hi-Tech Zone, to serve as a focal point for Galileo activities. On 9 October 2004, the Galileo Satellite Navigation cooperation Agreement was signed at the 6th EU–China summit in Beijing,21 demonstrating the importance of space as a tool of foreign policy for Europe. This agreement calls for cooperative activities in satellite navigation and timing in a wide range of sectors, notably science and technology, industrial manufacturing and service and market development, as well as standardization, frequency and certification.22 Galileo is one of the most visible aspects of EU–China relations in space but other cooperative ventures are ongoing. In April 2004, a High-Level steering group on China–EU Space Co-operation was set up to reinforce the dialogue between the EU and China, and to support the development of long-term perspectives for cooperation in space. The steering group includes representatives of government administrations, agencies and manufacturers, as well as operators and service providers. It will also deliver an annual report with recommendations to participating organizations and the EU–China Joint Ministerial Committee. The group will help to identify areas of mutual interest and promote concrete joint actions. A Joint Statement launching the Space Dialogue between the EC and China was endorsed in September 2005, and since then a series of high-level meetings have taken place. Nevertheless further cooperation is linked to problems of China's participation to the Galileo programme, and particularly its participation in the GSA. However, beyond this issue on Galileo, an overall space policy dialogue is planned to be launched in 2007.

2NC/1NR Extension: Answers To 2AC #2: "Solvency Deficit: Counterplan Doesn't Solve the Case" - Plan-specific Solvency: Colonization Aff (1/2)

____Their claims have zero warrant: in order to solve extinction, we only have to win that we create a sustainable colony on other planets. There is no reason why having Americans in that colony is any better than having Europeans.

____Europe has come together to support space exploration and has the technology to do it.

SEBOLDT, ET AL, 2004

[Wolfgang, German Aerospace Center (DLR), Institute of Space Simulation; Hans-Joachim Blome, University of Applied Sciences; Bernd Dachwald, Lutz Richter, German Aerospace Center (DLR), Institute of Space Simulation; "PROPOSAL FOR AN INTEGRATED EUROPEAN SPACE EXPLORATION STRATEGY," 55th International Astronautical Congress 2004, http://www.spacesailing.net/paper/200410_Vancouver_SeboldtBlomeDachwald+.pdf]

In 2001, a dedicated exploration program, termed AURORA, was established by European Space Agency – recently renamed European Space Exploration Program (ESEP) – with a clear focus on Mars and the ultimate goal of landing humans there around 2030 in international cooperation [1]. Given the very modest or even lacking experience with planetary missions in Europe until just a few years ago, AURORA was principally aiming at preparing European space industry for meaningful contributions to an international planetary exploration program as a system-level partner, providing critical mission elements rather than subsystems or instrumentation. Two European-led robotic missions to the surface of Mars were proposed in the context of AURORA: a mission focused on exobiology, ExoMars, based on a rover about the size of the MER vehicles, and a Mars Sample Return (MSR) mission, with the latter being considered as a potential cooperative effort with NASA. Included was also the option of technology demonstrations on the Moon, but no dedicated missions were identified. AURORA was conceived as a separate optional program and did not find adequate support and funding from all European member states. It was even claimed by some governments that a specific program for exploration should not be established because it is already covered by the mandatory space science program. The budget and planning of that program, however, does not allow significant exploration activities for the coming decade. The only approved future planetary science missions are Venus Express and the Mercury mission BepiColombo, which are both limited to orbiters. Concerning ongoing missions, SMART 1 – mainly a technology demonstrator for electric propulsion – is on its way to lunar orbit and – except for the Titan probe Huygens and Rosetta's comet lander Philae – there is no further in-situ science planned on planetary surfaces in the space science program.

2NC/1NR Extension: Answers To 2AC #2: "Solvency Deficit: Counterplan Doesn't Solve the Case" - Plan-specific Solvency: Colonization Aff (2/2)

____Europe is already developing plans to colonize Mars, and is ahead of the U.S. technologically.

ZEY, 2010
[Dr. Michael, executive director of the Expansionary Institute and Professor of Management at Montclair State University; "As US Abandons Manned Flight, China, Russia, Europe Train For Space Colonization with Mars500," 6/07, http://www.examiner.com/future-trends-in-national/as-us-abandons-manned-flight-china-russia-europe-train-for-space-colonization-with-mars500]

From the 1950s to the 1970s the United States and the former USSR dominated space exploration. Now, a number of countries, including a variety of European and Asian countries as well as Brazil have been sending up communication and military satellites and making preparations for ambitious manned space missions. A few years ago China became the third nation to launch a human into space. Japan just announced its plans to establish a robotic moon colony by 2020. To prepare for human space flight to distant orbs, a number of countries this week initiated a project called Mars500, a mission designed to examine the physical and psychological stresses astronauts might encounter during a 520-day trip to Mars. An international team of six researchers will experience this simulated manned mission to Mars housed in a virtual spacecraft sitting inside a large hangar at Moscow's Institute for Medical and Biological Problems. The spacecraft is actually a series of interconnected steel cylinders called "Bochka," or barrel. Inside the spacecraft are small (32 square feet) windowless living quarters, personal cabins furnished with a bed, desk, chair and shelves. The self-contained environment is equipped with enough food, water, and other supplies to last the whole trip as well as video games, books, and other materials to amuse the crew during their leisure hours. The crew will spend the first 250 days "flying" to Mars, and after landing will explore the simulated model of the Martian terrain attached to the spacecraft module. Then the crew will embark on a 230-day return flight, finally exiting the enclosed environment in November, 2011. The six-person crew was chosen from hundreds of applicants. The commander, a recently-married Russian commander named Aleksei Sitev, 38, has worked at Russia's cosmonaut training centre. The doctor, Sukhrob Kamolov, 32, and one of the researchers, Aleksander Smoleyevsky, 33, are also Russian. Other researchers include Wang Yue, 26, from China's space training centre, and Diego Urbina, 27, an Italian- Colombian. The flight engineer is 31 year old Frenchman Romain Charles. Mars500 will provide these countries with a wealth of knowledge about the technological obstacles and psychological trials and tribulations a space crew will encounter both during the flight to Mars and while on the planet itself. By mission's end China, Russia, and the European Space Agency will be years ahead of the US on the space learning curve.

2NC/1NR Extension: Answers To 2AC #2: "Solvency Deficit: Counterplan Doesn't Solve the Case" - Plan-specific Solvency: Missile Defense Aff (1/3)

____The counterplan establishes an effective missile defense system that will prevent ballistic missile use. Even if it isn't directly supporting the United States, the shield will intercept missiles as they are launched so they can never reach the U.S. mainland.

____Europe already has basic detection satellites in place, and can develop active response capabilities to counter ballistic missiles.

HENRY, ET AL, 2008

[Philippe, Snecma, and Association Ae´ronautique et Astronautique de France (3AF) Strategy and International Affairs Commission—Writers' Group (members are Didier Compard (ECTI), Bernard Deloffre (Satel Conseil International), Bertrand de Montluc (Ministry for Foreign Affairs—Analysis and Prediction Center), Jean Jamet (3AF), Michel Laffaiteur (3AF), Louis Laidet (3AF, President of the Commission for Strategy and International Affairs); "The militarization and weaponization of space: Towards a European space deterrent," *Space Policy,* v. 24]

Confronted with the phenomenon of the gradual arming of space, France and some of its partners in Europe may, if the hypothesis of a threat were to take form in speeches and deeds, enlarge the range of alternatives open to them: diplomatic action and control of armaments, technological and industrial measures aimed at the development of European capacities13—possibly within the NATO framework— of space surveillance and warning systems, and an increase in our national technical capacities which are defensive and, if necessary, active. In effect, the Chinese and US tests have shown the incapacity of Europe to detect, characterize and appreciate the potential menace which it constitutes. Only an intergovernmental collaboration within Europe appears appropriate for preparing to deal with such a situation. It would avoid massive investment in fully autonomous resources. The first example we have is the tripartite agreement between France, Germany and Italy for the exchange of high resolution images from the reconnaissance satellites, respectively, Ple´iades, SAR-Lupe and Cosmo Skymed, when these three systems are operational. However, France must continue with what it has already embarked on, on the one hand the operational programmes Helios, Essaim and Syracuse and, on the other hand, the technological demonstration programmes SPIRALE and ELISA, to ensure the continuation of the former and, for the latter, to arrive at operational capacities fit to put at the disposal of the armed forces. Europe does not have to imitate the USA. It is not exposed to the same risks and has no intention of being a rival as a dominating world power. On the economic level, Europe doubts it has the financial resources to be able to catch up with the USA in terms of the quantity of operational devices, even though it is the second economic power in the world. But having systems which are autonomous and complementary to those of its partners appears to be a growing priority, in the light of the recent advances observed in other countries. China has just reminded us of this. Germany has the FGAN-TIRA radar and the UK the STARBROOK optical instruments. They provide a capacity for detection, orbitography, the management of a catalogue of orbiting objects and their identification. However, these systems, with Graves, are not interoperable and do not satisfy the global need for detection, warning and response which future threats will require. The relaunch of the defence effort in terms of space, which we are advocating, must on one hand include reinforcement of the protection of orbiting systems, naturally those which are exclusively military, but also European commercial satellites which have a role in providing services to the armed forces, and, on the other, make Europe able to anticipate possible attacks from "rogue states" or isolated terrorist groups and able to counter these threats by appropriate means. The generalization in the world of the use of space for military purposes with, ultimately, access of regional and local powers to armament systems which may be used in space, in the first instance inter-regional and intercontinental ballistic missiles, leads us to propose the strengthening of our capacities for monitoring and response.

2NC/1NR Extension: Answers To 2AC #2: "Solvency Deficit: Counterplan Doesn't Solve the Case" - Plan-specific Solvency: Missile Defense Aff (2/3)

____European nations already have the technical capacity and political will to engage in space-based missile defense.

BRACHET AND DELOFFRE, 2006
[Gerard, National Academy of Air and Space in Paris; Bernard. Satel Conseil International; "Space for defence: A European vision," *Space Policy,* v. 22]

One notes also that, among the defence missions that can be satisfied with space systems, many can be shared with European partner countries of France, either through conventional modes of cooperation where investments are also shared (like Helios I or II), or through exchanges of capacity between autonomous systems, as is the case for the German radar observation system SAR Lupe with Helios II. In the latter case, capacity sharing signifies the setting up of ground systems able to process various types of data simultaneously, and therefore requires a new concept of architecture integrating different characteristics of space observation systems, both optical and radar imagery. Beyond this, in a medium term perspective (beyond 2010–2015), one should take into account the progressive appearance of new threats that include the proliferation of ballistic missiles and weapons of mass destruction, and later even the possible appearance of space weaponry, which might entail killer satellites or even the threatening presence of nuclear or chemical devices in orbit. In such a case, the capabilities to oppose them should be developed. It is no doubt premature for Europe to plan for neutralization weapons being placed in orbit, but it is now urgent that it reinforce its capacity to monitor space, which means having at its disposal precise knowledge of all objects in space including debris, and the ability to identify them. Space monitoring is of dual interest also because it helps to prevent the risk of collision and to predict fall-out zones for space objects, ensuring the safety of the population. Second, where military threats are concerned, another form of surveillance means having systems in space able to detect missile launches, and provide early warning. The first of these missions consists of monitoring a given geographical zone, detecting ballistic missile launches by the signature of the plume and determining the location of launch sites. The second mission, early warning, can play a role in the context of deterrence thanks to its ability to identify the aggressor. It is also an essential component of anti-ballistic missile defence. The implementation of an anti-missile system in Europe, or rather in certain European countries, is under discussion in the context of the US proposal to participate in its own anti-ballistic missile defence programme. In France, besides the report written in 2003 on the subject by the Acade´mie Nationale de l'Air et de l'Espace [4], the Defence Advisory Scientific Committee (Conseil Scientifique de De´fense) has also delved into the subject, and both recommend a progressive approach, based on a significant research and technology effort, susceptible to place European industry in a stronger position in the negotiations which would take place should Europe decide to participate.

2NC/1NR Extension: Answers To 2AC #2: "Solvency Deficit: Counterplan Doesn't Solve the Case" - Plan-specific Solvency: Missile Defense Aff (3/3)

____Burden sharing means Europe needs to increase its participation in space military affairs for any U.S. action to be effective.

NOBLE, 2008
[Michael, United States Air Force, "Export Controls and United States Space Power," *Astropolitics,* v.6 n.3]

During a speech at CSIS, the Secretary of Defense fielded a question regarding how well he thought the North Atlantic Treaty Organization (NATO) allies were doing in satisfying their commitments to the alliance. In his response, he addressed the challenges the governments of many NATO nations face in fulfilling their commitments such as in Afghanistan and concluded that "we're trying to work now more behind the scenes and see if there are some creative ways we can come up with where they can contribute in ways that are politically acceptable and that relieve the burden on the rest of us."171 With a little creative thinking, one might conclude that greater partnerships in space may be one arena where NATO allies could contribute. Indeed, the NSSO and the Office of the Assistant Secretary of Defense for Networks and Information Integration have proffered a proposal for Coalition Space. One concept for coalition space has each member state contributing a satellite to a "coalition constellation." Each contributing state gains military and economic benefits from the constellation approach without having to shoulder the burdens of funding and operating the entire constellation. Military or operational benefits include better coverage for communications systems, more frequent revisit for intelligence, surveillance, and reconnaissance (ISR) systems, and improved accuracy from PNT constellations. The coalition participation in the constellation changes the calculus of anti-satellite attacks since a strike against any one of the satellites, or ground or other system elements for that matter, is a strike against the coalition, a collective security benefit. Economic benefits of a coalition constellation are straightforward. Development, procurement, operations, and maintenance cost sharing between participating states and larger quantity buys will yield economies of scale that can be shared between all participants.172

2NC/1NR Extension: Answers To 2AC #2: "Solvency Deficit: Counterplan Doesn't Solve the Case" - Plan-specific Solvency: Lunar Mining Aff

____The counterplan can establish a working property rights model on the Moon. There is no warrant for why U.S. courts are needed to enforce property rights; European Union officials can recognize corporate claims, and this will provide legal stability that leads to investment.

____And, Europe has the capacity to develop lunar resources.

HATCH, 2010

[Benjamin, Executive Notes and Comments Editor, Emory International Law Review; J.D. Candidate, Emory University School of Law; "DIVIDING THE PIE IN THE SKY: THE NEED FOR A NEW LUNAR RESOURCES REGIME," *24 Emory Int'l L. Rev. 229*, http://www.iew.unibe.ch/unibe/rechtswissenschaft/dwr/iew/content/e3870/e3985/e4139/e6403/sel-topic_4-hatch_ger.pdf]

While the only states that have placed humans in outer space are the United States, Russia, and China, they are not the only members of the club of spacefaring states. The nations of Europe, while not technically a state, do share a number of common agencies, one of which is the European Space Agency ("ESA"). n96 Although the European Space Agency is not affiliated with the European Union, the members of the European Space Agency include nearly all Western European states. n97 The European Space Agency has ambitions to not only send humans into space but also to participate in the development of the Moon. [*242] The European Space Agency launched its first lunar satellite in September 2003. n98 The satellite's mission was successfully completed upon its planned crash into the Moon's surface in September 2006. n99 This first, small step for the European Space Agency will not be the last. The ESA's new Aurora Programme is an international effort with the purpose of deploying humans and robots on the Moon and Mars in the foreseeable future. n100 Part of this development will be the construction of lunar bases. According to the current schedule, the European Space Agency will construct a "global robotic village" on the Moon in 2016, to be followed in eight years by a manned base. n101

2NC/1NR Extension: Answers To 2AC #3: "Solvency Deficit - No Political Will" (1/2)

They say the EU can't solve because of a lack of support for space policy, but…

_____ 1. Extend the 1NC solvency evidence. The counterplan provides a guaranteed market for the goods needed to do the plan by providing E.U. governmental support for the project. This convinces businesses that they will always have a buyer, which encourages new investment.

_____ 2. The Counterplan fiats E.U. action, and fiat is forever so the counterplan can't be rolled back. This solves political will because it guarantees that the E.U. will always support the counterplan even if it doesn't support other space policies.

____ 3. European countries are now willing to increase funding for space programs.

SEBOLDT, ET AL, 2004
[Wolfgang, German Aerospace Center (DLR), Institute of Space Simulation; Hans-Joachim Blome, University of Applied Sciences; Bernd Dachwald, Lutz Richter, German Aerospace Center (DLR), Institute of Space Simulation; "PROPOSAL FOR AN INTEGRATED EUROPEAN SPACE EXPLORATION STRATEGY," 55th International Astronautical Congress 2004, http://www.spacesailing.net/paper/200410_Vancouver_SeboldtBlomeDachwald+.pdf]

At the recent European Space Agency Council meeting in March 2004, an European Space Agency long-term plan for 2004 to 2013 was proposed with three new initiatives, one of them being exploration oriented and termed Inspiration Initiative [2]. Main contents for the coming years would be robotic missions, exploration technologies, and scientific support, with the overall guiding principle to "find, understand, sustain, and expand life". The estimated budget for the period 2005 to 2013 was in the order of 1 billion Euro. For 2004/05, a preparatory phase – termed European Space Exploration Program (ESEP) – was approved in July 04 by AURORA-participants. The final proposal to be co-financed by European Space Agency member states and the European Union (EU) will be presented at the 2005 Ministerial Council. In the White Paper of the EU [3] "Space: a new European frontier for an expanding Union" the increasing strategic importance of space and space policy for the EU was emphasized, including the option for additional joint ESA-EU funding. Besides space science, also space exploration was mentioned as a separate promising topic to be further assessed .

2NC/1NR Extension: Answers To 2AC #3: "Solvency Deficit - No Political Will" (2/2)

____ 4. The counterplan provides the financial stability to reinvigorate European space industries.

BRACHET AND DELOFFRE, 2006
[Gerard, National Academy of Air and Space in Paris; Bernard. Satel Conseil International; "Space for defence: A European vision," *Space Policy,* v. 22]

The industrial capabilities of a state or a community of states like the EU is the basis of the credibility of its defence. Generally speaking, states' security is more than ever dependent on the sum of intellectual capabilities and technical means available in part within its administration (legislative and regulatory framework, overseeing the implementation of public infrastructures, procurement) and in part within the fabric of industrial and research capabilities upon which industry depends. This European industrial and technical base ensures security of supply and the autonomy of the public actors in security and defence, freedom to use the equipment fielded, and the possibility of exporting systems and equipment to friendly countries and allies. To set up programmes in an intra-European cooperative framework, the European industrial and technological base could be organized in two different ways: 1. Firms would join together in ad hoc consortia to design and implement programmes of interest to several European countries. 2. More recently, the progressive establishment of large industrial groups at European level in the aeronautic, defence and space sector (EADS, Thales and Alcatel Alenia Space) is a sign of a major evolution in the industrial scene, likely to strengthen Europe's collective industrial capacity while maintaining competitiveness in the international market. These consolidations and joint ventures, which will certainly continue during the coming years, have a strong political impact because they facilitate the convergence of the expression of requirements (see, for example, the military transport aircraft A400M) and interoperability of equipment within armed forces. They also lead to a rationalization of the industrial infrastructure by eliminating duplications that result from states' national policies, thus improving competitiveness of the whole. Europe's policy for security and defence should consolidate this trend and provide it with new perspectives in the domestic market, able to favour both an intelligent rationalization of resources, without loss of substance, and increased competitiveness in the export market. This should apply to the space field as in other sectors of industry, while noting that, with the possible exception of the launch vehicle sector, the space field rarely has the opportunity of producing in series. But the space industry, like other high technology industries, needs to be permanently irrigated by an adequate influx of new technologies and innovative concepts, resulting from a global effort of the nation or the community of nations concerned in terms of educating the younger generations and in terms of research. In addition, to ensure that all the competence and the technologies necessary will be on hand when needed, it is essential to provide industry with medium- and long-term visibility by defining targets for foreseen capabilities and programmes to be developed. The evolution of financial structures for advanced research in Europe, whether in the EDA, the future Security Programme, or the organization of the European Union's future Framework Programme for Research and Technological Development, should take into account an increased and better coordinated long-term research effort in all technological areas that could be of interest to the security and the defence of Europe. The Eurospace position paper published in January 2005 highlights this need for a better coordination at the European level of security related R&D in Europe [5].

2NC/1NR Extension: Answers To 2AC #4: "E.U. Soft Power Turn" (1/2)

They say the Counterplan hurts EU soft power, but…

____No Link: This evidence is about directly creating military policy, which the counterplan is not. It is a peaceful project that can be incorporated into general E.U. humanitarian policies that shore up soft power.

____Non-unique: EU credibility is already collapsing because of the economy.

TASPINAR, 2010
[Omer, Columnist for Today's Zaman; "The end of the EU's soft power?" 5/17, http://www.todayszaman.com/columnists-210375-the-end-of-the-eus-soft-power.html]

At the larger geostrategic level, the crisis of the eurozone is a stark reminder that Europe is no longer able to command the same level of soft power -- political legitimacy and diplomatic clout in the world. In other words, Europe's international image and ability to attract other countries to its own economic and political model is deeply damaged. Let's take the example of Turkey for instance. As they see the mess in Europe and the relative stability of their own economy, the Turkish public opinion's already low level of enthusiasm for EU membership is now probably going even lower. But Europe's troubles are significant for another reason: the geostrategic and economic center of gravity of the world is rapidly shifting to Asia. The fact that China, the Asian tigers, India and Brazil have been able to whether the global recession much better than Europe is a case in point.

___Link turn: Developing new EU space policies is critical to overall foreign policy credibility.

PETER, 2007
[Nicolas, Space Policy Institute, George Washington University; "The EU's emergent space diplomacy," *Space Policy,* v. 23]

International cooperation in science and technology (S&T) has been growing steadily since World War II and can be considered the biggest contemporary axis of civilian governmental cooperation. External S&T cooperation may not only be implemented for scientific or technological reasons, but also to improve foreign relations. International cooperation in S&T has been a significant component of European integration since the late 1950s; since more recent times it has also been an element of the European Union's relations with the rest of the world. Until the mid-1980s, the European Union (EU) was developing a set of specific S&T policies aiming to foster intra-European cooperation and to support programmes for particular technology fields in order to be more competitive in a global context. S&T cooperation was, therefore, one element of the "European" response to the external economic competition. But, as the EU has seen its legitimacy and its role in S&T policy increase since the end of the Cold War, such cooperation has evolved beyond Europe's borders to reach out to new partners. The increasing inter-linkages of the EU's S&T and foreign policy are particularly important in space activities, as space has always been a domain of "high S&T" politics. Thus, the EU's increasing involvement in space affairs is leading to the emergence of an "EU space diplomacy".

2NC/1NR Extension: Answers To 2AC #4: "E.U. Soft Power Turn" (2/2)

____And, the turn outweighs the link because of spin.The E.U. can translate successful space policy into other foreign policy successes.

PETER, 2007
[Nicolas, Space Policy Institute, George Washington University; "The EU's emergent space diplomacy," *Space Policy,* v. 23]

The EU is in a process of almost constant reform and adaptation and its external relations are no exception. But the EU has managed in a couple of decades to evolve from a relatively inward-focused regional economic organization to a more global political actor. Today, the EU increasingly tends to structure its most important foreign policies into broad dialogues or framework agreements, which involve among others economic and political dimensions, as well as an S&T dimension. This capacity to 'package' EU external policies into single comprehensive deals has allowed the EU to augment its volume of activities over the years, as well as to expand its influence in the world. This is particularly important today, since what was often considered 'low politics' (i.e. S&T cooperation) has gained in status and is now used as a tool to reach different countries as part of a broad foreign policy agenda.

____And this is magnified by consolidation: New EU space policies consolidate European authority in a single agent, giving it more foreign policy credibility.

PETER, 2007
[Nicolas, Space Policy Institute, George Washington University; "The EU's emergent space diplomacy," *Space Policy,* v. 23]

As mentioned above, since the successful launch of Sputnik I in 1957, space, like nuclear activities, has always been a prestige S&T domain, in which governments have had strong interests. However, for Europe as a whole, it is independent access to space, space applications for the benefit of citizens and governments and space science that have been the traditional reasons for engaging in space activities. But as the EU has become aware of the importance of space activities for achieving a wide range of policy objectives, and as the international political significance of space has grown, space is now taking a high profile in the Union's dialogues with major partners. As underlined by Johnson, the EU sees 'soft power' tools like diplomacy, cooperation and economic and political action as no less valid and effective than the use of military force [10]. In this context, the international dimension of civilian space activities is increasingly becoming a major element of the EU's relations with third parties. Galileo served as a wake-up call to the world that the EU is an emerging space power. But it is just one component of much broader European space initiative [8]. The EU is reaching for the leading role in European space policy, where international cooperation is a major element. As underlined in the 2003 White Paper, the challenge for Europe is identified to be able "to forge international partnerships that will serve European space policy objectives in support of EU policies across a broad spectrum" [11]. Space is also recognized as "a privileged instrument for developing international cooperation", and "international cooperation within a European space policy is not simply a matter of scientific collaboration on technologies and applications, but should also be in function of serving the widest-possible spectrum of the EU's objectives" [11].

European Union Counterplan 2AC (1/3)

1. Permutation: Do the plan and the counterplan. Having two actors pass the plan creates double solvency, and avoids the link to the disadvantages because European Union action would shield the United States from blame.

2. The Counterplan doesn't solve the case: *[insert plan-specific module here]*

3. Solvency Deficit: Europe's space policy has no support or organization

GAUBERT AND LEBEAU, 2009
[Alain, Former Secretary General, Eurospace ; Andre, Former CNES President; "Reforming European space governance," *Space Policy,* v. 25]

The weaknesses of space in Europe are not, in the main, of a technical nature; they relate to programmatic and structural matters. Europe has the necessary technical mastery at the heart of its space industry and agencies to develop all forms of space utilisation. The most telling insufficiency is that which affects the military dimension of space activities. There is no European-level military space programme and the sum of national activities is almost derisory [laughable]. This reflects the way defence in Europe lags behind the Union's civil sectors; added to this at the national level is the difficulty that space - a natural theatre for combined operations - has in finding a home within military organisations that are traditionally divided up between land, sea and air. A second programmatic difficulty directly linked to problems of governance concerns the obstacles that the creation of new operational systems must face. The organisation of European space activities, supported by the existence of the space agencies, is such that the development of technological capabilities and experimental systems benefits from a good measure of vitality. But in so far as the space agencies are not qualified to run operational activities themselves, transition to operational status encounters great difficulties which are demonstrated at two levels: space systems and services. The continuity of the service-providing systems is only in exceptional cases ensured by sources of funding outside the socalled 'space budgets' (i.e. those of the space agencies). Thus the continued existence of these systems is precarious. The meteorological system is one exception, based on the existence of public services well versed in international cooperation which have taken the baton from European Space Agency and, in addition, have been able to maintain constructive relations with it. The result of this situation is that the continuity of service activities based on the availability of space systems is called into question. With the exception of telecommunications, these service activities, which are often commercial, are not in a position to provide upstream funding to keep the space systems on which they rely going. They are grafted on to one or more systems whose continuity is ensured through public funding. The fate of the Jason network of altimetry satellites is an exemplar of these difficulties. A range of services based on the use of Jason data has developed, chief among them are computer modelling of the global oceans via the Mercator system. But the right kind of institutional framework to ensure the continuation of satellite altimetry has not yet been defined, making the long-term existence of these services uncertain. These programmatic weaknesses have negative effects on the space industry. The weakness of military space inflicts a permanent handicap on European industry vis-a` -vis that of other global powers. To this can be added the fact that no political authority keeps watch over ensuring continuity of the workload. Industry could doubtless adapt itself to a smaller workload if only its continued existence were assured, but when added to such inadequacy, the abovementioned irregularities dangerously weaken the human assets at the heart of all industrial capacity. Such assets are fragile; they take time to put together but can dissipate quickly. No political authority is unambiguously responsible for this dimension of the problem. More generally, it is from structural problems that the programmatic weaknesses proceed, and it is by reforming the structure that we may hope to resolve them.

European Union Counterplan 2AC (2/3)

4) Turn: E.U. Soft Power.

A) EU space policy is controlled by corporate elites, and a new rushed space program would hurt EU bargaining credibility globally.

SLIJPER, 2009
[Frank, Campagne tegen Wapenhandel (Dutch Campaign against Arms Trade); "The EU should freeze its military ambitions in space," *Space Policy,* v. 25]

The new Obama government has recently signalled a willingness to embrace a ban on weapons that interfere with satellites [19]. A new international space climate may spur badly needed policy initiatives, including fruitful negotiations between the American, Chinese and Russian governments. The EU should take the lead in any such negotiations aimed at preventing further escalation of a military show of force in space. Needless to say, Brussels' credibility would be highest if it scaled down its military space ambitions. 8. Democratic deficit Another important reason for the EU to halt its military ambitions in space is the democratic deficit of its policy making. It should seriously cut the influence that corporate business has on policy making and instead invest much more energy in addressing new policies to the general public. Not only is this a democratic duty, it is also a necessity for a clear public understanding of the way Europe is developing, especially in the politically sensitive area of foreign and defence policies. To address the democratic deficit of its policies, including space and the CSDP, Brussels should seriously start addressing the worrying information gap with the general public by taking its new policies to the wider public. Today the relative outsider who seeks background information beyond the general policy explanations on the Commission and European Space Agency websites either needs to dive deep into the worldwide web to retrieve officials' powerpoint presentations, or needs access to expensive specialist aerospace and defence media. It is therefore ludicrous for many top European officials to keep on contending that the military and security use of space are undisputed: most people simply have no clue of what is going on. Instead of bringing its newly adopted space and security agenda to the wider public, the EU is reverting to its old reflex of backdoor policy making with vested-interest stakeholders for the sake of a mutually beneficial policy agenda. With major business interests at stake, this is a worrying practice that needs to be reversed. Yes, the Commission has held consultation rounds and yes, discussions are ongoing in the European Parliament, but they go completely unnoticed by the rest of the world. In the face of broad public scepticism, if not outright rejection of the EU's military ambitions, the Union, while moving on with its current military space plans, risks a further eroding of public support for its expanding political ambitions.

European Union Counterplan 2AC (3/3)

B) European credibility is critical to solve global warming, terrorism, and diseases.

NYE, 2008
[Joseph, Professor at Harvard, "Europe not to be underestimated," *Taipei Times,* 2/13, http://www.taipeitimes.com/News/editorials/archives/2008/02/13/2003401096/2]

Europe can contribute significantly to China's integration into global norms and institutions. In general, Europe and the US have more to fear from a weak China than they do from a wealthy China. Political Islam and how it develops will be the second factor. The struggle against extreme Islamist terrorism is not a "clash of civilizations," but a civil war within Islam. A radical minority is using violence to impose a simplified and ideological version on a mainstream with more diverse views. Another major determinant of which scenario prevails will be US power and how it is used. The US will remain the most powerful country in 2020, but, paradoxically, the strongest state since the days of Rome will be unable to protect its citizens acting alone. US military might is not adequate to deal with threats such as global pandemics, climate change, terrorism and international crime. These issues require cooperation in the provision of global public goods and the soft power of attracting support. No part of the world shares more values or has a greater capacity to influence US attitudes and power than does Europe. That suggests that the fourth political determinant of the future will be the evolution of European policies and power.

2AC #2: "Solvency Deficit – Counterplan Doesn't Solve Plan" - China Cooperation Aff

____The Counterplan doesn't solve our Harms:

a) Economy: Export controls are preventing U.S. businesses from accessing international markets, and the declining aerospace industry is bringing down the global economy. The impact is nuclear war. The counterplan doesn't change U.S. export policy, so it can't save the U.S. aerospace industry.

____And, China/E.U. cooperation on satellites will be used to hurt U.S. leadership.

EAST ASIAN STRATEGIC REVIEW, 2008
[No author attributed," China's Space Development— A Tool for Enhancing National Strength and Prestige" Chapter 1, http://www.nids.go.jp/english/publication/east-asian/pdf/2008/east-asian_e2008_01.pdf]

China is also countering US dominance in security-related space activities by developing technologies to exploit the vulnerabilities of US space assets. This capability was amply demonstrated by the success of the anti-satellite test described earlier. China's resistance is further manifested in its proactive involvement in the Galileo Project, the European program aimed at developing a navigation satellite system that will not rely on the United States' GPS. As such, the project serves as an opportunity for China to deepen its ties with Europe while challenging US supremacy. Moreover, China is carrying out its own initiatives, such as the Beidou system mentioned earlier. It also appears to be enhancing its optical reconnaissance satellites and developing SAR reconnaissance satellites; these projects, if successfully realized, will allow China to dramatically improve its capabilities in space asset use and space-based information gathering.

b) U.S./China Relations: Previous unilateral military approaches to space have created tensions between the U.S. and China that will lead to aggressive responses and nuclear wars. The counterplan doesn't change U.S. approaches to China so it can't create new avenues for cooperation.

1AR Extension to 2AC #2: "Solvency Deficit – Counterplan Doesn't Solve Plan" - China Cooperation Aff

Extend our 2AC #2, the solvency deficit. The EU can't change US export laws or improve the US-China relationship and the Counterplan will hurt US leadership.

____And, European space agencies can't effectively distribute satellite technologies because of inherent cultural differences and political regulations.

SECARA AND BRUSTON, 2009
[Teodora and Jean, Eurisy (a European non-profit association of over 30 governmental space offices and space agencies, international organisations, research institutions, and private businesses involved or interested in space-related activities); "Current barriers and factors of success in the diffusion of satellite services in Europe," *Space Policy,* v. 25]

This results in overestimating and overspending efforts in technical demonstrations, neglecting non-technological factors that influence service adoption and missing the importance of social networks, both of which are key to satellite service diffusion. The actors who are currently making efforts to develop satellite services through technological demonstration projects - ESA, the EC and other governing and administrative bodies via investment in R&D - could contribute more substantially to satellite service diffusion if, acknowledging the limitations of the technology demonstrations in service diffusion, they concentrated on greater use of the effective tools they dispose of: policy, regulations, and financing mechanisms to stimulate the use of satellite services, rather than their production. However, government regulations are not the only drivers of change, and they cannot replace market mechanisms. The diffusion of innovation relies heavily on the existence of environments of shared culture and proximity, and on social networks. Creating such environments implies a grassroots approach, whereby actors who are closest to the user communities should play an essential part in diffusing the services. Among the actors identified above, value-added service providers are among the best situated stakeholders to bring innovative satellite services to the final users. Not only do they have a better grasp of the final user communities at a grassroots level, but they also share to a larger degree both "codified" and "tacit knowledge" with the final user [19]. Furthermore, their flexibility in integrating the satellite component with other, better-established technologies means that they can produce a "black box" service that is more compatible with final users' traditional working methods, and is thus more acceptable to them. A problem in the current state of affairs is that many value-added service providers, especially those closely linked to the space community (space industry subsidiaries for instance), still rely to a large extent on institutional funding of service development (ESA/EC) for their commercial survival. This is partly a result of the working culture of space technology companies, which have traditionally relied exclusively on long-term government-funded projects and have been less subject to market forces, competition, and the necessity to meet user needs in the short term. ESA, the EC and other government bodies should more clearly recognise the fact that their own efforts to diffuse satellite services via technology demonstration projects may weaken value-added service providers. Instead, they could better support these actors by stimulating market demand via regulations and financing mechanisms for the use (not only production) of satellite services, and via the users themselves.

2AC #2: "Solvency Deficit – Counterplan Doesn't Solve Plan" - Colonization Aff

____The Counterplan doesn't solve our Harms: Only NASA has tested transport technologies that can be effective in the short-term. This is critical to get us to other planets before a major disaster destroys Earth and causes total extinction.

____EU colonization missions will fail because they don't have the political will to sustain them financially.

BLAMONT, 2005
[Jacques, professor at University of Paris-VI, "International space exploration: Cooperative or competitive?" *Space Policy*; v. 21]

In the world outside the USA, the decision of any government to spend money on space programmes is motivated by societal factors, and not "to fulfil the public's sense of destiny" (W. Huntress). Let us quickly review the major players. Europe is engaged in the most extraordinary political endeavour of all times, the building of a community of 500 million people whose ancestors have fought bitterly among themselves over centuries and, in particular, during the previous century. Since 1990 the heavy burden of raising the standard of living of 17 million 'Easterners' has absorbed all the wealth of Germany. In 2004 10 new members, whose GNP is less than 40% of that of the other Europeans, have joined the Union; they require enormous investments and sacrifices to catch up. Here is the European challenge—at home, not on Mars.

____And, the impact for our solvency deficit is infinite: even a 1% difference in effectiveness has an incalculable advantage for the Aff.

BOSTRUM, 2003
[Nick, PhD from the London School of Economics, director of The Future of Humanity Institute at Oxford University; "Astronomical Waste: The Opportunity Cost of Delayed Technological Development," *Utilitas*, v.15, n. 3]

The expected utility of a 1% chance of realizing an astronomically large good could still be astronomical. But just how good would it be for (some substantial subset of) currently living people to get access to astronomical amounts of resources? The answer is not obvious. On the one hand, one might reflect that in today's world, the marginal utility for an individual of material resources declines quite rapidly once his basic needs have been met. Bill Gates' level of well-being does not seem to dramatically exceed that of many a person of much more modest means. On the other hand, advanced technologies of the sorts that would most likely be deployed by the time we could colonize the local supercluster may well provide new ways of converting resources into well-being. In particular, material resources could be used to greatly expand our mental capacities and to indefinitely prolong our subjective lifespan. And it is by no means clear that the marginal utility of extended healthspan and increased mental powers must be sharply declining above some level. If there is no such decline in marginal utility, we have to conclude that the expected utility to current individuals of successful colonization of our supercluster is astronomically great, and this conclusion holds even if one gives a fairly low probability to that outcome. A long shot it may be, but for an expected utility maximizer, the benefit of living for perhaps billions of subjective years with greatly expanded capacities under fantastically favorable conditions could more than make up for the remote prospects of success.

2AC #2: "Solvency Deficit – Counterplan Doesn't Solve Plan" - Missile Defense Aff

____The Counterplan doesn't solve our Harms: ballistic missile proliferation is inevitable, and this will lead to accidental or intentional war as rogue states launch nuclear weapons against the United States. The counterplan only establishes protection for the European Union, which leaves the United States vulnerable.

____Even if the counterplan creates an umbrella defense that protects the U.S. from direct attack, it still leaves the perception that the U.S. is unwilling to take military actions to defeat our enemies. The perception of weakness collapses U.S. leadership, which is the only way to prevent nuclear war.

2AC #2: "Solvency Deficit – Counterplan Doesn't Solve Plan" - Lunar Mining Aff

____The Counterplan doesn't solve our Harms: other countries will only follow a U.S. initiated property rights regime because the U.S. has the biggest global energy market. This gives lunar mining legitimacy, which is necessary for the perception of stability that will attract private investment. The impact is nuclear war as the economy crashes from high energy prices.

WASSER, 2011
[Alan, Chairman of The Space Settlement Institute and a former CEO of the National Space Society; "The Space Settlement Initiative," May, http://www.spacesettlement.org/#20]

The United States will probably be the first and most important market where land deeds will be sold to the public. In that case, it will be the U.S. courts that will rule on whether Lunar land sales are valid transactions or frauds. What this legislation does is tell the U.S. courts what standard to use in making that ruling. Further, it is not at all unusual for quite a few other nations to follow the U.S.'s lead on things like this. However, this legislation is most definitely not just for the benefit of Americans! Given today's global economy, it is almost certain that all entrants in the race to establish a settlement will be multi-national consortia. The investor/owners will be drawn from all around the world, as will the land buyers. Most particularly, the teams of aerospace companies cooperating to build the ships will be from many nations. It is just too big a job for one company, or even one nationality, to undertake alone.

____And, E.U. traditions value cosmopolitanism over individual rights, and this will destroy property rights on the Moon for U.S. companies.
SPACE REVIEW, 2009
[Taylor Dinerman, "The limits of space law," 8/03, http://www.thespacereview.com/article/1431/1]

In his new book, The Development of Outer Space: Sovereignty and Property Rights in International Space Law, Thomas Gangale makes the case that it is now settled international law that there can be no private property on the Moon or on other bodies, at least as private property is understood here on Earth. He makes the case that some sort of internationally recognized body, probably under UN control, will have to legitimate any commercial activity. He believes that there may be a way for private companies to harvest lunar resources without contravening the provisions of the Outer Space Ttreaty, but he cannot clearly define how this would work. His interpretation of the Outer Space Treaty is an unlimited claim of legal control and as such it contains the seeds of its own destruction. In US history we have a terrible example of a Supreme Court, in the Dred Scott decision, recognizing the legal legitimacy of chattel slavery. Gangale may have the law on his side, at least as far as the Outer Space Treaty is concerned, but then so did the slaveowners of the Old South. Gangale believes that the day of the nation-state is almost over and that some sort of new "transnational" form of shared sovereignty is merging. He quotes former ultra-leftist German Foreign Minister Joschka Fischer who approves of "the transfer of nation-state sovereign rights to supranational European institutions." He may be right, but there is no sign that such institutions will preserve individual rights any better than the old system. Indeed, to judge by the European Union, such institutions will seek to undermine individual rights such as freedom of speech and freedom to engage in lawful commerce whenever they find it convenient. Raison d'état has long trumped law in the EU, and no US or other private entity should expect fairness or equitable treatment from them or from any institution they control.

1AR Extension To 2AC #3: "Solvency Deficit – European Political Support/Funding"

Extend our 2AC #3, the solvency deficit which proves Europe doesn't have the political support and organization to do the affirmative plan successfully.

____EU space policy depends on funding from individual European governments, which don't have the political will to sustain financial commitments.

MADDERS AND THIEBALT, 2007
[Kevin, Interdisciplinary Centre for Space Studies, Catholic University; Walter, Systemics Network International; "Carpe diem: Europe must make a genuine space policy now," *Space Policy,* v. 23]

Historically low expectations at policy level among European Space Agency Member State constituencies. Often cited as a model of intergovernmental cooperation, European Space Agency was created in 1975 after a first 15 years of European space efforts marked by crises that demanded significant political engagement, notably via a ministerial European Space Conference. No stranger to crisis afterwards, ministerial engagement in European Space Agency nevertheless declined in level of seniority and regularity. The exception was the period 1985–89, when the main elements of a high-powered European Space Agency Long Term Plan (LTP) won approval at the highest level in key governments and set a clear vision for space R&D. New, big LTP programmes were able to pull a comprehensive and more or less coherent set of activities along with them, against a background of buoyant budgets and superpower competition in major new space infrastructures. When this world changed with the end of the Cold War and the costs of German reunification, a painful period of reduction of major programmes ensued in the 1990s and ambitions in many of European Space Agency's Member States returned to a modest level; space correspondingly moved back down the political scale, possibly to its lowest point ever in some countries. With space budgets cut to a level under current European Space Agency arrangements that is broadly sustainable fiscally to obtain anything more will probably require a fight to push space up the political scale again, with the professional, bureaucratic and political risks this will entail for those involved. This is a recipe for complacency.

____Without political and financial will from individual countries, European space policies will fail.

DE L'ESTRANGA AND DE MONTLUC, 2006
[F. Bujon, Chairman, Citigroup - Paris; B., Foreign Affairs (CAP), ; "Making space the key to security and defence capabilities in Europe: What needs to be done," *Space Policy,* v. 22]

A realistic space policy, building upon the emerging signs of dynamics, must be given practical effect by an effort to develop capabilities. The history of the past 20 years in Europe has shown that this should not be taken for granted. An effort of such a kind can be made only if it is backed by strong political will and budgetary support, in France as well as in the rest of Europe.

1AR Extension To 2AC #3: "Solvency Deficit – European Political Support/Funding"

____Political will - European countries won't contribute continued funding to get launches off the ground, and don't have the commercial capacity to develop necessary technology.

HENRY, ET AL, 2009
[Philippe Henry, Workgroup of the Strategy and International Affairs Committee of the French Aeronautics and Astronautics Association; "Europe's major challenge for the 21st century: Access to space," *Space Policy,* v. 25]

Contrary to the USA, which spends more than $20 billion per year on its military space programmes and thus provides its launchers with a large captive internal market, Ariane [French aerospace company that produces the European Space Agency's launchers and boosts 50% of the world's satellites into space] does not have this advantage and is unlikely to have it in the foreseeable future. Institutional operational payloads26 have represented 20% of the total put into orbit by the European launcher in the past 10 years. They were included in 25%27 of the launches that took place in the period and in half of the cases benefited from the presence of a commercial copassenger sharing the cost of operations. France has shown a willingness to increase its research and development effort in the field of military space applications but it has not yet been successful in convincing its European partners to follow its example.28 The budgetary pressure their governments are under will probably not encourage them to increase spending in the near future, spending that can only be justified by the perception of medium- or long-term threats. In reality, in the coming years, the institutional civil and military programmes will only provide the means to launch two Arianes per year, the average rate of Japanese launches, which have run into two problems: making Japan's launch systems reliable and reducing production costs. This is why its launch policy is in constant transformation. Japan's H2A "heavy-lift" launcher has not reached a cost level that would enable it to be competitive in the international market. This economic handicap comes in addition to a longer period to prove its reliability, which is an essential guarantee for customers who already have several established suppliers. It was the long and glorious history of the Russian Proton launchers, and even more so of Soyuz, which, along with the price offered by the Russians, was their main attractive feature when they appeared on the commercial market. The commercial ascent of Ariane, like that of its Russian competitors which started in the middle of the previous decade, can only be based on a pace that is maintained, supported by a market in which all the commercially accessible payloads can be taken on without unacceptable operational constraints and using the dual launches which achieve the technical and economic optimum conditions.

1AR Extension To 2AC #3: "Solvency Deficit – European Political Support/Funding"

____European space policy is dominated by distinct political identities who will battle over leadership and funding, leading to implementation bottlenecks.

HOERBER, 2009
[Thomas, Centre for European Integration, Ecole Supe´rieure des Sciences Commerciales d'Angers ; "ESA + EU: Ideology or pragmatic task sharing?," *Space Policy,* v. 25]

Peter Creola, writing as the then Head of the Swiss delegation to European Space Agency argues that on the part of EU "there would be a temptation to call into doubt the institutional independence of European Space Agency or to erode its technical and managerial capacity."11 However, he also sees the need for further consolidation and integration in the European space sector, which is by no means an easy task considering, for example, European defence issues in combination with the extra-European members of European Space Agency such as Canada.12 There is also the pressure of funding. The European Space Agency budget has been stagnating for many years and is about one-fifth of that of the USA. Despite this, Europe is the second space power on Earth but, in order to maintain this, Creola suggests that a doubling of the budgets may be necessary.13 There are clearly ambitious and worthwhile future projects, such as completion of the International Space Station, human space exploration or even a European base on the Moon, which might make such a move necessary.

____Market sustainability: European domestic industries are too small, can't invest enough, and face too much competition.

GAUBERT AND LEBEAU, 2009
[Alain, Former Secretary General, Eurospace ; Andre, Former CNES President; "Reforming European space governance," *Space Policy,* v. 25]

We can draw several lessons from this short description of the European space industry. First of all, the industry is fragile because it is quite small. The means necessary for research and development, which is an essential condition of its existence, are, clearly, limited by its capacity to invest. In this regard it seems scarcely to have exceeded the critical mass required for its existence. As a consequence, any decline in its market access (whether civil or military institutional activities or commercial market) endangers its ability to respond to requests from states or from its commercial clients. The second lesson is that it is wholly dependent on factors which are external to it. Moreover, it has no control over these factors. In fact, even though it can make recommendations on the quality and level of state expenditure in the space field, it cannot be involved in formulating and deciding upon this. It can only limit itself to demonstrating the contribution of space technology to a given application. This is especially noticeable in the defence field. The third lesson is that, today and for the foreseeable future, market forces are not strong enough to ensure the stability of the European space industry. It is faced with competition from North American companies - which receive a level of financing from the federal government roughly six times higher than that enjoyed by the Europeans - and from terrestrial technologies. Where the latter are concerned, it has been shown that they are in many cases no more effective, but the companies producing them are possessed of a powerful and well organised lobbying capability, especially in the corridors of the European Commission. Thus the continued existence of the European space industry cannot be taken for granted.

1AR Extension To 2AC #4: "Turn – Counterplan Hurts EU Soft Power"

Extend our 2AC #4, the turn that the Counterplan hurts the EU's world standing.

____E.U. credibility is high because of its non-military approach to solving global problems.

JAWARO, 2010
[Sofa, Former Gambian Army First Lieutenant and Doctoral Candidate of Global Studies with a focus on International Security at Rutgers University; "The European Union Soft Power," 5/27, http://sofawarrior.blog.com/2010/05/27/the-european-union-soft-power-the-law-%E2%80%93-enhances-democratic-participation-in-international-governance-%E2%80%93-a-call-to-action-for-mr-sana-bairo-sabally-part-i/]

In his book titled Why Europe will Run the 21st Century, Mark Leonard argued that The European Union (EU) is leading a revolutionary transformation of power that in just 50years has transformed a continent from total war to perpetual peace. Leonard noted that by building a network of power-that binds states together with a market, common institutions, and international law-rather than hierarchical nation-states, Europe is increasingly writing the rules of the 21st century. This scholarly characterization falls on Europe's right evolutionary trajectories. The premises of European Union's foundation is based on universal principles of liberty, democracy, respect for human rights, fundamental freedoms and the rule of law as an all encompassing tool guiding its operational procedures. These principles are common to the EU Member States respect for human rights features among the key objectives of the EU's common foreign and Security policy (CFSP). As a member state of the European Union, Germany – the residency of Gambian Human Rights Predator – Sana Bairo Sabally, has played a pivotal role in advancing EU norms and values over the years.

____EU civilian space initiatives will be used as cover for an expanding EU military role.

SLIJPER, 2008
[Frank, Dutch Campaign against Arms Trade and has been a researcher and campaigner on arms trade issues for over fifteen years; "From Venus to Mars," Nov, http://www.space4peace.org/eurospace/Venus%20to%20Mars%20EU%20Space%20Report.pdf]

The ambiguity of many western states towards the militarisation of space is clearly reflected within the European Union. While its members support UN initiatives to prevent an arms race in space, they have at the same time become increasingly dependent on satellite services for their military, leading to EU initiatives to develop common space assets and a drive towards a common European space policy. In December 2001, on the 40th anniversary of France's National Centre for Space Studies then-president Jacques Chirac warned his audience: "The United States spends six times more public money on the space sector than Europe. Failure to react would inevitably lead to our countries becoming first scientific and technological vassals, then industrial and economic vassals".53 In recent years the EU's interest in space policy has grown significantly. According to Brussels a driving force has been the enlargement of the Union, as well as the fact that the space sector would be a "strategic industrial sector for growth and employment". The Enterprise directorate that is responsible for Space Policy boasts furthermore of "space-based science and applications [that] play an important role in strengthening the competitiveness of the knowledge-based society in Europe".54 Increasingly, this interest widens from purely civilian applications towards space projects with both civilian and military purposes. Contrary to the US, where most space initiatives have a clear military label, within the EU the issue is still caught up in much secretiveness. Though EU military space policies have overcome some of their controversy, much of their acceptance is rooted in the emphasis that is put on human security or non-military aspects.

1AR Extension To 2AC #4: "Turn – Counterplan Hurts EU Soft Power"

____Increasing authority for European space initiatives necessarily increases European militarization.

SLIJPER, 2008
[Frank, Dutch Campaign against Arms Trade and has been a researcher and campaigner on arms trade issues for over fifteen years; "From Venus to Mars," Nov, http://www.space4peace.org/eurospace/Venus%20to%20Mars%20EU%20Space%20Report.pdf]

As we've seen in the previous two TNI papers on EU security and militarisation5, a warm relationship exists between industry and European Commission. The behind– closed-doors, business-dominated policy making processes only confirm what many people in Europe think about the expanding EU. Despite widespread discontent with the way Brussels operates, Eurocrats and industry take a 'business as usual' approach. Worse, these crucial developments go unnoticed for most people. The same is true for military-related developments in the area of the new European space policy that have so far received hardly any public attention, while developments over the past decade have been considerable. Again, mostly under the veil of 'security' and intelligence sharing, the emergence of a military role for the formerly purely civilian European Space Agency (ESA) follows a path towards military use, similar to what we've seen with the development of repressive policy tools. While still in its infancy, EU financed communication and spy satellites are slowly becoming reality, and in the long term the inclusion of space-based missile defence and other more offensive uses of space are real options for an increasing ambitious EU military space policy. French president Sarkozy has called the space agenda one of the top priorities during the EU presidency over the second half of 2008, as part of a broader aim to progressively frame common EU defence policy. "I very much hope that the French presidency of the European Union (…) will be the first step in a veritable relaunch of European defence for the coming years", Sarkozy said just before taking over the presidency.6 In November 2008 government ministers are scheduled to meet in the Netherlands to set multi-year programme objectives and budgets for the European Space Agency, which fulfils a key role in slowly incorporating space into Europe's rising military ambitions.

1AR Extension2AC #4: "Turn – Counterplan Hurts EU Soft Power"

____E.U. civil and military space programs are run jointly. Even if the counterplan isn't directly a military program, it will be taken over by military interests and viewed as one.

SLIJPER, 2009
[Frank, Campagne tegen Wapenhandel (Dutch Campaign against Arms Trade); "The EU should freeze its military ambitions in space," *Space Policy,* v. 25]

While still in their infancy, EU-ESA financed and operated navigation (Galileo) and Earth observation (Kopernikus/ GMES) satellites with tailor-made military functions are now becoming reality. Originally the main stated purpose of GMES was in the area of disaster prevention and protection of the environment. While there seems little reason to object to this, GMES has become a typical dual-use project with growing military dimensions. ESA's Stephen Briggs told an audience of NATO officials that GMES's relevance is based upon "increased use of military assets for complex situation responses" and an "increased global role of Europe and strong public support for CFSP"; "enhanced cooperation with US Defense Intelligence Agency" is high on the GMES agenda as well [13]. Contrary to general public understanding, from the beginning Galileo has been connected to military use, with its socalled Public Regulated Service (PRS), encrypted signals to be used by military and security users. PRS is one of the five different services that Galileo will offer. It is expected that half of all the users of the encrypted signal will be military customers, with the other half made up of law-enforcement agencies and emergency-response services, according to a recent survey by the European Commission [14]. However, in October 2006 European Commissioner Verheugen said "it was a national decision as to whether Galileo could be used for military purposes. This could not be made mandatory and there was no strategy within the Commission to have European military forces use such technology" [15]. If that is still the case the Commission and European Space Agency should urgently start thinking of such a strategy. Now that US GPS technology is increasingly being used to guide bombs and artillery munitions in Afghanistan and Iraq, Europe should come up with a policy on any such future use of Galileo. A third space project with military purposes under the auspices of European Space Agency is the sensitive space situational awareness (SSA) programme that was endorsed late in 2008. SSA received a major impetus after China's anti-satellite weapon test in 2007, both in Europe and the USA. More military-related European Space Agency initiatives are planned for the near future. Contrary to the situation in the USA, where there is a clear distinction between civil and military space programmes, European Space Agency and the EU are going in the opposite direction. The continuing integration of military functions into European Space Agency also raises questions about its future role as a partner in international science and exploration programmes. "This puts European Space Agency into the uncomfortable role of having to be a warfighting institution at the same time as a civil and scientific organisation", according to 1 Space Review columnist Taylor Dinerman [16].

1AR Extension2AC #4: "Turn – Counterplan Hurts EU Soft Power"

____The E.U. will use civilian space projects as cover for expanding military projects, but this will collapse E.U. credibility as a peacemaker.

SLIJPER, 2008
[Frank, Dutch Campaign against Arms Trade and has been a researcher and campaigner on arms trade issues for over fifteen years; "From Venus to Mars," Nov, http://www.space4peace.org/eurospace/Venus%20to%20Mars%20EU%20Space%20Report.pdf]

All this follows the familiar pattern that we have seen previously in the area of security research, where projects initially are very much presented as civil security initiatives, sometimes as dual or multiple purpose, whereas a closer look in many cases reveals a strong military component.72 As one industry expert some years ago baldly explained, the sensitive word 'military' was carefully replaced by 'security' to smoothen acceptance of their research agenda.73 As we shall see here, much the same mechanism is being used in the nascent European space policy. The dual-use terminology moreover allows for the incorporation of military projects under the banner of and financed by (civil) security projects. This silent inclusion of military aspects in dual-use programmes is a favoured route for the military at a time when – at least in Europe – it has to cope with decreasing budgets.74 As three Italians related to the Scienziate/i Responsabili (Responsible Scientists) association write in the journal Space Policy: Furthermore, it allows private and public funding of industrial space activity without a sharp separation of military and civilian use, now considered as a démodé cultural heritage out of step with economic (industrial) needs for a complete commercial and public synergy of investments. It remains less evident, however, how such industry characteristics might assure European 'sustainable growth' and 'quality of life'.,75 They further contend that a space arms race remains the main risk of dual-use developments, as they go against the promotion of confidence-building measures to prevent such an arms race. From the perspective that Europe is a peacemaker that should be trusted, this may sound paranoid. However, this argument is well illustrated in the western (military) press, which often criticises or at least mistrusts Chinese dual-use space developments as being a cover for (offensive) military intentions in space.76 The concerned Italians warn that "a European 'dual-use race' may be a complete loss of civilian scientific leadership in space research activities – with dual-use industries gaining increasing power as they link up with military institutions".77 Also, they show that while dual-use suggests some kind of balance, in the case of the Italian CosmoSkyMed space programme – which started as a fully civilian mission - the military has access to all civilian data, while "data specifically produced by military missions may eventually be passed to civil users only after being degraded".78

1AR Extension2AC #4: "Turn – Counterplan Hurts EU Soft Power"

____Sneaking militarization into general space policy will collapse support for E.U. leadership.

SLIJPER, 2008
[Frank, Dutch Campaign against Arms Trade and has been a researcher and campaigner on arms trade issues for over fifteen years; "From Venus to Mars," Nov, http://www.space4peace.org/eurospace/Venus%20to%20Mars%20EU%20Space%20Report.pdf]

The emergence of European initiatives to make common use of military roles of space assets is part of a broader drive to make EU a military powerhouse. Though three national referenda (in France, the Netherlands and Ireland) may have impeded this drive, the creeping militarisation of European space policies is likely to continue. While Europe still takes a backseat in the growing international rivalry in space, it should use its position to enhance and push negotiations, especially within the United Nations, to consolidate and reinforce the Outer Space Treaty and to prevent any arms race in space from further escalation. As space assets are increasingly being used for both purposes, it gets harder to distinguish between civilian and military use of space. Worse, in Europe the still dominant civilian – commercial or scientific - use is becoming overshadowed by recent initiatives to involve the military in Europe's space policies and activities, as is the case with for example the European Space Agency and the GMES project. This involvement often means taking crucial control. Thus Europe is now pushing for military prominence in space, and therefore part of the growing risk of an arms race in space. Similarly, Galileo risks becoming the navigation system for European intervention wars – apart from imagery and information relay also including potential missile/ artillery guidance. Again while Galileo is generally presented as a genuinely civilian programme, it now appears to be highly militarised. Both business and the military are major driving forces behind these developments. The danger is real that military and industrial push factors take the lead over more genuine undisputed needs to develop (shared) civilian satellite capabilities. Therefore the EU should come clean on its military intentions and stop using the smokescreen of 'security' labelling of projects that have clearly identified military interests and goals. As is symptomatic in the area of defence issues, many developments take shape in an atmosphere of meetings and discussions with inner-circle stakeholders who have a direct interest in these developments taking place: Eurocrats, industry representatives and military leaders. However there is very little concern on the involvement of the wider general public, or critical informed civil society. This tendency erodes general public support for military affairs, and undermines the credibility of the EU itself.

Critical Astropolitics Kritik – Table of Contents

Background Notes: Critical Astropolitics Kritik

Geopolitics: Geopolitics is a way of thinking about the world that revolves around nations and boundaries. Just like "politics" is concerned with gaining influence in order to get what you want achieved in the government, geopolitics looks at the way nations use their territory and power to build up influence and shape global events.

Colonialism: Colonies are regions or groups of people that a country controls, but aren't technically in their area of direct influence. For example, England had colonies that eventually became the United States; they were under English control, but were across an ocean. Colonialism usually refers to a group of people being controlled by a government (it can also be non-governmental) that is not their own. It is usually an oppressive relationship because the government is imposing its own cultural or political ideas onto the colonized group without their consent.

Veil of Ignorance: Philosopher John Rawls wanted to establish a system for organizing justice and rights at the beginning of a society, and decided that the only fair way to distribute things was to begin from a standpoint of knowing nothing about your background. If you didn't know whether you were rich or poor, you would probably choose to guarantee rights for everyone just in case you happened to be poor. This thought experiment has been applied to many other philosophical questions; it is called a "Veil of Ignorance" because you are supposed to pretend that there is a veil over you that prevents you from seeing the world around you, and make decisions based on the possibility that you will be starting from the worst possible place.

Critical Astropolitics Kritik 1NC (1/5)

A) Thesis: Space policy offers humanity the chance to start over and erase all the boundaries that create violence by taking a slow, thought out approach. By rushing to act before asking critical questions, the Affirmative recreates the problems of colonialism.

LIN, 2006
[Patrick, The Nanoethics Group, "Viewpoint: Look Before Taking Another Leap for Mankind—Ethical and Social Considerations in Rebuilding Society in Space" *Astropolitics,* v.4 n.3]

Going back a few centuries to colonial America, our history lessons seemed to have glossed over the fierce ethical debate that had surrounded English colonialism, which focused on the moral permissibility of settling on lands already occupied by the indigenous people of America or Amerindians. It was not at all obvious that colonialism was an unproblematic practice, and in fact, it seemed to be such an intractable and important ethical dilemma that it inspired some of the most notable thinking in political philosophy. For instance, John Locke's influential Second Treatise of Government, which explained the origins of private property and civil government, is now believed to be a defense of English colonialism, establishing a legitimate mechanism to claim property in lands that are already occupied, though not "owned" by Amerindians as they were believed to be nomadic and only wandered across the land rather than have ownership in it.1 The difference between colonialism and space exploration, of course, is that we do not run immediately into the problem of displacing or interfering with pre-existing inhabitants of whatever space bodies we explore next, since no such "alien" life-form has yet to be established. And given Fermi's Paradox, this may be a problem we need not tackle in the near future. Rather, the point here is if we are taking another giant leap into the space frontier, our position is not too different from that of colonialists, as we have the unique opportunity to start a new world, but in doing so, there may be important ethical and social issues we should consider first. Our last "New World" proved to hold many conflicts and challenges—from territorial disputes with other nations to the chaos of the Wild West to current population-related issues—that may similarly arise in the context of space exploration. But now, we have the benefit of hindsight and another unique opportunity to identify and defuse those potential landmines before we step on them. It has not been easy getting from a loose collection of American colonies to where we are now, and we might expect similar trials on our road to space settlements as well. Other relevant lessons from history may include our recent development of cyberspace, or the Internet frontier. Without planning ahead for related intellectual property issues as well as online sales tax, Internet crimes, and other areas, the rush into cyberspace has been messy at best. Domain names represent a frenzied and frustrating land-grab of sorts that go to the first person to claim it, rather than to the most deserving person or organization with an established interest or trademark associated with the name, notwithstanding legal action against domain-name "squatters." The usual free-market principles do not even apply here. If they had, domain names might have been auctioned off to the highest bidder. So it is unclear what our guiding philosophy or strategy is in developing cyberspace, and the absence of an overarching strategy is

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Critical Astropolitics Kritik 1NC (2/5)

[The Lin evidence continues, with no text deleted…]

a likely contributor to our current problems in the Internet Age. We might also draw an analogy between developing outer space to, say, developing Antarctica. If that frozen land were to somehow become available for commercial exploration and settlements, what kind of social planning and ethical considerations would we discuss then, and are we applying the same forethought to space development, and if not, why not? We would not rush to develop the South Pole without a well-thought plan, so the same reasonable precaution would seem to apply to settling space. To be sure, much has already been said about certain issues in space ethics, which we will quickly survey in the next section, but there are also new "big picture" worries that have not received much or any attention. Addressing these issues would at least give the public more confidence that governments, scientists, and astronauts are thinking ahead in our collective interests, rather than barreling forward with little regard or public discussion of important consequences. To illustrate, the area of biotechnology created an entirely new discipline of bioethics, and what seems to be occurring now to an extent with nanotechnology are a number of controversies surrounding environmental, health, and safety risks, and more distant concerns related to privacy, human enhancement, global security, and other areas.

B) Link: The assumption that the U.S. should be the primary agent of space policy is imperialist. Even if the plan is a "good idea," it begins from the perspective that current U.S. geopolitical framework is the correct one, and this is indistinct from how Europe colonized the world.

DUVALL AND HAVERCROFT, 2009
[Raymond, coedited *Power and Global Governance;* Jonathan, SDF Postdoctoral Research Fellow at the Centre of International Relations, University of British Columbia; *Securing Outer Space,* ed. Natalie Bormann and Michael Sheehan, p. 46-47]

However, even if the U.S. government is popularly responsive in its foreign policy – a debatable proposition – the implication of Dolman's astropolitik is that the U.S. would exercise benign control over orbital space, and, from that position, potentially all territory on Earth and hence all people, by being responsible to its 300 million citizens. As such, this benign hegemony would in effect be an apartheid regime where 95 percent of the world would be excluded from participating in the decision-making of the hegemonic power that controls conditions of their existence. This, too, is a hallmark of empire, not of a competitive system of sovereign states. Third, Dolman's astropolitik treats space as a resource to be mastered and exploited by humans, a Terra Nulius, or empty territory, to be colonized and reinterpreted for the interests of the colonizer. This way of looking at space is similar to the totalizing gaze of earlier geopolitical theorists who viewed the whole world as an object to be dominated and controlled by European powers, who understood themselves to be beneficently, or, at worst, benignly, civilizing in their control of territories and populations (Ó Tuathail 1996: 24–35). This assumption, like the first two, thus also implicates a hallmark of the logic of empire, namely what Ó Tuathail (1996) calls the 'geopolitical gaze' (about which we have more to say below), which works comfortably in tandem with a self-understanding of benign hegemony. When these three assumptions are examined in conjunction, Dolman's astropolitik reveals itself to be a blueprint for a U.S. empire that uses the capacities of space-based weapons to exercise hegemony over the Earth and to grant access to the economic resources of space only to U.S. (capitalist) interests and their allies.

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Critical Astropolitics Kritik 1NC (3/5)

[The Duvall and Havercroft evidence continues, with no text deleted…]

This version of astropolitics, which is precisely the strategic vision underlying the policy pronouncements of the National Security Space Management and Organization Commission (Commission 2001) – and subsequently President George W. Bush – with which we began this chapter, is a kind of spatial, or geopolitical, power within the context of U.S. imperial relations of planetary scope. Its ostensive realist foundations are muted, except as a rather extreme form of offensive realism, because the vision is not one of great power competition and strategic balancing, but rather one of imperial control through hegemony. As such, it brings into question the constitution of sovereignty, since empire and sovereignty are fundamentally opposed constitutive principles of the structure of the international system – the subjects of empire are not sovereign. Thus, if astropolitics is to be in the form of Dolman's astropolitik (and current U.S. policy aspirations), the future of sovereignty is in question, despite his efforts to position the theory as an expression of the realist assumption of great power competition. In later sections of this chapter, we attempt to show what this bringing sovereignty into question is likely to mean, conceptually and in practice. Before turning to that principal concern, however, we consider an alternative geopolitical theory of astropolitics.

C) Implication: Creating space as a region to be dominated by United States power makes all of us soldiers in a perpetual war: every vague enemy must be destroyed, and we must always strike first.

ORR, 2004
[Jackie, Department of Sociology, Syracuse University; "The Militarization of Inner Space," *Critical Sociology,* v.30]

The Bush administration's first National Security Strategy document, published in September 2002, offers the inquiring civilian-soldier some indication of the full scope of the battle plans. Twelve months after launching its boundless war against terrorism, the administration introduced its new doctrine of preemptive strikes, unilaterally pursued, against perceived threats. National security now depends, the civilian-soldier learns, on "identifying and destroying the threat before it reaches our borders. . . [W]e will not hesitate to act alone, if necessary, to exercise our right of self-defense by acting preemptively." 6 Released just as the Bush administration stepped up its rhetorical and operational preparations for a military invasion and occupation of Iraq, the document leads even mainstream media commentators to note, with measured alarm, its imperial posture. An editorial published in The Atlanta Journal-Constitution a week after the document is made public describes it as a "plan for permanent U.S. military and economic domination of every region on the globe." The editorial warns: "This war [against Iraq], should it come, is intended to mark the official emergence of the United States as a full-fledged global empire, seizing sole responsibility and authority as planetary policemen." 7 If the militarization of outer space is an essential component of Full Spectrum Dominance, and if the so-called 'war against terrorism' must be situated within broader U.S. ambitions for global empire, 8 it is perhaps useful for today's civilian-soldier to wonder just how wide and deep is a "full spectrum" of dominance? What borders must be crossed to fully dominate such an infinity of space? Perhaps the domination of outer space in the interests of militarized technologies and intelligence requires the militarization of a somewhat more covert spatial territory – a territory more spectral, less smoothly operationalized but no less necessary to global dominion. What

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Critical Astropolitics Kritik 1NC (4/5)

[The Orr evidence continues, with no text deleted…]

happens in that elusive terrain of 'inner space' as outer space becomes an overt field for fully militarized command posts? Is the 'inner' psychic terrain of today's U.S. civilian-soldier another battlefield on the way to full spectrum dominance of the globe? What kind of militarized infrastructure is needed 'inside' the soldierly civilian called upon to support the establishment of military superiority across the spectrum of spaces 'outside'? To what extent might Full Spectrum Dominance depend intimately on commanding 'space power' in both outer and inner space? The psychology of the civilian-soldier, the networks of everyday emotional and perceptual relations, constitute an 'inner space' that is today, I suggest, one volatile site of attempted military occupation. But the occupying forces I'm concerned with here are not those of an invasive, enemy 'other.' Rather, a partial and urgent history of attempts by the U.S. government, media, military, and academy to enlist the psychological life of U.S. citizens as a military asset – this is the embodied story that occupies me here. The militarization of inner space, a complex, discontinuous story that nowhere crystallizes into the clear knot of conspiracy but which leaves its uneven traces throughout the scattered archives of the 20th century United States, is now as it has been before a major concern of those most responsible for the business of war. Militarization, defined by historian Michael Geyer as "the contradictory and tense social process in which civil society organizes itself for the production of violence," constitutes at its core a border-crossing between military and civilian institutions, activities and aims (1989: 79). The militarization of inner space can be conceived, then, as the psychological organization of civil society for the production of violence, an important feature of a broader – tense and contradictory – social process. It is not my intention to reify 'psychology' or psychological processes as if they could be separated from social, historical, or economic contexts. Quite the contrary. By naming the constructed 'inner space' of psychological activities as increasingly militarized – with the events of September 11 serving as an accelerator and intensifier of processes that are by no means new – my hope is to deepen a critical sociological commitment to contesting the 'space' of psychology as the radically social matter of political struggle, as one radically material weapon of war. Or its refusal. While I refer to this psychological space as 'inner,' it of course is not irreducibly individual, and is never confined to a neat interiority. Inner space both produces and is produced by deeply social ways of seeing, profoundly cultural technologies of perception. And though I want to reject any notion of a homogeneous collective psyche, I do want to conjure the dense sociality and historicity of psychology spaces. Psychological life occupies a difficult borderland, a 'between-space' where the question and human confusions of what is 'inner' and 'outer' are repetitiously experienced, and consciously and unconsciously lived. Indeed, the space of psychology is the very site where everyday sensations of what's 'inside' and what's 'outside,' what's 'them' and what's 'us,' what feels safe and what seems fatally frightening are culturally (re)produced or resisted; it is an intensely border-conscious space. The politics of borders – how they're made and unmade, what they come to mean – is one shifting center of the politics of nationalism, of language, of memory, of race, gender, class, of terror. What has come in the modern West to be called the 'psychological' plays a dramatic, power-charged role within each of these entangled political fields. The militarization of psychological space can be imagined then as a strategic set of psychological border operation

Critical Astropolitics Kritik 1NC (5/5)

D) Alternative: Before beginning space development, we should stop and adopt the Veil of Ignorance in order to address the ethical questions about how we relate to space. Pushing forward without pausing will recreate all the problems of Earth and cause new catastrophes.

LIN, 2006
[Patrick, The Nanoethics Group, "Viewpoint: Look Before Taking Another Leap for Mankind—Ethical and Social Considerations in Rebuilding Society in Space" *Astropolitics,* v.4 n.3]

If space development is just on our horizon, there looks to be enough questions to require forethought and advance planning related to the social, political, and economic landscape of space living, in addition to the usual near-term issues in space ethics. If this is our chance for a fresh start, then we should be deliberate and careful with our actions, thinking through as many of the unintended consequences as possible. We already have centuries of philosophical, political, and economic theories in our stockpile; now is the time evaluate them once again, and finally turn theory into action. One reasonable starting point would be to consider space development through political thinker John Rawls' Original Position in which we formulate policy under a "veil of ignorance" or pretend that we do not know any facts about ourselves, including who we are, what economic class we belong to, what nationality we are, and so on.7 With our personal identity stripped away, the rules we set up would be fair, since we know that any biases we build in, such as rules that disadvantage minorities, religions, economic classes, or others, may backfire and disadvantage ourselves, if we turn out to be a member of those groups. Under Rawls' veil of ignorance, you may be just as likely to be a poor farmer in the heartland of America, or a Buddhist in Japan, or a wealthy businessman in Germany, or an AIDS patient in South Africa, or an amputee in Iraq. Applying the veil of ignorance to rules in space helps ensure that the processes we set up are fair and consider the interests of all people, including protecting the worst-off people from an even worse and uncaring fate. What we probably do not want to happen is to rush into orbit and the settlement of space without a "big picture" strategy that would allow individuals, corporations, or governments to makeup a plan as they go along, whether it is to camp on, erect billboards on, or lay claim to other planets, untethered by orderly processes and safeguards. Had we given that kind of forethought to administering the Internet, we might not have had cyber-squatters camping out on domain names, disgruntled teens writing virus programs that exploit gaps in the technology, unscrupulous companies clogging our e-mail in-boxes with spam, or any number of issues related to intellectual property, privacy, security, and other key areas. History gives us plenty of other examples where we have introduced new technologies or crossed barriers without giving forethought to our actions, which then caused problems that we could have avoided. We do not even need to look at the most obvious cases, such as splitting the atom. The automobile enabled us to more easily and quickly travel greater distances, but it also created pollution, urban sprawl, pressure on natural resources, and other problems—things we could have addressed much earlier. Nanotechnology, as another example, promises to give us great benefits, but it also holds great potential for misuse and raises ethical questions related to health, privacy, human enhancement, military, economics, and more.

2NC/1NR Extensions: Answers To 2AC #1: "Alternative Doesn't Solve Case"

They say our kritik alternative doesn't solve the case harms, but…

____They can't win uniqueness for their advantages. Extend the 1NC ORR 2004 evidence, going to space with the same assumptions we carry on Earth will only recreate the Harms they are attempting to Solve. All their evidence presumes that the United States has the capacity to benignly govern in space, but history has proven that imperial governments always fail.

____Traditional space policy ignores critical alternative approaches that are necessary for successful policy implementation.

PASS, 2006
[Jim, Astrosociology.com and Long Beach City College, "Astrosociology as the Missing Perspective" *Astropolitics,* v.4 n.1]

While I originally set out to develop astrosociology as a new sociological subdiscipline, it became clear almost from the beginning that the absence of this perspective applied to the other social sciences and affected the space community. A great schism exists between sociology and the space community, and to a somewhat lesser extent regarding the other social sciences, with extensive consequences as Marilyn Dudley-Rowley comments below. Aerospace scientists and engineers who advocate for inclusion of the social sciences in their work have been tarred as being something less than team players. Social scientists who could bring applicable insights to the aerospace industry were shown the door, and thought of being a little weird within their own disciplines.1 Such a level of separation places limits on progress for aerospace and the space sciences due to the inability to share important ideas from the social sciences. The natural sciences by far enjoy the greatest attention by the National Aeronautics and Space Administration (NASA), for example, while the social sciences largely find themselves locked out. Relevant research findings and theoretical concepts of social scientists rarely receive proper attention from the space community as things currently stand. As such, the development of astrosociology quickly became a two-pronged strategy applicable to sociology and every other relevant field. Further, the need to study space from a social scientific perspective is not recognized by those in the social sciences at the macro level. Nevertheless, the need to develop astrosociology remains an imperative as we move into space, due to the increasingly complex nature of human groups and future societies in isolated conditions without the security blanket of Earth-based rescue or timely assistance in problem solving.

2NC/1NR Extensions: Answers To 2AC #2: "Permutation – Do Both" (1/4)

They say to permute to do both the plan and the kritik, but…

____ The permutation is impossible. Extend the 1NC LIN 2006 evidence; we have to begin from the Veil of Ignorance regarding space in order to create a just society because the 1AC's assumptions guarantee that the plan will be implemented in order to increase United States power and destroy everyone that disagrees. You can't start from a position of questioning and also know what the answer is, so you should reject the Permutation.

___Our links are specific and the Permutation doesn't solve them.

[Insert Plan-specific links here]

____Relying initially on a state-centric notion of sovereignty means every approach to space will be short-sighted and ignore alternatives.

STUART, 2009
[Jill, PhD from London School of Economics, *Securing Outer Space,* ed. Natalie Bormann and Michael Sheehan, p. 163-164]

However the conservatism of the approach is also in some ways a weakness. By not critiquing the original concept of sovereignty in relation to the state itself, but merely seeking to explain how it is adjusted for transnational issues, regime theory potentially presents an ahistorical and overly static picture of sovereignty. By taking the states-system as it is, regime theory potential ignores more radically different forms of order that have preceded Westphalian sovereignty, and short-sightedly misses how the system may be fundamentally transformed in the future. Medieval methods of governance are one obvious historical example of non-Westphalian practices of sovereignty. In medieval systems, territory and sovereignty were not mutually exclusive (Ruggie 1993: 150), and overlapping systems of governance regulated physical spaces. Another example of pre-Westphalian notions of sovereignty is sovereignty based on patterns of migration, whereby systems of rule need not be territorially fixed, but based on nomadic movement over different pasturelands for livestock.7 Such examples from the past remind us that Westphalian sovereignty is only one approach to the relationship between sovereignty, territory and the state. In continuing to use the language of Westphalian sovereignty, regime theory manages to explain actor preferences, negotiations and outcomes, but provides little insight into the bigger picture of the shifting nature of the relationship between sovereignty and territory conceptually and in practice. Regime theory focuses on a discussion of the negotiations behind regime formation, when in fact the underlying processes may be far more significant and indicate the possibility of fundamental discontinuity in the system of states. By accepting a relatively superficial "re-packaging" of sovereignty within the existing discourse, we are perhaps not making a significant enough break from Westphalian sovereignty, particularly when it comes to the unique area of outer space and outer space politics. The next approach explores the ways in which sovereignty may be more radically reconceived, and also how outer space may be part of the feedback loop that is causing that reconceptualization.

2NC/1NR Extensions: Answers To To 2AC #2: "Permutation – Do Both" (2/4)

____Society is pushing for space technology faster than it can understand the human perspectives. Starting from a purely astropolitical standpoint like the alternative is necessary now to prevent catastrophe.

PASS, 2006
[Jim, Astrosociology.com and Long Beach City College, "Astrosociology as the Missing Perspective" *Astropolitics,* v.4 n.1]

A spacefaring society involves much greater levels of complexity and integration of space exploration and exploitation into its major institutions. Its technologies are vastly more sophisticated than our own, but so is its social complexity. We are nowhere near this reality and, in fact, find ourselves at the other end of the continuum as a space-capable society. Astrosociology can contribute to futures studies by further developing this continuum through specifying various points along it starting from a grounded point, perhaps ancient astronomical societies, to a spacefaring point. Space-incapable societies also deserve attention, because we can learn much by seeking a greater understanding about how and why societies become space capable. Although we find ourselves nearly fifty years into the space age, the present provides us with a good point to begin serious consideration of these issues. The more quickly we understand astrosocial phenomena and their significance to our societies at the present time, the better we can plan for humanity's future in space. Social change contributing toward the transformation of existing social systems into spacefaring societies will inevitably involve astrosocial phenomena. Hence, it behooves us to determine which of these phenomena actually contribute to such change and potentially place us on the track toward a spacefaring future. Until now, this type of determination from an astrosociological perspective did not exist. Astrosociology can eliminate this "blind spot" in the sociological perspective. Social and behavioral scientists who join the field of astrosociology from other perspectives can further add their insights, resulting in an even more comprehensive understanding of all the issues related to astrosocial phenomena.

____The plan's rush to act in space imposes the current self-interested mindset in space. Ordering is important: we need the alternative first in order to change the way humans view space.

STUART, 2009
[Jill, PhD from London School of Economics, *Securing Outer Space,* ed. Natalie Bormann and Michael Sheehan, p. 163-164]

How much individual humans benefit from outer space programmes is both arguable and also as yet unclear, and will depend to a degree on exogenous and internal factors that will continue to shape the development and impact of outer space politics. The development of cosmopolitan sovereignty requires a major cognitive shift in the hearts and minds of humans, and the internalization of those shifts in social norms and principles. That shift could be grossly undermined in the future by increased weaponization of outer space, or if, for example, mining of resources becomes distributed to individual countries. On the other hand, future developments could serve to reinforce a cosmopolitan shift. A potential asteroidal collision, a drastic deterioration of the Earth's environment (even more than the present situation), or contact from extraterrestrials could require widespread and immediate cooperation, and further impress on humans our common collective fate. Such issues would require a practical movement towards global solutions (and perhaps greater global governance), which in turn would be based on cosmopolitan principles rooted in humanity.

2NC/1NR Extensions: Answers To To 2AC #2: "Permutation – Do Both" (3/4)

____The 1AC adopted a framework of state-centered politics, and this distorts every action they take towards space afterwards. The alternative becomes an ignored afterthought in their permutation, and they can't access any of our worldview solvency.

STUART, 2009
[Jill, PhD from London School of Economics, *Securing Outer Space,* ed. Natalie Bormann and Michael Sheehan, p. 163-164]

Regime theory and cosmopolitan sovereignty provide useful theoretical frameworks for unbundling the relationship between sovereignty, territory and the state in outer space politics. As emphasized above, and by way of summary, regime theory provides useful tools for explaining the negotiations and preference formations that lead to cooperative regimes, which creatively de-link sovereignty and territory. However its rationalist approach to actor behaviour overlooks deeper social and constructivist forces that may be influencing outer space politics. And its conservative approach to the states system causes shortsightedness in appreciating other forms of governance and the organization of political space that have preceded the Westphalian system, and (especially in the context of outer space) fundamental changes to the system that may come in the future. Cosmopolitan sovereignty usefully embraces the normative and teleological dynamics of outer space politics, and offers an alternative reading of outer space law. In accepting that classical sovereignty exists in the system, but that it may be at play with liberal and cosmopolitan forms of sovereignty too, the approach opens up new interpretations of outer space politics in the present, but also offers clear visions for potential developments in the future. The constructivist dynamic of the approach also allows us to see how outer space may not only be subject to, but also constitutive of, cosmopolitan shifts in the collective human episteme. In regards to the study of sovereignty, territory and the state in outer space politics, I draw three broad conclusions based on the above analysis. First, it is obvious that Westphalian sovereignty as a concept is inadequate for analysing outer space politics. The concept does not provide a language through which to understand spaces outside of the traditional territorial state. The concept is as inflexible as the boundaries it prescribes for states, and alternative approaches must continue to be developed to unbundle the concept itself. As exemplified by the two approaches taken in this chapter, theoretical approaches that go beyond Westphalian sovereignty can serve to de-link sovereignty, territory and the state from each other in various forms. Second, I conclude that theoretical conceptions such as sovereignty precede the meaning with which we infuse outer space politics, and conversely that outer space exploration is causing cognitive shifts that lead to changes in our key theoretical concepts. The different visions of outer space politics that the two theoretical approaches give exemplify how our conceptual frameworks precede our interpretation of events occurring in outer space – that is, analysis of outer space politics is in part dependent on our conceptual frameworks and worldviews developed in regards to wider world politics. Yet I also argue that the unique opportunities and events that outer space makes available to humans, and the unconventional political, legal and cognitive developments those opportunities and events inspire, is also influencing political practice and conceptualizations in wider politics. Thinking about outer space governance can partly be understood in the context of globalization, as one of many contemporary developments that challenge the role of the state and our perception of community. However outer space can

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2NC/1NR Extensions: Answers To To 2AC #2: "Permutation – Do Both" (4/4)

[The Stuart evidence continues, with no text deleted…]

also be seen as a new area that is also reinforcing changes in that perception, by providing imagery of the planet as a whole, by providing humans with information about the status of the Earth environment, and by "shrinking" the planet through technological developments such as satellite communications. While the governance of other global commons such as the high seas have challenged the conceptualization of traditional sovereignty before, this chapter shows how outer space re-introduces with some urgency those challenges, and provides new angles to that challenge. In line with the previous conclusion, and as emphasized at earlier points in the chapter, my third conclusion is that exogenous events and human-driven developments in outer space will continue to influence our understanding of sovereignty, both in space and in wider world politics, in the future. A major exogenous event or technological development could significantly change outer space politics, and indeed something like an asteroid would then also influence world politics more broadly conceived. However, barring such a major event, the relationship between sovereign practice in outer space and our understanding of that sovereignty are likely to continually and dialectically re-constitute each other, as outer space continues to pose unique governance and conceptual challenges. Power political trends, such as indicated by George W. Bush's space control policy, could in fact reinforce realpolitik, although likely still in the context of increased globalization and diversification of actors in world politics. Or (and particularly in the longer term) outer space may continue to reinforce liberal and cosmopolitan trends that more explicitly undermine Westphalian sovereignty.

2NC/1NR Extensions: Answers To 2AC #3: "Link Turn – Humans Will Cooperate in Space" (1/2)

Their link turn says that going to space will increase human cooperation, but…

____Only the Alternative causes the mindset shift necessary to create cooperation in space. Extend the 1NC LIN 2006 evidence; starting from a Veil of Ignorance means we take everyone's perspective into account, which makes violence impossible. The Affirmative assumes that everyone should be exactly the same and American, which makes violence against the Other inevitable.

____Securitized space policy leads to behavior normalization by convincing us all that being watched is normal. This creates a military lifestyle of rigid rules and social laws.

MACDONALD, 2007
[Fraser, Lecturer in Human Geography, School of Anthropology, Geography & Environmental Studies University of Melbourne; "Anti-Astropolitik: outer space and the orbit of geography," *Progress in Human Geography,* v.31, n. 5]

In this way, the gadgetry of space-enabled espionage is being woven into interpersonal as well as interstate and citizen–state relations. If the movements of a car can be tracked by a jealous boyfriend, they can also be tracked by the state for the purposes of taxation: this is surely the future of road tolls in the UK. A British insurance company is already using satellite technology to cut the premiums for young drivers if they stay off the roads between 11pm and 6am, when most accidents occur. Information about the time, duration and route of every single journey made by the driver is recorded and sent back to the company (Bachelor, 2006). The success of geo-technologies will lie in these ordinary reconfigurations of life such as tracking parcels, locating stolen cars, transport guidance or assisting the navigation of the visually-impaired. Some might argue, however, that their impact will be more subtle still. For instance, Nigel Thrift locates the power of new forms of positioning in precognitive sociality and 'prereflexive practice', that is to say in 'various kinds of culturally inculcated corporeal automatisms' (Thrift, 2004b: 175). In other words, these sociotechnical changes may become so incorporated into our unconscious such that we simply cease to think about our position. Getting lost may become difficult (Thrift, 2004b: 188). Perhaps we are not at that stage yet. But one can easily envisage GPS technologies enhancing existing inequalities in the very near future, such as the device that will warn the cautious urban walker that they are entering a 'bad neighbourhood'. In keeping with the logic of the panopticon, this is less 'Big Brother' than an army of little brothers: the social life of the new space age is already beginning to look quite different. And it is to this incipient militarization of everyday life that the emerging literature on 'military geographies' (Woodward, 2004; 2005) must surely turn its attention.

2NC/1NR Extensions: Answers To 2AC #3: "Link Turn – Humans Will Cooperate in Space" (2/2)

____Endless violence is only possible when individuals like us begin to think there is no alternative to U.S. dominance of space.

ORR, 2004
[Jackie, Department of Sociology, Syracuse University; "The Militarization of Inner Space," *Critical Sociology,* v.30]

"Every American is a soldier" – a declaration of psychic and social fortitude announced in the absent shadow of two pillars of world trade, near the cold ashes of the nerve center of U.S. military planning and power. The militarization of inner space that such a proclamation incites and enforces is part of a history of imaginary and real constructions of the ideal U.S. civilian-soldier. Full Spectrum Dominance and its ambition to link a hegemonic multi-dimensional U.S. military superiority with a global economic reach, can only be built within the psychological space of a population that produces the violence demanded by such a blind, visionary conjuring of the future. The so-called 'war against terrorism' takes its place within a historical theater of cultural wars over de/militarized psychic zones.

2NC/1NR Extensions: Answers To 2AC #4: "Link Turn – Nations Will Cooperate in Space" (1/2)

Their link turn says that nations will cooperate in space, but…

____Expanding security rhetoric in space to non-military issues justifies weaponizing and putting military solutions in space.

PEOPLES, 2010
[Columba, School of Sociology, Politics and International Studies, University of Bristol; "The growing 'securitization' of outer space," *Space Policy,* v.26]

Attempts at securitization are thus a rapidly growing feature of contemporary space policy discourse. Merely making this observation, however, leaves aside the question of whether such securitizing moves should be encouraged or avoided by policy makers and analysts. On the one hand, the idea of space as a key part of the 'connective tissue' that binds global security might seem an attractive proposition to those seeking to shift the emphasis away from militaristic national concerns. In this light, attempts to securitize environmental monitoring, critical infrastructure and economic prosperity under the rubric of space security might be welcomed as the basis for a more multilateral, cooperative global approach. On the other hand, there is a legitimate concern that the securitization of space policy effectively acts as a Trojan horse for the expansion of national-military interests. One previous viewpoint contributor contends in relation to EU space policy that '.Europe's "security research" has slowly paved the way for the introduction of much more controversial "military research" within the European domain'14, and Manriquez suspects that, with Japan's space law revision, 'the nation inches [further] towards re-militarization with the likely opening of space for military use.'15 Similarly, the new space policy of the Obama administration appeals simultaneously to an expansive definition of global security and a more narrow, traditional focus on the national-military interest of the USA included within this. All of this points to the importance of taking the securitization of space policy seriously as a key element of debates on space security. Focusing on militarization and weaponization alone simply isn't sufficient.

2NC/1NR Extensions: Answers To 2AC #4: "Link Turn – Nations Will Cooperate in Space" (2/2)

____The claims of "good things" the military could do in space are used to cover up atrocities. Even if space policy could be about peace, securitizing those policies like the 1AC's assumptions did will always lead to negative outcomes.

MACDONALD, 2007
[Fraser, Lecturer in Human Geography, School of Anthropology, Geography & Environmental Studies University of Melbourne; "Anti-Astropolitik: outer space and the orbit of geography," *Progress in Human Geography,* v.31, n. 5]

In post-Cold War unipolar times the strategic rationale for the United States to maintain the prohibition against weaponising space is diminishing (Lambakis, 2003), even if the rest of the world wishes it otherwise. In 2000, a UN General Assembly resolution on the 'Prevention of an Arms Race in Outer Space' was adopted by a majority of 163-0 with 3 abstentions: the United States, Israel and the Federated States of Micronesia (United Nations, 2000). Less than two months later, a US Government committee chaired by Donald Rumsfeld5 issued a report warning that the 'relative dependance of the US on space makes its space systems potentially attractive targets'; the United States thus faced the danger, it argued, of a 'Space Pearl Harbor' (Rumsfeld, 2001: viii). As space warfare was, according to the report, a 'virtual certainty', the United States must 'ensure continuing superiority' (Rumsfeld, 2001: viii). This argument was qualified by obligatory gestures towards 'the peaceful use of outer space' but the report left little doubt about the direction of American space policy. Any difficult questions about the further militarisation (and even weaponisation) of space could be easily avoided under the guise of developing 'dual-use' (military/civilian) technology and emphasising the role of military applications in 'peace-keeping' operations. Through such rhetoric, NATO's satellite-guided bombing of a Serbian TV station on the 23rd April 1999 could have been readily accommodated under the Outer Space Treaty injunction to use outer space for 'peaceful purposes' (Cervino, 2003). Since that time new theatres of operation have been opened up in Afghanistan and Iraq, for further trials of space-enabled warfare that aimed to provide aerial omniscience for the precision delivery of 'shock and awe'. What Benjamin Lambeth has called the 'accomplishment' of air and space power, has since been called into question by the all too apparent limitations of satellite intelligence in the tasks of identifying Iraqi Weapons of Mass Destruction or in stemming the growing number of Allied dead and wounded from modestly-armed urban insurgents (Lambeth, 1999; Graham, 2004; Gregory, 2004: 205). For all its limitations, even this imagery has been shielded from independent scrutiny by the military monopolization of commercial satellite outputs (Livingstone and Robinson, 2003). And yet, far from undermining Allied confidence in satellite imagery or in a 'cosmic' view of war (Kaplan, 2006), it is precisely these abstract photo-cartographies of violence – detached from their visceral and bloodied 'accomplishments' – that have licenced the destruction of Fallujah (Gregory, 2004: 162; Graham, 2005b). There remains, of course, a great deal more that can be said about the politics of these aerial perspectives than can be discussed here (see, for instance, Gregory, 2004; Kaplan, 2006).

2NC/1NR Extensions: Answers To 2AC #5: "War Predictions Hold True"

They say that their predictions for war are still valid in space, but…

____ Extend the 1NC DUVALL AND HAVERCROFT 2009 evidence; the Affirmative's assumptions are only correct if you begin from the perspective of a privileged American. Current geopolitical analysis ignores the perspectives of those who aren't directly benefitting from the affirmative plan, which means you should question every conclusion they come to.

____This evidence is about warfare theory, not sociology. Even if they are correct that the United States could win every future war by using space weapons, it would be better to vote Negative so those wars never happen.

2NC/1NR Extensions: Answers To 2AC #6: "Kritik Impact Inevitable"

They say that violence between nations is inevitable in space, but…

____The Alternative will break this down. Critically analyzing the rush into space will allow us to break free of our current perspectives and incorporate alternatives. This prevents nationalism and elitist politics from taking over and extending their power into the rest of the Universe, and doesn't require abandoning technology.

MACDONALD, 2007
[Fraser, Lecturer in Human Geography, School of Anthropology, Geography & Environmental Studies University of Melbourne; "Anti-Astropolitik: outer space and the orbit of geography," *Progress in Human Geography,* v.31, n. 5]

As has already been made clear, this sort of project is by no means new. Just as astropolitics situates itself within a Mackinderian geographical tradition, so a critical geography of outer space can draw on geography's early modern cosmographical origins, as well as on more recent emancipatory perspectives that might interrogate the workings of race, class, gender and imperialism. Space is already being produced in and through Earthly regimes of power in ways that undoubtedly threaten justice and democracy. A critical geography of space, then, is not some far-fetched or indulgent distraction from the 'real world'; rather, as critical geographers we need to think about the contest for outer space as being constitutive of numerous familiar operations, not only in respect of international relations and the conduct of war, but also to the basic infrastructural maintenance of the state and to the lives of its citizenry. Geography is already well placed to think about these things; there are many well worn lines of geographical critique that have their parallel in space. For instance, there are pressing 'environmental' questions about the pollution of Earth's orbit with space 'junk', a development which is seriously compromising the sustainable use of Lower Earth Orbit. This high-speed midden, already of interest to archaeologists (see Gorman, 2005), is coming up for its fiftieth anniversary in 2007, after the launch of the Russian satellite Sputnik on the 4th October 1957. Since then, the sheer variety and number of discarded objects is remarkable. From lens caps to frozen astronaut faeces, the number of orbiting articles greater than 10cm in diameter currently being tracked is over 9000 (Brearley, 2005: 9). The ability to think critically about nature conservation and heritage policy – another aspect of the geographer's remit – may also have an extra-terrestrial transference, as wilderness and 'first contact' paradigms look set to be mobilized in space (Cockell and Horneck, 2004; Rogers, 2004; Spennemann, 2004). One might further speculate that the economic geography of outer space would be a rich, if as yet undeveloped, avenue of enquiry. And a cultural and historical geography of space offers numerous flights of fancy, from questions of astronautical embodiment to the politics of planetary representation. All of this is to say that a geography of outer space should be a broad undertaking, aside from the obvious project of a critical geo/astropolitics. Lastly, a critical geography must not be overly pessimistic, nor must it relinquish an engagement with space technology on the grounds that this has, to date, been driven largely by military agendas. The means of our critique may require us to adopt such technologies, or, at least to ask what opportunities they present for radical praxis. One thinks here of various forms of playful and subversive activism, experiment and art-event that have deliberately toyed with space hardware (Triscott and la Frenais, 2005; Spacearts, 2006). GPS receivers can help us think reflexively about position (Parks 2001); remote sensing can be used to explore political conditions in the world (Parks and Biemann, 2003); amateur radio-telescopy can help us re-conceptualize space by attuning us to the sonorous qualities of its scientific 'data' (Radioqualia, 2003); even rocket science can still carry utopian freight (Chalcraft, 2006). Through such means, can space be given a truly human geography.

2NC/1NR Link Extensions – U.S. Federal Government (General)

____Relying on U.S. superiority and unilateral power to develop space recreates nationalism and self-superiority that has empirically causes rights violations and racism.

MACDONALD, 2007
[Fraser, Lecturer in Human Geography, School of Anthropology, Geography & Environmental Studies University of Melbourne; "Anti-Astropolitik: outer space and the orbit of geography," *Progress in Human Geography,* v.31, n. 5]

To his credit, Dolman does give some attention to the divisive social consequences of this concentrated power. Drawing on earlier currents of environmental determinism and on the terrestrial model of Antarctic exploration, he ponders the characteristics of those who will be first to colonise space. They will be 'highly educated, rigorously trained and psychologically screened for mental toughness and decision-making skills, and very physically fit'; 'the best and brightest of our pilots, technicians and scientists'; 'rational, given to scientific analysis and explanation, and obsessed with their professions' (26). In other words, 'they are a superior subset of the larger group from which they spring' (27). As if this picture isn't vivid enough, Dolman goes on to say that colonizers of space 'will be the most capably endowed (or at least the most ruthlessly suitable, as the populating of America and Australia … so aptly illustrate[s])' (27; my emphasis). 'Duty and sacrifice will be the highest moral ideals' (27). Society, he continues, must be prepared 'to make heroes' of those who undertake the risk of exploration (146). At the same time, 'the astropolitical society must be prepared to forego expenditures on social programs … to channel funds into the national space program. It must be embued with the national spirit' (146). Dolman slips from presenting what would be merely a 'logical' outworking of Astropolitik, to advocating that the United States adopt it as their space strategy. Along the way, he acknowledges the full anti-democratic potential of such concentrated power, detaching the state from its citizenry: 'the United States can adopt any policy it wishes and the attitudes and reactions of the domestic public and of other states can do little to challenge it. So powerful is the United States that should it accept the harsh Realpolitik doctrine in space that the military services appear to be proposing, and given a proper explanation for employing it, there may in fact be little if any opposition to a fait accompli of total US domination in space'. 156. Although Dolman claims that 'no attempt will be made to create a convincing argument that the United States has a right to domination in space', in almost the next sentence he goes on to argue 'that, in this case, might does make right', 'the persuasiveness of the case' being 'based on the self-interest of the state and stability of the system' (156; my emphasis). Truly, this is Astropolitik: a veneration of the ineluctable logic of power and the permanent rightness of those who wield it. And if it sounds chillingly familiar, Dolman hopes to reassure us with his belief that 'the US form of liberal democracy … is admirable and socially encompassing' (156) and it is 'the most benign state that has ever attempted hegemony over the greater part of the world' (158). His sunny view that the United States is 'willing to extend legal and political equality to all' sits awkwardly with the current suspension of the rule of law in Guantanamo Bay as well as in various other 'spaces of exception' (see Gregory, 2004; Agamben, 2005).

2NC/1NR Link Extensions -- Missile Defense Aff (1/3)

____Making space policy about "stopping threats" extends security discourse into a new realm, justifying tyrannical state powers and eliminating the Other.

PEOPLES, 2010
[Columba, School of Sociology, Politics and International Studies, University of Bristol; "The growing 'securitization' of outer space," *Space Policy,* v.26]

What, then, is 'securitization', and why should it be regarded as anything other than another '-ation' to be added to the pot? Recent decades have seen a rapid and extensive 'broadening' of the contexts in which the concept of security is applied and in the range of issues it is seen to cover. From a relatively circumscribed historical association with military threats and issues, the concept of security is increasingly used in reference to 'non-traditional' issues, such as migration and environmental degradation. In both policy and academic discourse non-military issues are now frequently referred to as 'security' issues by policy makers. Space policy has been far from immune from this wider trend. Such moves to widen the spectrum of security issues can be classified as attempts at 'securitization', a term coined by the group of scholars within security studies commonly referred to as the 'CopenhagenSchool'.2 Securitization is, in broad terms, the process through which a non-military issue comes to be seen as an issue of security. When an issue comes to be treated as an issue of national security, it is justifiable to use exceptional political measures to deal with it. It is 'securitized': that is, it is treated with the same degree of urgency as military threats to the very existence of a state (as traditionally captured in the concept of 'national security'), or what the Copenhagen School labels 'existential threats'. At its most fundamental the idea of national security assumes that the state must be protected, therefore it is necessary for the state to maintain standing armies, weapons production and procurement, intelligence agencies, and so on. One of the ways we can distinguish an existential threat, then, is by the level of response it generates. When an issue or development is successfully presented as an existential threat, it legitimises the use of exceptional political measures. A classic military example in international relations is a state's right to self-defence. If a state is under attack, it claims the legitimate use of extraordinary measures that go beyond normal day-to-day politics: the declaration of a state of emergency or martial law, the rationing of certain goods and services, closure of roads and schools, and so on. Commonly, then, the identification of existential threats sets in chain a number of effects that characterize the specific quality of security problems: urgency - the issue takes priority; and extraordinary measures - authorities claim powers that they would not otherwise have, or curtail rights and liberties that might otherwise apply.

2NC/1NR Link Extensions – Missile Defense Aff (2/3)

____The 1AC's descriptions of inevitable space war and the judge's duty to defend America turn us all into soldiers, and make space a new playground for American military dominance.

ORR, 2004
[Jackie, Department of Sociology, Syracuse University; "The Militarization of Inner Space," *Critical Sociology,* v.30]

"[E]very American is a soldier" now, declared George W. Bush one month after September 11, 2001. 2 Speaking at the first meeting of the new Homeland Security Council, whose opening order of business was to beef up U.S. border operations by tightening immigration surveillance and control, Mr. Bush's pronouncement itself performed a consequential border crossing. His sweeping rhetorical induction of the entire U.S. citizenry into the ranks of military combatants obliterated the very boundary between 'civilian' and 'soldier' on which popular understandings of 'terrorism' fundamentally depend: would future attacks on U.S. civilians now be acknowledged as a targeted assault on U.S. soldiers? Mr. Bush's border transgression, conducted in the midst and in the name of intensified border patrols, raises a few other urgent questions for the newly anointed civilian-soldier: When was I trained for battle? What are my weapons and how do they work? And where, precisely, stands this "home" which the new armies of civilians are asked to secure? Which borders are we really being asked to defend? What exactly is this war into which the U.S. civilian-soldier has been involuntarily drafted? The 'war against terrorism' is the repetitiously proffered answer to this last query. But a little bit of history and the website of the U.S. Space Command suggest another story. The U.S. Space Command was established in 1985 as the coordinating military body unifying Army, Navy, and Air Force activities in outer space. "As stewards for military space," states General Howell M. Estes III, the Space Command's ex-Commander in Chief, "we must be prepared to exploit the advantages of the space medium." In Joint Vision 2010, an operational plan for securing and maintaining unchallengeable "space power," the U.S. Space Command describes how "the medium of space is the fourth medium of warfare – along with land, sea, and air." The end result of the "emerging synergy of space superiority with land, sea, and air superiority" is the achievement of Full Spectrum Dominance: the capacity of the U.S. military to dominate in any conflict, waged in any terrestrial or extraterrestrial medium. Or, in the Space Command's words, displayed onscreen against the black, star-studded background of empty space: "U.S. Space Command – dominating the space dimension of military operations to protect U.S. interests and investment. Integrating Space Forces into warfighting capabilities across the full spectrum of conflict." 3 The battles for which the U.S. Space Command is prepared are not futuristic science fiction scenarios. As the command center responsible for the protection and proliferation of military and commercial satellites, and for the rejuvenated National Missile Defense program, the Space Command is already a key player in the conduct of U.S. war. Satellite-mediated infotech warfare has arrived. The militarized use of space-based satellites to provide real-time flows of information and imagery debuted in the U.S. invasion of Panama in 1989, developed in the 1990s during the U.S.-led war against Iraq and in the killing fields of Kosovo, and is today an integral component of U.S. military activity in Afghanistan and Iraq (Gray 1997; Grossman 2001). "Space support to NATO's operations in Kosovo was a perfect example of how the United States will fight its wars in the future," the Space Command reported in 2002, "Satellite-guided munitions, communications, navigation, and weather all combined to achieve military objectives in a relatively short amount of time and without the loss of a single U.S. troop." 4 As home to an increasingly sophisticated and expensive infrastructure of satellites, and to a proposed network of (possibly nuclear-powered) space stations equipped with laser weaponry, 'outer space' is now the final, fantastic frontier for the U.S. military's imaginary and material battlefields.

2NC/1NR Link Extensions – Missile Defense Aff (3/3)

____Space-based weapons give the U.S. the ability to target and destroy anyone who doesn't behave according to imperialist standards. This is the ultimate form of biopolitical control.

DUVALL AND HAVERCROFT, 2009

[Raymond, coedited *Power and Global Governance;* Jonathan, SDF Postdoctoral Research Fellow at the Centre of International Relations, University of British Columbia; *Securing Outer Space,* ed. Natalie Bormann and Michael Sheehan, p. 163-164]

On the individual axis, space weapons represent a powerful disciplinary capacity in the ability to target individuals with great precision. Many of the proposed weapons systems – most notably space-based lasers – are designed to project lethal force at very precise targets, even individuals. Presumably then a primary use of such weapons would be to destroy specific enemies of the imperial center. This ability to project force precisely to any point on Earth would have two political effects. First, it will strip all states that do not possess them of their ability to protect themselves from intervention by the space-based empire, and thereby vitiate their claims to sovereignty. Second, the sole possessor of space-based weapons will be able to govern the conduct of individuals.7 This bio-political power over individual lives would be far more significant than the ability to merely punish and kill dissidents to imperial power. The possession of the power to target any individual, anywhere on Earth, on very short notice would give the possessor of these weapons unprecedented power to discipline these individual's interests and identities so that their actions comply with the will of the imperial center.

2NC/1NR Link Extensions – Lunar Mining Aff (1/2)

____Before assigning property rights in space, we should ethically inquire into how property exists. Recreating capitalism's rules in space will cause the same disasters we have on Earth.

LIN, 2006

[Patrick, The Nanoethics Group, "Viewpoint: Look Before Taking Another Leap for Mankind—Ethical and Social Considerations in Rebuilding Society in Space" *Astropolitics,* v.4 n.3]

If space will be commercialized, then property claims—by governments, corporations, individuals, or all three—will need to be made in order to operate business ventures without interference from others. Just as a patent provides an inventor with the protection needed to invest the time, money, and hard work required in the first place, a company may be less willing to invest hundreds of millions or billions of dollars to, say, build time-share condos on the Moon without having clear rights to that property. At any rate, it seems to be in our nature, and in our rational self-interest many times, to acquire or want things to be ours and ours alone, so these issues will naturally arise. Notwithstanding the United Nations (UN) treaties related to outer space that preserve space as a commons, what would be a fair process for claiming property in space, without which we risk a free-for-all, chaotic land-grab? Note that lawsuits, however weak they may be, have already been filed on Earth to lay claim to such things as asteroids,3 so the idea of dividing up property in space may not be so far-fetched. First of all, we need to understand what it means to own space in common with others. Is our relationship with space one of "positive community of ownership," in that we each own an equal share in space and its contents? If so, several other questions are relevant. To illustrate the point, imagine if there were only seven people alive on Earth and only seven other planets in our solar system: do we then each get our own planet or only 1=7th of each planet? And how do we account for future people—must we factor in their legacy before we can claim our shares (e.g., now I can claim only a 1=1000th share of Mars in order to leave enough land for others who might exist in my lifetime)? On the other hand, if our relationship to space is one of "negative community of ownership," then no one has a prima facie claim to the property in question; no one owns anything yet, or we share the common starting point of owning no part of space. This raises the question of how it is possible to gain ownership of unowned objects. Some of the mechanisms or processes by which we can legitimately acquire property might include laboring upon the object (e.g., shaping clay into a bowl) or improving it (e.g., cultivating a field for crops), but why should that be enough to give us property rights—why not other methods? The issue here is to justify the property-giving process in a way that explains why other processes do not lead to property rights, such as simply pointing at an unclaimed asteroid and say "that is mine" or roping off a section of the Moon in order to claim it. If only labor and=or improvement are enough for property rights, what is so special about it such that an object then becomes ours? And what is the extent of our property rights—are we permitted to destroy what we own, like to irradiate our land, or freely transfer all our rights to an individual person or company who might then own the entire Moon? Of course, we might simply extend our existing rules of property to govern space as well, assuming all states involved endorse a free-market system. But in uncharted territory, such as with cyberspace, our most obvious options seem to be limited to firstcome, first-served and to the highest bidder, which we have seen lead to the inefficient and disorderly Internet "gold rush." And because how we formulate property rights sets the tone for whatever economic model is adopted—a high-bid process would naturally foster capitalism—this has great implications on how markets and transactions would proceed in space. If entering space marks our opportunity to start over again, then it seems that unfettered capitalism should no longer be a sacred cow and should be subject to critical evaluation along with other competing economic models. For instance, a purely freemarket economy, while efficient at allocating scarce resources and inspiring innovation, is not so much concerned with need or merit, so a hybrid model may be desired.

2NC/1NR Link Extensions – Lunar Mining Aff (2/2)

____Framing the Moon's value in terms of human Earthly needs is the conquering logic of Colonialism.

MACDONALD, 2007
[Fraser, Lecturer in Human Geography, School of Anthropology, Geography & Environmental Studies University of Melbourne; "Anti-Astropolitik: outer space and the orbit of geography," *Progress in Human Geography,* v.31, n. 5]

Aside from military space applications, to which I will later return, one of the most significant geographical engagements with outer space is in the sphere of 'planetary geomorphology'. There is a vast literature on surface processes on the Moon and on the other inner planets (Mars, Mercury and Venus) in journals such as Icarus and Journal of Geophysical Research (for an introduction see Summerfield, 1991). Terrestrial landscapes become analogues for interpreting remotely sensed images of planetary bodies, which has in turn heightened the importance of satellite imagery in understanding Earth surface processes. One of the very few points of common reference in physical and human geographical considerations of outer space is the imagery from the US Apollo space programme. While geomorphologists have examined photographs of the lunar surface to cast light on, for example, cratering and mass movement, Denis Cosgrove has attended to the cultural significance of the now iconic Apollo photographs The Whole Earth, Earthrise and 22727 (Cosgrove, 1994; 2003). Cosgrove outlines the momentous import of the Western conception of the Earth as a globe, which culminated in photographing the earth from space to provide an 'Apollonian gaze' that had been dreamed about since the age of Cicero (Cosgrove 2001)2. Despite his claim that 'geography is not a lunar practice', Cosgrove is almost unique among contemporary human geographers in thinking beyond the terrestrial (Cosgrove, 2001b; Cosgrove, 2004). Even the 'Apollo's eye' views, as James Sidaway has argued, embody their own particular geography (Sidaway, 2005: 71). Sidaway presents a critical visual exegesis of the cover of Hardt and Negri's Empire, showing how a photograph of the Earth 'innocently' chosen by the publisher, is itself predicated on a matrix of 'geo-political-ecologies' – the Cold War; the aeronautical agency of the preeminent capitalist state; corporate copyright controls – whose operations are purportedly the subject of the book. (Hardt and Negri, 2000). For Sidaway, the image signifies empire in ways unanticipated by the authors of Empire. Another exception to geography's prevailing worldliness, though not one that deals with outer space per se, is Rob Kitchin and James Kneale's collection of essays on geographies of science fiction, Lost in Space (Kitchin and Kneale, 2002). In these essays, literary form quite rightly determines the genre rather than necessarily requiring an outer space setting. Perhaps the most explicit extra-terrestrial treatment by a geographer is by Jason Dittmer who considers the representational strategies employed in coverage of the 1997 Mars Pathfinder expedition. The production of a Martian geography, he argues, was achieved through particular discourses of scientific advancement, place naming and colonial exploration (Dittmer, 2006).

2NC/1NR Link Extensions – China Cooperation Aff (1/3)

____The desire to strengthen our satellite networks is rooted in the desire to control the globe. The aff wants to literally peep on everything and everyone.

MACDONALD, 2007
[Fraser, Lecturer in Human Geography, School of Anthropology, Geography & Environmental Studies University of Melbourne; "Anti-Astropolitik: outer space and the orbit of geography," *Progress in Human Geography,* v.31, n. 5]

In all these geographical precedents, the enabling character and production of space itself tends to be assumed. This much is also true for some of the literature from Sociology of Scientific Knowledge (SSK) and Science, Technology and Society (STS) concerned with missile or space technology. Both of these fields have done much to expose the contingency of technological outcomes and to denaturalize the 'inevitability' of technical progress (Mackenzie, 1990; Mack, 1990; Mort, 2002). However, the key monographs on missile and satellite programmes by Donald Mackenzie, Pamela Mack and Maggie Mort, while taking a broadly SSK or STS approach, do not for the most part apply this perspective specifically to outer space. Only Peter Redfield, writing in Social Studies of Science, conceives space as a problematic which calls into question some of the cherished tenets of contemporary social theory (Redfield, 2002). Where, for instance, does the study of outer space leave political discourses of 'grounded-ness' (Massey, 2005) or 'grass-roots'? Or, for that matter, the repeated mantra (especially prominent in sociologies of science and histories of geography) that 'all knowledge is local' (see Geertz, 1983: 4)? 'All knowledges, practices and objects may indeed be local, but are they equally local?' asks Redfield (Redfield, 2002: 792). This point also has a bearing on the feminist argument, very familiar to geographers, about the situatedness of knowledge and vision. There is a vast literature in geography which critiques the notion of an Olympian view, arguing instead for a politics and an epistemology of location, positioning and (once again) groundedness. Informed by Donna Haraway's work, it makes the case that partiality rather than universality is the basis from which we should make rational knowledge claims (Haraway, 1991). How will this argument fare in an era when there is no point on the Earth's surface, nor in the Earth's atmosphere (nor even, increasingly, below the Earth's surface) that is not subject to the gaze of satellite surveillance? This is not to question the political necessity of Haraway's disclosure of position – nor to suggest that a view from space is anything other than situated – but to draw attention to the changing circumstances in which this tactic might be deployed, remembering too that a satellite is a great deal more Olympian than Mount Olympus. It seems that, literally and figuratively, it is this 'god-trick' so explicitly forbidden by Haraway that is now the primary goal of astrostrategy (Haraway, 1991: 195).

2NC/1NR Link Extensions – China Cooperation Aff (2/3)

____Even so-called "peaceful" satellite uses are based in military technology. Every attempt to strengthen satellite networks ends up supporting space militarization.

MACDONALD, 2007
[Fraser, Lecturer in Human Geography, School of Anthropology, Geography & Environmental Studies University of Melbourne; "Anti-Astropolitik: outer space and the orbit of geography," *Progress in Human Geography,* v.31, n. 5]

In this discussion so far, I have been drawing attention to geography's recent failure to engage outer space as a sphere of enquiry and it is important to clarify that this indictment applies more to human than to physical geography. There are, of course, many bio-physical currents of geography that directly draw on satellite technologies for remote sensing. The ability to view the Earth from space, particularly through the Landsat programme, was a singular step forward in understanding all manner of Earth surface processes and biogeographical patterns (see Mack, 1990). The fact that this new tranche of data came largely from military platforms (often under the guise of 'dual-use') was rarely considered an obstacle to science. But as the range of geographical applications of satellite imagery have increased to include such diverse activities as urban planning and ice cap measurements, so too has a certain reflexivity about the provenance of the images. It is not enough, some are realising, to say "I just observe and explain desertification and I have nothing to do with the military"; rather scientists need to acknowledge the overall context that gives them access to this data in the first place (Cervino et al, 2003: 236). One thinks here of the case of Peru, whose US grant funding for agricultural use of Landsat data increased dramatically in the 1980s when the same images were found to be useful in locating insurgent activities of Maoist 'Shining Path' guerillas (Schwartz, 1996). More recently, NASA's civilian Sea-Wide Field Studies (Sea-WiFS) programme was used to identify Taliban forces during the war in Afghanistan (Caracciolo, 2004). The practice of geography, in these cases as with so many others, is bound up with military logics (Smith, 1992); the development of Geographical Information Systems (GIS) being a much cited recent example (Cloud, 2001; 2002; Pickles, 1995; 2004; see Beck 2003 for a case study of GIS in the service of the 'war on terror').

2NC/1NR Link Extensions – China Cooperation (3/3)

____Satellite imagery serves to create surveillance by putting all human behavior under a nationalist gaze.

MACDONALD, 2007
[Fraser, Lecturer in Human Geography, School of Anthropology, Geography & Environmental Studies University of Melbourne; "Anti-Astropolitik: outer space and the orbit of geography," *Progress in Human Geography,* v.31, n. 5]

The geopolitical effects of reconnaissance from space platforms are by no means confined to particular episodes of military conflict. Like high-altitude spy planes, its Cold War precursor, satellite surveillance also gives strategic and diplomatic powers. Unlike aerial photography, however, satellite imagery is ubiquitous, high-resolution and offers the potential for real-time surveillance. The emerging field of surveillance studies, strongly informed by critical geographical thought, has opened to scrutiny the politics and spaces of electronic observation (see, for instance, the new journal Surveillance and Society). The writings of Foucault, particularly those on panopticism, are an obvious influence on this new work (Foucault, 1977; Wood, 2003), but they have seldom been applied to the realm of outer space. As Foucault pointed out, the power of Jeremy Bentham's panopticon prison design is enacted through the prisoner–subjects internalising the disciplinary gaze: the presence of the gaoler was immaterial, as the burden of watching was left to the watched. Similarly, the power of panoptic orbital surveillance lies in its normalising geopolitical effects.

2NC/1NR Link Extensions – Colonization Aff (1/2)

____The people most responsible for Earth's destruction will be in charge of the aff's policymaking because they are rushing in without questioning the ethical consideration. This makes repeating our mistakes inevitable.

LIN, 2006

[Patrick, The Nanoethics Group, "Viewpoint: Look Before Taking Another Leap for Mankind—Ethical and Social Considerations in Rebuilding Society in Space" *Astropolitics,* v.4 n.3]

If not for adventure or knowledge, there are other, more pragmatic reasons to consider. For example, notable scientists, like the late Carl Sagan and Stephen Hawking, discuss "backing up the biosphere" in case our world becomes uninhabitable. Of course, if that ever happened, it may be our own fault, given our weapons of mass destruction, freely-distributed recipes for the 1918 killer virus, predicted misapplications of biotechnology and nanotechnology, and other possible man-made catastrophes. So is it a good enough reason to inhabit another planet, because we want a "do-over" if we destroy our own? And if so, again, what are we doing to ensure that we do not make the same mistakes and lay waste to another biosphere? If we have put ourselves in a position where we need a back-up plan, it is unclear how settling space will improve our self-destructive tendencies until we address those root issues. Less metaphysically, does having a safety net, such as a backup planet, make it more likely that we take more chances and treat our home planet less carefully? This would seem to be consistent with human behavior: as risks decrease, we are more likely to engage in that activity. However, an argument might be made that people who engage in possibly catastrophic acts are not the kind of people worried about our future and would proceed ahead regardless of a back-up biosphere. Further, perhaps having a "Plan B" does make sense, if we think that a natural apocalypse may occur, such as an asteroid collision.

____Conceiving of space as an extension of human domain to be colonized views it exclusively from our present social location as privileged Americans. This makes new nationalism and power-politics inevitable.

MACDONALD, 2007

[Fraser, Lecturer in Human Geography, School of Anthropology, Geography & Environmental Studies University of Melbourne; "Anti-Astropolitik: outer space and the orbit of geography," *Progress in Human Geography,* v.31, n. 5]

There is also, I think, scope for a wider agenda on the translation of particular Earthly historical geographies into space, just as there was a translation of early occidental geographies onto imperial spaces. When Donald Rumsfeld talks of a 'Space Pearl Harbor', there is plainly a particular set of historico–geographical imaginaries at work that give precedence, in this case, to American experience. Rumsfeld has not been slow to invoke Pearl Harbour, most famously in the aftermath of September 11; notably, in all these examples – Hawaii in 1941; New York in 2001; and the contemporary space race – there lurks the suggestion of a threat from the East9. All of this is a reminder that the colonisation of space, rather than being a decisive and transcendent break from the past, is merely an extension of longstanding regimes of power. As Peter Redfield succinctly observed, to move into space is 'a form of return': it represents 'a passage forward through the very pasts we might think we are leaving behind' (Redfield, 2002: 814). All of this supports the idea that space is part and parcel of the Earth's geography (Cosgrove, 2004: 222). We can conceive of the human geography of space as being, in the words of Doreen Massey, 'the sum of relations, connections, embodiments and practices' (Massey, 2005: 8). She goes on to say that 'these things are utterly everyday and grounded, at the same time as they may, when linked together, go around the world'.

2NC/1NR Link Extensions – Colonization Aff (2/2)

____Even if the affirmative's specific policy isn't about the military, the military is inherently invested in space technology. The way the aff describes threats and space will be used to justify new military uses.

MACDONALD, 2007
[Fraser, Lecturer in Human Geography, School of Anthropology, Geography & Environmental Studies University of Melbourne; "Anti-Astropolitik: outer space and the orbit of geography," *Progress in Human Geography,* v.31, n. 5]

I should emphasise that I am not advancing some technologically determinist argument to the effect that if something is military in origin it is somehow 'tainted' or forever in the service of militarism. Walter Benjamin reminds us that the meaning of technology has no umbilical link to its origins: he noted that the Eiffel Tower 'found' its purpose as a military radio transmitter long after it had been built simply as a monument to industrial confidence in iron (Benjamin, 1999: 568). But we should be concerned when the needs of basic civilian infrastructure come to be regarded as coterminous with those of military strategy, particularly in circumstances when technologies of the state are so readily adaptable to monitoring the lives of its citizenry. Another consequence of this conflation is that dual-use systems underpinning normal life have become a ready target of military efforts, being exempt from the usual civilian protections of international law (Graham, 2005c). To use Stephen Graham's phrase, US air and space power is increasingly aimed at 'switching cities off' (Graham, 2005c). This may very easily develop from targeting electricity networks (Belgrade, Baghdad, Beirut) to the destruction of satellite provision on which so much of our civilian infrastructure depends. As Tim Luke observed, many more human beings live highly cyberorganized lives, totally dependent upon the Denature of machinic ensembles with their elaborate extra-terrestrial ecologies of megatechnical economics. This is true for the Rwandans in the refugee camps of Zaire [sic] as it is for the Manhattanites in the luxury coops of New York City (Luke quoted in Graham 2005c: 171) I am reluctant to reiterate Paul Virilio's preoccupation with the crash and the accident as defining features of modernity (Virilio, 2000; Leslie, 2000). But one cannot avoid the fact that systems that have become vital for sustaining our current mode of existence are now obvious and accessible targets. Concerns have even been raised that constellations of satellites are vulnerable to hackers with destructive intent (Kent, 2006). The point of all this gloomy talk is to qualify rather than to overturn the emphases of Nigel Thrift's recent work. Moreover I hope to contextualise some of the tendencies Thrift describes within the systems of geo-power from which they have materialized. In the final section I want to show something of the strategic struggle for space; a struggle that is by no means distant from the discipline of geography.

2NC/1NR Impact Extensions (General) - Genocide

The construction of 'violence' as something barbaric that only enlightened U.S. leadership can solve makes perpetual violence against marginalized Others inevitable. This is the same system of extermination that created the Holocaust, and now it makes extinction possible.

DILLON AND CAMPBELL, 1996
[Michael, professor of politics at Lancaster University; David, professor of international politics at the University of Newcastle, *The Political Subject of Violence,* p. 163-164]

This interpretation of violence as constitutive of identity might, paradoxically, offer the only hope of some amelioration of the worst excesses of violence exhibited by the formation of (political) identity. The orthodox rendering of such violence as pre-modern abdicates its responsibility to a predetermined historical fatalism. For if these ethnic and nationalist conflicts are understood as no more than settled history rearing its ugly head, then there is nothing that can be done in the present to resolve the tension except to repress them again. In this view, the historical drama has to be enacted awarding to its script. With human agency in suspension while nature violently plays itself out. The only alternative is for nature' to be overcome as the result of an idealistic transformation at the hands of reason. Either way, this fatalistic interpretation of the relationship between violence and the political is rooted in a hypostatised conception of man/nature as determinative of the social/ political: the latter is made possible only once the former runs its course, or if it is overturned. It might have once been the case that the prospect of' a transformation of nature by reason seemed both likely and hopeful; indeed, many of the most venerable of the debates in the political theory of international relations revolved around this very point. But, having reached what Foucault has called society's "threshold of modernity, " we now face a prospect that radically re-figures the parameters of politics: the real prospect of extinction. As Foucault argues, we have reached this threshold because the life of the species is wagered on its own political strategies. For millennia, man remained what he was for Aristotle: a living animal with the additional capacity of a political existence; modern man is an animal whose politics place his existence as a living being in question. How the prospect of extinction might materialise itself is an open question. That increasingly it can be materialized, militarily, ecologically and politically, is not. The double bind of this prospect is that modernity's alternative of transformation through reason is not only untenable, it is deeply complicit in the form of (inter)national life that has been responsible for bringing about the real prospect of extinction in the first place. The capacity of violence to eradicate being was engendered by reason's success; not merely, or perhaps even most importantly, by furnishing the technological means, but more insidiously in setting the parameters of the political (le politique, to use the useful of debate in which Simon Critchley engages) while fuelling the violent practices of politics (lupalirique). The reliance on reason as that which could contain violence and reduce the real prospect of extinction may prove nothing less than a fatal misapprehension. In support of this proposition, consider the interpretive bases of the Holocaust. For all that politics in the last fifty years has sought to exceptionalise the Nazis' genocide as an aberrant moment induced by evil personalities, there is no escaping the recognition that modem political life lies heavily implicated in the instigation and conduct of this horror. In so far as modernity can be characterised as the promotion of rationality and efficiency to the exclusion of alternative criteria for action, the Holocaust is one outcome of the 'civilising process.' With its plan rationally to order Europe through the elimination of an internal other, its bureaucratised administration of death, and its employment of the technology of a modem state, the Holocaust "was not an irrational outflow of the not-yet-fully-eradicated residence of pre-modern barbarity. It was a legitimate resident in the house of modernity; indeed, one who would not be at home in any other house."

2NC/1NR Impact Extensions - Turns Case - Missile Defense Aff

Securitizing space creates self-fulfilling prophecies that ultimately are counterproductive to the affirmative's goals.

HANDBERG, 2004
[Roger, Department Chair, Pre Law Advisor at University of Central Florida, "REVIEW ARTICLE: MILITARY SPACE POLICY: DEBATING THE FUTURE" *Astropolitics,* v.2 n.1]

More troubling are the fairly cavalier dismissals of the question of the security dilemma. This dilemma refers to the situation when a state takes certain actions to further its security but its actions in fact over time paradoxically reduce national security because of how other states respond to those actions. Weaponization of space presents such a dilemma because, ultimately, US security may be severely compromised. The problem is that linearly projecting the future effectively discounts others' reactions and implicitly assumes permanent American technological superiority. Weaponizing space is a two-way street, not one that only the United States will be capable of embarking down. History is replete with examples of technologically superior states falling behind their adversaries as either the government and=or the society wearies of the likely increasing financial and psychological burden, or technological surprises occur erasing their technological advantage. Other states may choose to defer or challenge. The United States may not be able to influence their choices. In time, such challenges cumulatively may prove fatal to the originally dominant state.

2NC/1NR Impact Extensions - Turns Case – Colonization Aff (1/2)

The same mindset that caused environmental destruction and inevitable war on earth will follow the aff into space unless we stop and critically examine our assumptions first.

LIN, 2006
[Patrick, The Nanoethics Group, "Viewpoint: Look Before Taking Another Leap for Mankind—Ethical and Social Considerations in Rebuilding Society in Space" *Astropolitics,* v.4 n.3]

The prospect of increased space travel brings with it a host of ethical questions, including: environmental conservation, competing priorities, safety risks, and non-proliferation of military technology. These are somewhat familiar questions, and though they will not be the focus of this article, we will discuss them briefly here for the sake of completeness. One of the first and natural reactions of many is to ask: should we be encouraging private space exploration, given what we have done to our own planet? What is to prevent problems on Earth from following us into outer space, if we have not evolved the attitudes, and ethics, which have contributed to those problems? As examples, an over-developed sense of nationalism may again lead to war with other humans in space, and ignoring the cumulative effects of small acts may again lead to such things as the overcommercialization of space and space pollution. Have we learned enough about ourselves and our history to avoid the same mistakes as we have made on Earth? Preserving the pristine, unspoiled expanses of space is a recurring theme, much as it is important to preserve wetlands, rainforests, and other natural wonders here on Earth. We have already littered the orbital environment in space with floating debris that we need to track so that spacecraft and satellites navigate around, not to mention abandoned equipment on the Moon and Mars. So what safeguards are in place to ensure we do not exacerbate this problem, especially if we propose to increase space traffic? Furthermore, are we prepared to risk accidents in space from the technologies we might use, such as nuclear power?

2NC/1NR Impact Extensions – Colonization Aff (2/2)

Exploration and colonization will inevitably fail without the alternative because stable human interaction requires including critical perspectives.

PASS, 2006
[Jim, Astrosociology.com and Long Beach City College, "Astrosociology as the Missing Perspective" *Astropolitics,* v.4 n.1]

Space exploration serves as the heart of astrosocial phenomena in that this connotes humans continuing their investigation of the unknown. Astronomy, robotic missions to other cosmic bodies, the work of space engineers, and space settlement all represent examples of astrosocial phenomena and characterize space exploration. The human, or social, component represents the focus of astrosociology. It ties together the space environment and the social environment. Astrosocial phenomena do not strictly include human behavior in space, but also human behavior related to space, such as the work of engineers and policy makers on Earth. Some of these individuals are in space from time to time, but most still conduct their work on terrestrial soil at this early point in the space age. In all likelihood, this particular social pattern will not continue too much longer. A crucial example relates to the space settlement of space. To construct a space colony, or space society, the social sciences become unquestionably essential to understanding the implications, and thus, to planning such missions.3 At some point, organizations from various societies will start to develop plans for circumstances in space that require a different model than the small crew configuration. Large populations in space require thoughtful construction of both the social and physical environments. We currently find ourselves unprepared for this contingency because sociological and social science considerations receive very little acknowledgment from space scientists and engineers. The status quo cannot continue lest we find ourselves capable of engineering and manufacturing physical environments in space without the capacity to construct stable social environments.

Critical Astropolitics 2AC (1/4)

1. The Alternative does not solve the case because it does not include the plan. This means our Harms scenarios are disadvantages to voting Negative because our impacts are guaranteed to happen. Only voting Affirmative can solve extinction.

2. Permutation: Do the plan and the alternative. Combining theoretical perspectives with applied science and pragmatic policymaking is the best approach.

PASS, 2006
[Jim, Astrosociology.com and Long Beach City College, "Astrosociology as the Missing Perspective" *Astropolitics,* v.4 n.1]

Astrosociology expands the traditional focus by adding social and cultural issues to the current approach of considering engineering and technical issues. The limited exception is human factors, an approach that most often examines practical behavioral considerations related to the human interface with space equipment. Applied astrosociology provides a more comprehensive perspective by expanding human factors. Through collaboration with existing space scientists and engineers, this new approach will allow for the formal input from social scientists in the planning and implementation of space projects and missions.5 With this new interdisciplinary approach, a more balanced understanding of the issues is achieved. Space policy will benefit greatly from the work of applied astrosociologists. Currently, this balance is missing, though this can certainly change with the development of astrosociology as discussed in the next section of this article.

3. Link Turn - The emptiness of space means humans will inevitably cooperate after the plan, not compete.

HICKMAN, 2010
[John, Berry College, "Viewpoint: Extraterrestrial National Territory and the International System" *Astropolitics,* v.8 n.1]

The prospect of spacefaring states claiming sovereign national territory conjures the possibility of barbarism, for between the first and last territorial claims on any celestial body, the sovereign national territory of at least one state would have a frontier border, an international juridical "wilderness." It has been a century since that condition obtained anywhere on Earth. That such wilderness would be as empty of human barbarians, as they are of resentful extraterrestrial natives, should be sufficient reason to overcome any resulting anxiety. A better prediction is that extreme isolation and physical vulnerability would cause human settlements on celestial objects to lend one another support.

Critical Astropolitics 2AC (2/4)

4. Link Turn - Claiming space territory in the name of the United States will decrease conflict by guaranteeing stability and vulnerability for other powers.

HICKMAN, 2010
[John, Berry College, "Viewpoint: Extraterrestrial National Territory and the International System" *Astropolitics,* v.8 n.1]

The claim that competition between spacefaring states for new sovereign national territories on celestial bodies would result in an increased chance of armed conflict is one of arguments deployed in defense of the Outer Space Treaty.15 This echoes the theory, articulated first by Hobson and then elaborated by Lenin, that competition for colonies would be a pretext for militarism or would lead to war between the powers.16 That it failed to adequately explain the causes, conduct, and postwar settlements of the two world wars does not mean that this idea enjoyed any less currency when the Outer Space Treaty was being drafted.17 The Marxist intellectual tradition of treating territorial sovereignty as atavistic continued into the latter half of the 20th century. Therborn, for example, described feudal states as waging war for territory to extract agricultural surpluses from peasants, and capitalist states as waging war for territory to capture and monopolize raw materials and markets.18 Socialist states, on the other hand, might engage in conflict with one another only over differences of ideology and not the economic value of territory. Unfortunately, however, this fails to account for the unwillingness of socialist states to concede terrestrial territory in disputes with other states, socialist or otherwise, and the willingness of capitalist states to accede to the collective ownership of the extraterrestrial remainder of the cosmos with the Outer Space Treaty. Although the history of imperialism presents numerous wars, by the 19th century many of those wars involved the conquest of traditional states or non-state polities by one of the powers, rather than interstate wars between the powers. Scholars identifying an association between incidence of inter-state war and territorial aggrandizement in the 19th century must exclude colonial territory from their calculation.19 Diplomacy, rather than interstate war, decided territorial sovereignty over vast areas, including Australasia, the central Pacific, and most of sub-Saharan Africa. Diehl and Goertz found that violence was associated with only approximately one-fourth of the changes in territorial sovereignty occurring between 1816 and 1980, and those involving colonial territories were least likely to be violent.20 The sale of territory accounts for many transfers of sovereignty, including one-half of the continental territory of the United States: the Mississippi Valley from France in 1803; Florida from Spain in 1819; portions of southern Arizona and New Mexico from Mexico in 1848; Alaska from Russia in 1867; and the Virgin Islands from Denmark in 1917. Some territory was sold more than once. Having sold St. Barthe´lomey Island to Sweden in 1784, France bought it back in 1878. As with other types of items offered for sale, territory did not always find a buyer. Thus, Ecuador offered to sell the Gala´pagos Islands first to the United States and later to France and Chile, but without success.21 Surely, the most telling example of peaceful resolution of territorial interests is that Britain, the United States, and Russia divided northwestern North America without war. The closest the United States and Britain came to war over the northwest was the risible 1859 Pig War over the San Juan Islands in Puget Sound. So cordial were subsequent relations between the United States and Canada, that in 1879, Canada

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Critical Astropolitics 2AC (3/4)

[The Hickman evidence continues, with no text deleted…]

helped the United States maintain order in its recently acquired Alaskan territory with a timely show of force by the Canadian warship Osprey, which deterred a threatened uprising by the Tlingit. In 1903, the United States and Canada resolved their boundary dispute over the precise location of the international border that separated the Canadian Yukon and British Columbia from American Alaska through the eminently civilized mechanism of the Alaska Boundary Commission. Mandel found that international border disputes tended to involve states with low levels of technology and land important for its ethnic population, rather than its resources.22 Neither condition would obtain in the case of rival claims for extraterrestrial territory by spacefaring states. Competition for sovereign extraterrestrial territory is thus unlikely to lead to war between spacefaring states because they can follow the example of the great powers in the 19th century and negotiate resolution of rival claims. Far from being a cause for war between spacefaring states, in the near-term, the possession of extraterrestrial territories might prevent war. The extreme environment of space and the necessity to maintain the atmospheric integrity of crewed spacecraft and human bases make them extraordinarily vulnerable to attack. While the immense distances between celestial bodies would offer protection because of increasing warning time, mutual vulnerability would mean that human spacecraft and human bases of spacefaring states would be hostages guaranteeing peaceful conduct. In other words, every spacefaring state would have a keen interest in protecting its personnel or investments in space. As with nuclear deterrence between the United States and Soviet Union during the Cold War, mutual vulnerability to attack would give the potential belligerents reasons to negotiate their differences, rather than resort to force.

5. The 1AC's assumptions were derived from generations of human observation on Earth, and these assumptions will apply to conflict in space.

KLEINBERG, 2007
[Howard, The George C. Marshall Institute, Washington, D.C.,, "On War in Space" *Astropolitics,* v.5 n.1]

The nature of warfare does not change fundamentally just because the nodes are orbiting in space and the lines are electromagnetic in nature. There is still the large-scale human aspect at the core of this, of national, or sufficiently large and capable nonstate groups, interests, goals, leadership, and physical, fiscal, and psychological strengths and vulnerabilities, all essential aspects of human societies and groups in conflict. These factors have not changed since warfare first began. Deception, maneuver, and concentration, and so on, all continue to hold true for space as much as for any other medium. Hence, the warfighting theories from Sun Tzu, Clausewitz, Liddell-Hart, and the like, can and must all be brought to bear to provide the overall guiding ideas for space warfare theory. All of these aspects, from the perspectives of military strategy, airpower theory, and of technological advantage, resulted in the principles of Space Warfare Theory and Strategy developed herein.

Critical Astropolitics 2AC (4/4)

6. Their impacts are inevitable and the Alternative can't solve: Nation-states will inevitably be the main actors in space, and this guarantees nationalism and boundary-making continue.

JAKHU AND BUZDUGAN, 2008
[Ram and Maria, Institute of Air and Space Law, McGill University; "Development of the Natural Resources of the Moon and Other Celestial Bodies: Economic and Legal Aspects," *Astropolitics,* v.6 n.3]

We should keep in mind that irrespective of the increasing significance of the private entities in the space sector, states remain almost exclusively the subjects of international law. Peter Malanczuk correctly asserts that, "even much more than in general international law, there is no doubt that states are still the primary and predominant actors in space law. Legally speaking, this is a clear consequence of the fact that it is states which create space law in the form of treaties, custom or other international instruments and which provide for rights and duties of other entities. States also create international organizations active in outer space and regulate, supervise and license private operators within their national jurisdiction who must conform to the international treaty obligations which states have accepted."84 There should be no doubt that, at least in the near future, states will remain the main actors in the creation and implementation of law respecting space activities, including those that relate to space resource utilization. In other words, the scope, nature, and extent of participation by private entities in space are, and would be, determined by their respective states according to their national policies and regulatory mechanisms.

1AR Extension To 2AC #1: "Alternative Doesn't Solve Case"

Extend our 2AC #1, that the alternative can't solve our harms.

Space policy can't be delayed – enemies will catch up to our technological advantage unless we act now.

KLEINBERG, 2007
[Howard, The George C. Marshall Institute, Washington, D.C.,, "On War in Space" *Astropolitics,* v.5 n.1]

New weapons development programs take years or decades in some cases,64 a crucial factor in the space weapons decisionmaking process that cannot be overlooked. Critics of space weaponization contend that space weapons are unnecessary at the present time, and that the West's considerable intelligence-gathering capabilities and communities will provide plenty of warning in advance of any space weapons programs, time enough for the U.S. to deploy its own space weapons.65 However, such confidence should be tempered by recent revelations that U.S. intelligence analysts were not focused on the implications of a great many critical Chinese weapons technology programs in recent years, including Chinese efforts directed at the development of comprehensive space power capabilities.66 This shortcoming on the part of the U.S. intelligence community is by no means a unique event in the annals of espionage, as illustrated by many notable examples from Pearl Harbor through 9=11.67 The proposed "wait until it's a real danger" approach fails to address the aforementioned issue of the years required to produce modern weapon systems, years during which wars could be fought and lost as a result of enemies having space weapons while the U.S. does not. The margins of error between what is and what is known are simply too great, given the stakes involved in space, and years of preparation time required. Without a sufficient commitment to purpose, some programs would be first underfunded, and then postponed from one year to the next, with no actual systems produced, a path that is effectively as inadequate as doing nothing at all. Above all, preparation time must not be allowed to become reaction time. If an adversary is first to deploy or use space weapons, then it may already be too late for the U.S. to do anything about it. Loss of a war in space would be utterly catastrophic for the U.S. and for the world.

1AR Extension To 2AC #2: "Permutation – Do Both"

Extend our 2AC #2, the permutation to do both the plan and the kritik.

Even if the 1AC didn't include a human perspective, the permutation can incorporate the alternative.

PASS, 2006
[Jim, Astrosociology.com and Long Beach City College, "Astrosociology as the Missing Perspective" *Astropolitics,* v.4 n.1]

Collaboration among scientists from multiple disciplines inevitably results in a more comprehensive understanding of the relationship between space and society. Through formal interdisciplinary collaboration, scholars from currently isolated disciplines may work together on a consistent basis and contribute to the same literature. In doing so, they will become exposed to new ideas not common in their own discipline. This new reality, characterized by formalized collaboration, marks the beginning of a new era in the study of outer space by adding to the equation 1) human beings, 2) their cultural ideas, norms, and material culture, and 3) their social structures. The journal Astropolitics incorporates these ideas into its solicitation policy. Astrosociology can carry this process further by serving to reorganize how potential astrosociologists coordinate their work in a much more inclusive manner.

1AR Extension To 2AC #3: "Link Turn – Humans Will Cooperate in Space"

Extend our 2AC #3, our link turn which says that humans will cooperate in space.

Capitalism only corrupts elites on Earth because resources are scarce; in space, there will be enough resources that elites will be compelled to distribute fairly.

HICKMAN, 2010
[John, Berry College, "Viewpoint: Extraterrestrial National Territory and the International System" *Astropolitics,* v.8 n.1]

A different anxiety associated with the human occupation of celestial bodies is that it would diminish interest among elites in solving terrestrial problems. Might the terrestrial majority be abandoned to their fates by a spacefaring minority? The brutally honest answer is that living solely on the Earth has not made our species more responsible. Indeed, it might produce more irresponsibility because problems of global governance become zero sum struggles. The more politically acceptable answer is that additional power resources available to spacefaring states, because of their annexations of extraterrestrial territories, would give them the means to better support global governance. That might be coupled with the promise that extraterrestrial occupations in the form of human-tended bases offer our species, and other dependent species, better odds of surviving an otherwise existential catastrophe on Earth.

1AR Extension To 2AC #4: "Link Turn – Nations Will Cooperate in Space"

Extend our 2AC #4, the link turn which says that nations will cooperate in space.

Space development will decrease conflict in the short-term because of concerns over vulnerabilities.

HICKMAN, 2010
[John, Berry College, "Viewpoint: Extraterrestrial National Territory and the International System" *Astropolitics,* v.8 n.1]

The increased risk of war caused by international competition between spacefaring states, for sovereign national territory on celestial objects, is likely to be exposed as false sometime during the twenty-first century. Rather than increasing the likelihood of war between the spacefaring states, it should instead reduce it in the near-term, because of the mutual vulnerability of human spacecraft and human-tended bases, and over the long-term, by making spacefaring states less vulnerable to terrestrial warfare. When that competition for extraterrestrial territory begins, the total national territories of a small number of spacefaring states will increase enormously in a succession of annexations that move from celestial body to celestial body.

1AR Extension To 2AC #5: "War Predictions Hold True"

Extend our 2AC #5, our evidence proves that our foreign policy experts' predictions about preventing war are still true in space.

Even if it isn't completely accurate, relying on deterrence theory is necessary to delay conflict in the short-term because policymakers will inevitably revert to it.

COLETTA, 2009
[Damon, United States Air Force Academy, "Space and Deterrence" *Astropolitics,* v.7 n.3]

Deterrence offers a feasible solution to U.S. vulnerability in space. Presidents may avert their eyes, but they cannot turn their back on the strategy. To paraphrase a former secretary of defense, they must defend satellite constellations with what they have. It follows that useful advice for a new president dealing with space security will highlight rather than obfuscate the dilemma of how to make the risk of apocalyptic madness real enough for hardened adversaries without straying too far from American values. The most obvious way to lighten the burden of deterrence recruits measures normally described as part of control or avoidance. In the Cold War context, Air Land Battle doctrine of the 1980s provided a proportional, non-nuclear response to a Soviet armor offensive, and the Berlin Airlift of 1948–1949 made it possible for Allied Powers to concede the ground corridors from Western Germany for several months without going to war. Similarly, for 21st century space, control or avoidance measures will not advance far enough to protect U.S. space operations on their own. The costs in weaponization, force structure, or foreign policy retreats are likely to run too high. At the same time, smaller investments in control and avoidance tactics can still create maneuvering room and buy time for maintaining control during a crisis, putting off the terrible, indeed irrational choice at the last stage of what is ultimately deterrence strategy. The U.S. may learn to fight or hide under conditions of tight budgets and scarce political capital well enough to prevent the horrific, yet eminently functional architecture of its deterrence strategy from being stripped to its bare essentials.

Topicality – Table of Contents

Affirmative Answers

Lunar Mining Topicality 1NC – "Its means governmental"

A) Interpretation: The word "its" in the resolution means the development of space must be done solely by the United States federal government.

'Its' is possessive and shows ownership.

USINGENGLISH.COM, no date
["Term: Possessive Pronoun," http://www.usingenglish.com/glossary/possessive-pronoun.html]

Mine, yours, his, hers, its, ours, theirs are the possessive pronouns used to substitute a noun and to show possession or ownership. EG. This is your disk and that's mine. (Mine substitutes the word disk and shows that it belongs to me.)

B) Violation: The plan only encourages private companies to develop outer space. The United States federal government itself is not conducting the mining.

C) Topicality is a reason to vote Negative:

1) Predictable Limits – There are an infinite number of actors or combinations of actors capable of developing space. If the Affirmative is allowed to encourage any of them, the Negative will never be prepared with specific case research or links to disadvantages.

2) Grammar – The word 'its' has a very precise grammatical function when it modifies "United States federal government". Ignoring that for one word justifies ignoring the function of every word, which makes the resolution a meaningless sentence. Precise resolutional meaning is necessary for the Negative to predict what the Affirmative can do in the 1AC.

3) Extra-Topicality – Even if the plan involves the United States federal government, it also involves private businesses. This allows the Affirmative to claim unfair and unpredictable advantages, and also proves the resolution alone is not enough to vote Affirmative.

2NC/1NR Extensions: Answers To 2AC #1: "We Meet"

They say they meet our definition because only the government can do property rights, but…

____ Extend our interpretation, "its" is possessive and means the United States federal government must actively do the development. The plan doesn't meet this because it has private companies develop the Moon using federal government revenue, which is not the same thing. A topical affirmative would set up federal government mining settlements on the Moon instead of private mining settlements.

____And, only our interpretation makes sense because "its" is a term of exclusion, meaning ONLY the federal government can be involved.

FREY, 28
[Judge for Supreme Court of Missouri; Case Number - 320 Mo. 1058; 10 S.W.2d 47; 1928 Mo. LEXIS 834; lexis-nexis]

In support of this contention appellant again argues that when any ambiguity exists in a will it is the duty of the court to construe the will under guidance of the presumption that the testatrix intended her property to go to her next of kin, unless there is a strong intention to the contrary. Again we say, there is intrinsic proof of a [*1074] strong intention to the contrary. In the first place, testatrix only named two of her blood relatives in the will and had she desired [***37] them to take the residuary estate she doubtless would have mentioned them by name in the residuary clause. In the second place, if she used the word "heirs" in the sense of blood relatives she certainly would have dispelled all ambiguity by stating whose blood relatives were intended. Not only had [**53] she taken pains in the will to identify her own two blood relatives but she had also identified certain blood relatives of her deceased husband. Had it been her intention to vest the residuary estate in her blood relatives solely, she would certainly have used the possessive pronoun "my" instead of the indefinite article "the" in the clause, "the above heirs."

2NC/1NR Extensions: Answers To 2AC #2: "We Meet"

They say they meet our definition because development is in the context of private companies, but…

____Context is unpredictable because anyone on the internet can write the word "development" without giving it a precise meaning. Only our interpretation gives good Negative ground by limiting the plan to a single actor. They still justify using any private actor, which makes case research impossible.

2NC/1NR Extensions: Answers To 2AC #3: "Counter-Interpretation"

They say that we should counter-interpret "Its" as meaning "coming from," but…

____This interpretation justifies almost anything as topical. "In some way related to" has no limit, which means the Affirmative can do anything and the Negative would never be prepared to debate. Limits are the most important standard because they determine a fair division of ground.

____Our interpretation is still the best because of grammar: "its" modifies "United States federal government," so that is the only predictable actor in the resolution.

2NC/1NR Extensions: Answers To 2AC #5: "No Abuse – Part of Budget"

They say their case isn't abusive because private companies are a part of the space development budget, but…

____There is abuse because the Affirmative is able to claim advantages based on private companies, and not just the federal government. All of our case research and disadvantage links are about the government, so we aren't prepared to clash with these other unpredictable advantages.

2NC/1NR Extensions: Answers To 2AC #6: "Extra-Topicality Not a Voter"

They say that Extra-Topicality is not a voter, but…

____Extra Topicality is a voting issue: it creates unpredictable Affirmative ground that we can't research ahead of time because we don't know where to start. This artificially hurts our disadvantages, and means the Negative will always lose because they can take actions beyond the scope of the topic.

____Rejecting the non-topical parts of the plan does not solve this, because it forces us to win our Topicality violation in order to go for our disadvantages. This creates time pressure on the 2NR by requiring extending multiple positions, while the 2AR can focus on the one position they are winning.

2NC/1NR Extensions: Answers To 2AC #7: "Reasonability"

They say they shouldn't lose if they're reasonably Topical, but…

____You should default to a standard of competing interpretations. Reasonability is arbitrary because every judge will have a different idea of what a "good" interpretation is. Weighing the costs and benefits of each interpretation and judging the plan based on the best one is the only way to put the round in the hands of the debaters, which encourages more education.

Missile Defense Topicality 1NC – "Development Is Peaceful"

A) Interpretation: The word "development" in the resolution means the project must be peaceful.

HWANG, 6
[Chin Young, Policy and International Relations Division at Korea Aerospace Research Institute, "Space Activities in Korea—History, Current Programs and Future Plans," *Space Policy,* vol. 22, n. 3]

Space development in Korea has several characteristics. First, space development activities are initiated by a scientific research institute, KARI, and a university, KAIST SaTRec, for peaceful purposes. Most development projects have been proposed by research institutes, not government decision makers. Second, most satellite missions are multipurpose. Since space development has not been initiated by the top levels of government, funding has to be sought by research institutes and MOST. In order to get enough funds, missions must be able to meet various requirements of related ministries. At the same time, each space development project has to justify its feasibility in terms of an economic cost–benefit analysis. Third, Korean space activities have been focused on hardware—development of satellites and launch vehicles—rather than on the development of a full vision and the missions that would accompany this. The national space development plan reflects these characteristics, even though it contains some mention of space science and manned missions to the ISS through the international cooperation program.

B) Violation: The plan creates an offensive weapon system, which is not a peaceful satellite program.

C) Topicality is a reason to vote Negative:

1) Unidirectionality – "Development" is the key narrowing term in the resolution so it must be given a precise, unidirectional meaning. Allowing it to mean anything would make every plan topical and hurt clash and research-based education because the plan could have built-in link turns to generic disadvantages.

2) Legal Context – Only definitions coded in law should count because they are most predictable for a policymaker. Anyone can write a generic definition, but government-based definitions are more precise and come out of warranted debates.

2NC/1NR Extensions: Answers To 2AC #1: "We Meet"

They say they meet our definition because missile defense is peaceful, but..

____This is just spin. Our definition mentions satellites with an economic basis as examples of peaceful space programs, and clearly lasers designed to shoot down missiles do not count.

____Here's more contextual evidence that United States space development programs should be tailored toward peaceful economic gain:

HSU AND COX, 2009
[Feng, Ph.D. and Senior Fellow with Aerospace Technology Working Group; Ken, Ph.D. and Founder & Director of Aerospace Technology Working Group; "Sustainable Space Exploration and Space Development - A Unified Strategic Vision," 2/20, http://www.spacerenaissance.org/papers/A-UnifiedSpaceVision-Hsu-Cox.pdf]

In our view, even with adequate reform in its governance model, NASA is not a rightful institution to lead or manage the nation's business in Space Development projects. This is because human space development activities, such as development of affordable launch vehicles, RLVs, space-based solar power, space touring capabilities, communication satellites, and trans-earth or trans-lunar space transportation infrastructure systems, are primarily human economic and commercial development endeavors that are not only cost-benefit-sensitive in project management, but are in the nature of business activities and are thus subject to fundamental business principles related to profitability, sustainability, and market development, etc. Whereas, in space exploration, by its nature and definition, there are basic human scientific research and development (R&D) activities that require exploring the unknowns, pushing the envelope of new frontiers or taking higher risks with full government and public support, and these need to be invested in solely by taxpayer contributions.

2NC/1NR Extensions: Answers To 2AC #2: "Counter-Interpretation"

They say we should counter-interpret "Development" as making technology systems work, but…

____This doesn't achieve fair limits because it allows any technology to be topical. Every space policy involves developing a new technology, so the Negative would never be able to predict what the Affirmative would be defending. Forcing a unidirectional interpretation of "development" is better because we get stable links to generic disadvantages.

____Predictable ground is the most important standard because it determines whether the Negative has arguments that clash with the Affirmative. Without clash, debate isn't educational.

2NC/1NR Extensions: Answers To – #4

____There is abuse because the Affirmative can defend literally any technology. This gives them an unfairly large set of arguments to work with, while the Negative is stuck with stale generics like the Spending disadvantage. On a topic with this much literature, it is important to limit the Affirmative as much as possible so that we can have in-depth case debate against all of their advantages. Otherwise, they will always outweigh and we can never win.

2NC/1NR Extensions: Answers To – #5

____You should default to a standard of competing interpretations. Reasonability is arbitrary because every judge will have a different idea of what a "good" interpretation is. Weighing the costs and benefits of each interpretation and judging the plan based on the best one is the only way to put the round in the hands of the debaters, which encourages more education.

Colonization Topicality 1NC - "Space Excludes Planets"

A) Interpretation: "Space" is the vacuum between celestial bodies, excluding planets, moons, or asteroids.

ABOUT.COM, No Date
[Nick Greene, "Outer Space," http://space.about.com/od/glossaries/g/outerspace.htm]

Definition: Typically, outer space is defined based on our own perspective here on planet Earth as the area beyond the atmosphere of Earth. However, thinking on a universal scale, outer space would be the large void which occupies the (relatively) empty areas of the universe outside the atmosphere of any planet, star or other celestial body.
Also Known As: Space, Deep Space

B) Violation: The Affirmative plan targets development at celestial bodies, and not at space.

C) Topicality is a reason to vote Negative:

1) Limits: There are an infinite number of planets, moons, asteroids, satellites, debris objects, and spacecraft that an Affirmative could target. This makes the resolution completely unwieldy, and makes case –specific research for links or negative arguments impossible.

2) Grammatical Precision: The resolution says "space," and not "objects in space." This is meant to differentiate between the area around the Earth and the objects in that area. You should default to the most precise reading of the words in the resolution because any other interpretation is speculative and subjective, making research unpredictable.

2NC/1NR Extension: Answers To 2AC #1: "We Meet"

They say they meet our definition because they use space for transport and satellites, but…

____They do not meet. Our interpretation is specific and exclusive: "space" is defined as the area BETWEEN the planets, not including the planets themselves. A topical version of the plan would only create satellites, not bases on other planets.

____Here's more exclusive evidence:

RENNISON, 2007
[Susan, author of the book *Tuning the Diamonds – Electromagnetism & Spiritual Evolution,* "Science Talk: Towards a New Paradigm Part II – The Subtle Planes of Matter ," Oct, http://www.susanrennison.com/Index_sciencetalk2.htm]

SPACE: Space is defined as that which separates bodies of matter. Space has no objective reality except as an order or arrangement of the objects we perceive in it.

____And NASA reports prove our argument:

EVANS, KRAUS, AND PITTS, 65
[D.E., G.L., D.E., NASA Technical Reports, "Venus and mars nominal natural environment for advanced manned planetary mission programs," 1/01, http://hdl.handle.net/2060/19650014198]

Inter-planetary space is defined as the spatial volume between the planets extending from the Sun to the Outer limit of the solar System. This section primarily concerns environmental parameters for interplanetary space from 0.5 so 1.75 astronomical units (A.v.).

____Even if they do things in space, they also do things in areas that are not included in our definition of space. This makes them Extra Topical, because they go beyond the bounds of the Resolution. Extra Topicality is a voting issue because it generates artificial and unpredictable Affirmative ground that doesn't link to topic-specific arguments.

2NC/1NR Extension: Answers To 2AC #2: "Counter-Interpretation"

They say that we should counter-interpret Space to mean anything beyond Earth and including any celestial body, but…

____This interpretation explodes limits. There are an infinite number of asteroids, moons, planets, starts, debris objects, and space stations that the Affirmative could target, and each one carries different minerals and strategic advantages that require unique Negative research. Even if there are a lot of places in space to put a satellite, the Affirmative's interpretation includes them and then exponentially increases the number of plans beyond that.

____Government precision supports our argument. Other countries recognize space as the area between planets, not including them.

REPUBLIC OF SOUTH AFRICA, No Date
[Department of Science and Technology, "NATIONAL SPACE SCIENCE AND TECHNOLOGY STRATEGY," v. 1.3, http://www.dst.gov.za/Draft%20National%20Space%20Science%20and%20Technology%20Strategy.pdf]

Space is defined as that area beyond the Earth's measurable atmosphere which has very few particles of any size and is flooded with electromagnetic energy. It is generally agreed internationally that the exploration of space (and application of space technologies) is essential for solving some of the challenges that society is facing, or going to face in the future. It is also agreed that space activities should only be conducted for the benefit of 'all' mankind, and not to undermine international peace and security. Substantial progress has, therefore, been made in considering the spin-off benefits of space exploration, ensuring that space is maintained for peaceful purposes, and demonstrating how space activities could enrich daily life.

____The best ground is predictable. Allowing the Affirmative to target individual planets gives them a huge advantage without increasing the strength of Negative arguments, which means the Aff would always outweigh the predictable disadvantages. There are a good number of plans involving empty space, which fairly divides the ground for both sides.

2NC/1NR Extension: Answers To 2AC #4: "No Abuse"

They say their case isn't abusive because we don't lose any links to Disadvantages, but…

____Our argument isn't about link ground, it's about Affirmative advantage ground. If they get to claim huge, planet-specific advantages about particular minerals or colonization potential, we will not have arguments to answer the case but they will still have arguments against our generic disadvantages. This is equivalent to taking away our disads because we can't win impact calculus.

____Generics aren't as good as specific arguments. Debate is more educational when both sides can research in-depth responses to the arguments. The amount of planets in the universe discourages specific research and forces the Negative to rely on generic arguments. Even if there are a lot of places to put satellites, this interpretation shares a common literature base which means we could get very in-depth on satellite deployment without having to know exactly what the Affirmative plan would do.

2NC/1NR Extension: Answers To 2AC #5: "Reasonability"

They say they shouldn't lose if they're reasonably Topical, but…

____You should default to a standard of competing interpretations. Reasonability is arbitrary because every judge will have a different idea of what a "good" interpretation is. Weighing the costs and benefits of each interpretation and judging the plan based on the best one is the only way to put the round in the hands of the debaters, which encourages more education.

China Cooperation Topicality 1NC - "Increase is Immediate"

A) Interpretation: "Increase" implies immediacy and mandate, meaning the Affirmative plan must directly result in a positive change from the status quo.

HIGHER EDUCATION FUNDING COUNCIL, 2004
[Joint Committee on the Draft Charities Bill, "Memorandum from the Higher Education Funding Council for England (DCH 137),"
http://www.publications.parliament.uk/pa/jt200304/jtselect/jtchar/167/167we98.htm

9.1 The Draft Bill creates an obligation on the principal regulator to do all that it "reasonably can to meet the compliance objective in relation to the charity".[45] The Draft Bill defines the compliance objective as "to increase compliance by the charity trustees with their legal obligations in exercising control and management of the administration of the charity".[46] 9.2 Although the word "increase" is used in relation to the functions of a number of statutory bodies,[47] such examples demonstrate that "increase" is used in relation to considerations to be taken into account in the exercise of a function, rather than an objective in itself. 9.3 HEFCE is concerned that an obligation on principal regulators to "increase" compliance per se is unworkable, in so far as it does not adequately define the limits or nature of the statutory duty. Indeed, the obligation could be considered to be ever-increasing.

B) Violation: The plan does not create an immediate increase, but develops a program for cooperation that will eventually develop space once satellite plans are created and then implemented.

C) Topicality is a reason to vote Negative:

1) Effects Topicality – The Aff justifies taking an endless number of steps before the topical action happens. This is unpredictable and allows them to claim artificial advantage that will outweigh long-term links to generic disads.

2) Predictable Limits – Allowing an increase at any point in the future makes literally anything topical: chewing bubblegum today could increase Wrigley's profit allowing them to invest in satellite technology and develop space. The best interpretation forces the Aff to be intrinsically connected to space development.

2NC/1NR Extension: Answers To 2AC #1: "We Meet"

____The Plan doesn't meet our interpretation. "Increase" means you measure the amount of development immediately after the Plan passes to see if there is a change from the status quo, and in this case there is no change. The implementation of this plan requires China to agree, then a satellite to be developed, then the deployment of that satellite, and finally our links will apply. That is too many steps, and Effects Topicality is a voting issue because they can claim unpredictable advantages before the plan eventually becomes topical.

2NC/1NR Extension: Answers To 2AC #2: "Counter-Interpretation"

____This explodes limits by making any policy that could eventually create space policy topical. Expanding pre-school funding could make kids smarter, which gets them to go to engineering programs for graduate school, which gets one to invent a new spaceship, which then gets developed and goes to space… If anything is topical, then the Negative won't have disadvantages prepared against anything.

____Default to the interpretation that requires the least intervention. The simplest way to determine an increase is to look at space development immediately before and immediately after the plan. If we have to wait and look at Solvency before we can determine if an increase has taken place, this mixes burdens.

RIPPLE, 87
[Circuit Judge, Emmlee K. Cameron, Plaintiff-Appellant, v. Frances Slocum Bank & Trust Company, State Automobile Insurance Association, and Glassley Agency of Whitley, Indiana, Defendants-Appellees, 824 F.2d 570; 1987 U.S. App. LEXIS 9816, 9/24, lexis-nexis]

Also related to the waiver issue is appellees' defense relying on a provision of the insurance policy that suspends coverage where the risk is increased by any means within the knowledge or control of the insured. However, the term "increase" connotes change. To show change, appellees would have been required to present evidence of the condition of the building at the time the policy was issued. See 5 J. Appleman & J. Appleman, Insurance Law and Practice, § 2941 at 4-5 (1970). Because no such evidence was presented, this court cannot determine, on this record, whether the risk has, in fact, been increased. Indeed, the answer to this question may depend on Mr. Glassley's knowledge of the condition of the building at the time the policy was issued, see 17 J. Appleman & J. Appleman, Insurance Law and Practice, § 9602 at 515-16 (1981), since the fundamental issue is whether the appellees contemplated insuring the risk which incurred the loss.

____Inevitable steps in implementing space policy does not hurt our argument because those steps should be intrinsically related to the development of space. If the step could theoretically happen but not develop space, then the Affirmative isn't topical. "Engaging China" could do anything, which means it is a non-topical step.

2NC/1NR Extension: Answers To 2AC #4: "No Abuse"

They say that their case isn't abusive because we don't lose any Disadvantage ground, but…

____ Our best links are based on the actual development of space, like Space Weaponization or the Debris Disadvantage. Links to the perception of plan passing aren't topic-specific, which encourages the Negative to research hyper-generic arguments that ignore the topic entirely.

____This argument cuts both ways: if there are links to the perception of plan passing, then there are advantages the Aff can claim too. It is better to limit out non-topic specific arguments and focus on the most educational and predictable literature even if it cuts down both sides' ground a slight bit. Only our interpretation guarantees that every argument will be about space policy.

2NC/1NR Extension: Answers To 2AC #5: "Reasonability"

They say they shouldn't lose if they're reasonably Topical, but…

____You should default to a standard of competing interpretations. Reasonability is arbitrary because every judge will have a different idea of what a "good" interpretation is. Weighing the costs and benefits of each interpretation and judging the plan based on the best one is the only way to put the round in the hands of the debaters, which encourages more education.

Topicality – "Its Means Governmental" 2AC (Lunar Mining Aff) (1/3)

1) We Meet: The United States federal government is developing a property rights regime in space. Private companies cannot develop a legal concept, which proves the federal government is our actor.

2) Context proves We Meet: Encouraging private companies to invest in lunar projects is how NASA participates in development.

JOBES, 2005
[Douglas, president of the Space Settlement Institute; "Lunar Land Claims Recognition: Designing the Ultimate Incentive for Space Infrastructure Development," *Space Times*, May, http://www.space-settlement-institute.org/Articles/LCRSpaceTimesMay2005.pdf]

While the National Aeronautics and Space Administration (NASA) often interfaces with the private sector, the government cannot -- and should not -be expected to bear the entire burden for developing space. NASA's primary focus is exploration and discovery. That means a comprehensive approach to space development depends on finding ways to make space profitable for private industry -- if possible, convincing corporations, institutions, wealthy individuals, and venture capitalists to invest billions of dollars in space.

3) Counter-interpretation: "Its" means coming from.

WORLD ENGLISH DICTIONARY, no date
["its," http://dictionary.reference.com/browse/its]

its — determiner a. of, belonging to, or associated in some way with it: its left rear wheel

4) Reasons to Prefer the counter-interpretation:

a) Education – Private companies are the core of space development policy. Restricting the Aff to only the government means we ignore the majority of literature on the topic.

b) Overlimiting – The federal government includes private development of space in its definition, and the Neg's interpretation would make International Space Station Affirmatives untopical. This arbitrarily and unfairly restricts Affirmative ground.

Office of Management and Budget, no date
["Definitions of Research and Development: An Annotated Compilation of Official Sources," http://www.nsf.gov/statistics/randdef/fedgov.cfm]

Research and development facilities: Amounts for the construction and rehabilitation of research and development facilities. Includes the acquisition, design, and construction of, or major repairs or alterations to, all physical facilities for use in R&D activities. Facilities include land, buildings, and fixed capital equipment, regardless of whether the facilities are to be used by the Government or by a private organization, and regardless of where title to the property may rest. Includes the international space station and such fixed facilities as reactors, wind tunnels, and particle accelerators.

Topicality – "Its Means Governmental" 2AC (Lunar Mining Aff) (2/3)

5) No abuse: Tax incentives for private programs are part of the federal government's development budget, so every generic argument links to our plan.

CONGRESSIONAL BUDGET OFFICE, 2007
["Federal Support for Research and Development," June, http://www.cbo.gov/doc.cfm?index=8221&type=0&sequence=2]

Investments in research and development (R&D) have increased productivity, boosted economic growth, generated new products and processes, and improved the quality of people's lives.1 The possibility of profiting from a new product or process frequently leads businesses to invest substantial amounts of money in research and development. However, private investors cannot capture many of the benefits of their R&D spending, as the knowledge it produces may be used by others; consequently, the private sector may not make some investments that have positive social, or economic, returns—gains for society and for the economy as a whole. To address that problem of incentives and encourage more R&D investment, the government uses several policy tools, including appropriated spending for R&D activities, tax preferences for private-sector research and development, and protection of intellectual property through the copyright and patent systems. Analysts generally regard the government's funding of research and development as a way to partly offset the problems created by the difference between the returns that private parties achieve from their R&D investment—in the form of profits from new products and processes—and the returns that society may derive from those R&D activities. Federal spending has been critical to the funding of basic research (scientific inquiry that has no clear-cut commercial application but is nonetheless valued for the knowledge that results and the potential for future discoveries to grow from it). The tax preferences that policymakers have provided—the treatment of R&D spending as a fully deductible expense that can be subtracted from profits immediately rather than as an investment to be amortized and deducted over time, and the research and experimentation (R&E) tax credit—lower the cost of research and development, thereby increasing firms' after-tax returns on those activities and strengthening the incentives for firms to invest even more in research and development. In addition, the U.S. patent and copyright systems have features that encourage the private sector to fund R&D activities. Researchers who make a discovery often find it difficult to control who makes use of their work once it becomes public because the knowledge they produce may "spill over" and be used by others. Intellectual property protections, such as patents and copyrights, afford researchers—or, in some cases, the sponsors of research—legal control over the results of their work.2 Others wishing to make use of those results must secure permission by paying a licensing fee to the patent or copyright holder. The patent and copyright systems offer some protections against and compensation for others' use of a researcher's results, but they are an imperfect solution to the spillover effects that diminish the incentives for firms to invest in research and development. In some instances, costly delays and court battles over intellectual property protections may ensue, and licensees may not compensate patent holders for the full value of their findings. Moreover, the limitations on the life of a patent may not create strong incentives for firms to invest in research that could have a long path to development. Finally, although patents and copyrights encourage future R&D activities, they also have a cost: deferral of the social benefits that might result from the more immediate and widespread application of currently protected innovations. This Congressional Budget Office (CBO) study focuses on government-funded research and development—activities carried out in government laboratories or by academic researchers or private firms funded through federal grants or contracts—and tax incentives that encourage firms to perform research. For fiscal year 2007, federal budget authority (the legal authority to incur financial obligations resulting in outlays by the government) for research and development totals $137 billion.3 Tax incentives for R&D activities are estimated to have cost $9.9 billion in forgone revenues in fiscal year 2006. CBO's analysis discusses trends in those expenditures and examines the recent economics literature that has attempted to evaluate the economic effects of federal R&D programs.

Topicality – "Its Means Governmental" 2AC (Lunar Mining Aff) (3/3)

6) Extra-topicality is not a voting issue: if we win private companies receiving tax benefits are considered federal developers, then we are not outside the resolution. At worst, reject the extra-topical parts of our plan and hold us to the creation of property rights.

7) Default to reasonability: it's impossible for the Affirmative to win the round on topicality, so we should only need to provide a good interpretation rather than the best one. If both sides have ground and arguments, you should resolve the debate on substantive issues instead of topicality.

Topicality – "Development is Peaceful" 2AC (Missile Defense Aff) (1/2)

1) We Meet: Missile defense is a peaceful program, it is designed to prevent conflict and hopefully will never have to be used.

2) Counter Interpretation: "Development" is moving a technology program from a prototype to a working system.

Office of Management and Budget, no date
["Definitions of Research and Development: An Annotated Compilation of Official Sources," http://www.nsf.gov/statistics/randdef/fedgov.cfm]

The U.S. Office of Management and Budget (OMB) prescribes budget regulations for Federal agencies. Part II of Circular A-11 covers development of the president's budget and provides guidance on agency submissions to OMB. Section 84 of the circular defines R&D expenditures. The text can be found at http://www.whitehouse.gov/omb/circulars/a11/current_year/s84.pdf. Definition (as appears in the original source): Conduct of research and development (R&D): Research and development (R&D) activities comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications. Include: Administrative expenses for R&D. Exclude: Physical assets for R&D such as R&D equipment and facilities... Routine product testing, quality control, mapping, collection of general-purpose statistics, experimental production, routine monitoring and evaluation of an operational program, and the training of scientific and technical personnel. Definitions of basic and applied research and development are provided below... Basic research is defined as systematic study directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. Applied research is defined as systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met. Development is defined as systematic application of knowledge or understanding, directed toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.

3) Reasons to Prefer our interpretation:

a) U.S. government precision: Only our definition is from U.S. law. The Negative's interpretation comes from Korea, which is unpredictable because the Affirmative would never know which country's definition they were supposed to be meeting in any debate.

b) Fair limits: Our interpretation restricts the topic to plans that build new technology systems from an untested design. This limits out the vast majority of plans, while still maintaining room for Affirmative creativity. The Negative boxes us in to only one direction of advantages, which makes debates stale and uneducational.

c) Education – missile defense is at the core of United States space policy. Arbitrarily excluding it means excluding every military Affirmative, and that hurts education and research.

Topicality – "Development is Peaceful" 2AC (Missile Defense Aff) (2/2)

4) No abuse: there are no generic Negative disadvantages that only link to "peaceful" plans. They can run all the same arguments against our Affirmative, which means they have plenty of ground in this debate.

5) Default to reasonability: it's impossible for the Affirmative to win the round on topicality, so we should only need to provide a good interpretation rather than the best one. If both sides have ground and arguments, you should resolve the debate on substantive issues instead of topicality.

Topicality – "Space Excludes Planets" 2AC (Colonization Aff)

1) We Meet – Plan explores and develops space by utilizing it for transport and creating satellites necessary for colonization. Their interpretation is not exclusive: space can include both the area between planets, and the planets themselves.

2) Counter-interpretation: Space includes celestial bodies, and is limited as being beyond Earth's atmosphere.

THE FREE DICTIONARY, No Date
["Space," http://www.thefreedictionary.com/space]

2. a. The expanse in which the solar system, stars, and galaxies exist; the universe.
b. The region of this expanse beyond Earth's atmosphere.

3) Prefer our interpretation:

a) Literature-based Ground: The best literature about space policy contextually includes planets, moons, and asteroids. Artificially excluding this literature decreases education and divides arguments from their true contexts, making them arbitrary.

b) Government Precision: The only binding piece of international law on space is the Outer Space Treaty, and it includes planets:

GOROVE, 69
[Stephen, Chairman of the Graduate Program of the School of Law and Professor of Law, University of Mississippi, School of Law, "Interpreting Article II of the Outer Space Treaty," 37 Fordham L. Rev. 349 , http://ir.lawnet.fordham.edu/flr/vol37/iss3/2]

ARTICLE II of the Outer Space Treaty provides that "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 any other means."' Even a perfunctory glance at this provision seems to suggest a number of fundamental questions which will have to be resolved if man's spatial explorations are to take place within a framework of law and order and with a minimum of friction. The first question relates to the subject matter of appropriation, that is, what can or cannot be appropriated. The second query involves the meaning of "national" appropriation in contradistinction to "nonnational," such as, individual or international appropriation. The third inquiry centers around the meaning of the concept of appropriation. Finally, the fourth question, which is incidental to the third one, is whether there is any room for the exercise of some form or degree of sovereign authority, use or occupation which would be permissible despite the prohibition of Article I.

Topicality – "Space Excludes Planets" 2AC (Colonization Aff) (2/2)

c) Affirmative Creativity: Excluding planets means the only topical affirmatives involve satellite construction. This makes the topic stale and boring, and also rigs the game for the Negative by increasing the strength of generics while decreasing Affirmative advantage ground.

d) Logical Grammar: If planets aren't in space, then where are they? The inclusion of "beyond the Earth's mesosphere" in the Resolution proves that "space" is only meant to delineate a boundary with the Earth, and not to exclude other objects that exist beyond that boundary.

4) No abuse – All the same arguments like Spending, Politics, and Space Weaponization link to plans under our interpretation, so the Negative isn't losing link ground. The number of Affirmatives isn't any larger because there are an infinite number of orbits to put satellites in so small cases would be inevitable.

5) Default to reasonability: it's impossible for the Affirmative to win the round on topicality, so we should only need to provide a good interpretation rather than the best one. If both sides have ground and arguments, you should resolve the debate on substantive issues instead of topicality.

Topicality – "Increase is Immediate" 2AC (China Coop Aff) (1/3)

1) We Meet: The plan immediately creates a satellite development program that does not exist in the status quo. Either this meets their standard, or no plan is topical because every Affirmative involves building and launch periods that occur on Earth before they actually increase development in space. China doesn't get to veto the development of the satellite, we just invite them to participate.

2) Counter-interpretation: "Increase" is measured progressively after a period of time, not immediately. Federal agencies use this interpretation.

US COURT OF APPEALS FOR D.C., 2005

["STATE OF NEW YORK, ET AL., PETITIONERS v. U.S. ENVIRONMENTAL PROTECTION AGENCY, RESPONDENT, NSR MANUFACTURERS ROUNDT-ABLE, ET AL., INTERVENORS," lexis-nexis]

While the CAA defines a "modification" as any physical or operational change that "increases" emissions, it is silent on how to calculate such "increases" in emissions. 42 U.S.C. § 7411(a)(4). According to government petitioners, the lack of a statutory definition does not render the term "increases" ambiguous, but merely compels the court to give the term its "ordinary meaning." See Engine Mfrs.Ass'nv.S.Coast AirQuali-tyMgmt.Dist., 541 U.S. 246, 124 S. Ct. 1756, 1761, 158 L. Ed. 2d 529(2004); Bluewater Network, 370 F.3d at 13; Am. Fed'n of Gov't Employees v. Glickman, 342 U.S. App. D.C. 7, 215 F.3d 7, 2010 [*23] [**23] (D.C. Cir. 2000). Relying on two "real world" analogies, government petitioners contend that the ordinary meaning of "increases" requires the baseline to be calculated from a period immediately preceding the change. They maintain, for example, that in deter-mining whether a high-pressure weather system "increases" the local temperature, the relevant baseline is the tempera-ture immediately preceding the arrival of the weather system, not the temperature five or ten years ago. Similarly, [***49] in determining whether a new engine "increases" the value of a car, the relevant baseline is the value of the car immediately preceding the replacement of the engine, not the value of the car five or ten years ago when the engine was in perfect condition. EPA maintains that its choice of the ten-year lookback period is entitled to deference under Chevron Step 2 because it is based on a permissible construction of the ambiguous term "increases." 67 Fed. Reg. at 80,199. EPA disputes the validity of government petitioners' analogies, pointing out, for example, that if the weather system arrives in the evening, it is inappropriate to compare the nighttime temperature immediately following the arrival of the system to the daytime temperature immediately preceding the arrival of the system. The important point is that the period immediately preceding a change may not be analogous to the period following the change and thus may not yield a meaningful comparison for the purpose of determining whether the change "increases" emissions. Hence, government petitioners' reliance on the "ordinary meaning" of "increases" fails to address a practical reality. Indeed, during oral argument, [***50] counsel for government petitioners agreed that the provision in the 1980 rule for use of a "more representative" period not immediately preceding the change is consistent with the statutory language because some flexibility is needed to account for anomalous disruptions in operations. It follows that the statutory term "increases" does not plainly and unambiguously require the baseline period to immediately precede the change. Rather, the statute is silent or ambiguous on how to calculate baseline emissions, and the issue is whether the ten-year lookback period is based on a permissible interpretation of the statute under Chevron Step 2. [HN17] Under Chevron Step 2, a court must defer to the agency's interpretation of the ambiguous statutory term if it "represents a reasonable accommodation of conflicting policies that were committed to the agency's care by the sta-tute." Chevron, 467 U.S. at 845 (quoting United States v. Shimer, 367 U.S. 374, 383, 6 L. Ed. 2d 908, 81 S. Ct. 1554 (1961)). In particular, the agency's interpretation is entitled to deference when "the regulatory scheme is technical and complex, the agency considered the matter in a detailed and reasoned [***51] fashion, and the decision involves re-conciling conflicting policies." Id. at 865.

Topicality – "Increase is Immediate" 2AC (China Coop Aff) (2/3)

3) Prefer our interpretation:

a) Real World Policymaking: Multiple steps are inevitable in policymaking, so learning to predict and debate them is educational.

US COURT OF APPEALS FOR D.C., 79
["ALABAMA POWER COMPANY, ET AL., PETITIONERS * v. DOUGLAS M. COSTLE, as Administrator, ENVIRONMENTAL PROTECTION AGENCY, ET AL., RESPONDENTS; * SIERRA CLUB, ET AL., INTERVENORS" lexis-nexis]

An important [**201] issue under the Act arises from the problem of determining what types of industrial changes will be construed as "modifications" subject to PSD review requirements. Under the Act, the PSD permit and review process applies to construction and modification of major emitting facilities. As discussed in the previous section, the Act defines "modification" as any physical or operational change in a stationary source which "increases the [*401] amount of any air pollutant emitted by such source." 48 There are two possible ways to construe the term "increases." First, one can look at any change proposed for a plant, and decide whether the net effect of all the steps involved in that change is to increase the emission of any air pollutant this is commonly termed the "bubble" concept. Second, one can inspect the individual units of a plant, which are affected by an operational change, and determine whether any of the units will consequently emit more of a pollutant. In its regulations, EPA has adopted a qualified form of the "bubble" concept for defining modifications subject to PSD review. 48 Clean Air Act § 111(a)(4), 42 U.S.C. § 7411(a)(4) (Supp. I 1977). [**202] Congress did not, in any pertinent part of legislative history, specify which of these two constructions was to be controlling; 49 but an analysis of the implications of the two possible interpretations shows the second to be unreasonable and contrary to the expressed purposes of the PSD provisions of the Act. It is important first to recognize that alterations of almost any plant occur continuously; whether to replace depreciated capital goods, to keep pace with technological advances, or to respond to changing consumer demands. This dynamic aspect of American industry was not disputed by the parties. To apply the second construction of "increases," however, would require PSD review for many such routine alterations of a plant; a new unit would contribute additional pollutants, these increases could not be set off against the decrease resulting from abandonment of the old unit, and thus the change would become a "modification" subject to PSD review. Not only would this result be extremely burdensome, it was never intended by Congress in enacting the Clean Air Act Amendments.

b) Literature-based Ground: The only topical plan under their interpretation would have the United States federal government launch a satellite immediately. There is no literature supporting that action because space policy is in the context of development and deployment of new technologies.

c) Education: Only our interpretation allows debate about international relations or public/private partnerships because it generates ground for cooperation. Their interpretation maintains stale debates over the same actor that is always used.

Topicality – "Increase is Immediate" 2AC (China Coop Aff) (3/3)

4) No Abuse – Even if there are multiple steps, we can't claim advantages off of them because they are directly related to the implementation of the topical plan. The best Negative links are based on perception of plan passing, which means they get disadvantages before our plan is implemented. Effects Topicality helps the Negative, it isn't a voting issue.

5) Default to reasonability: it's impossible for the Affirmative to win the round on topicality, so we should only need to provide a good interpretation rather than the best one. If both sides have ground and arguments, you should resolve the debate on substantive issues instead of topicality.

Topicality – "Increase is Immediate" 1AR Extensions to 2AC #2: "Counter-Interpretation" (China Coop Aff)

Extend our 2AC #2, our counter-interpretation, which is defined from federal case law and says "Increases" aren't immediate but gradual.

Our interpretation has better Government Precision: The Supreme Court looks at progressive growth when there is no modifying period for "increase."

U.S. BANKRUPTCY COURT, 2002
[UNITED STATES BANKRUPTCY COURT FOR THE MIDDLE DISTRICT OF LOUISIANA, "IN RE LAWRENCE D. GOLDBERG, DEBTOR; DWAYNE M. MURRAY, TRUSTEE, PLAINTIFF VERSUS MAE M. STACY TRUST AND F. EUGENE RICHARDSON, DEFENDANTS," CASE NO. 94-10885, ADVERSARY NO. 95-1020; lexis-nexis]

In determining the plain meaning of the phrase "in-creases the obligor's insolvency," the Court initially notes that this phrase makes no reference whatsoever [**50] to a "reasonably equivalent value" test 26 or even to the "fair consideration" test of the Section 3 of the UFCA. 27 Instead, Article 2036 of the Civil Code merely uses the word "increases," and the absence of "reasonably equiv-alent value" language or "fair consideration" language rings loudly in the Court's judicial ear. Accordingly, **the Court will focus on the plain meaning of the term "in-creases." Taking note from one of the dictionaries of choice of the United States Supreme Court**, 28 **the Court finds that the definition of the word "increase"** in Web-ster's Ninth New Collegiate Dictionary **reads** as follows: [*270] **To become progressively greater** (as in size, amount, number, or in-tensity). . . . to make greater: AUGMENT. . . . INCREASE, ENLARGE, AUGMENT, MULTIPLY mean to make or become greater. INCREASE used intransitively implies progressive growth in size, amount, intensity; used transitively it may imply simple not necessarily progressive addition. . . the act or process of increasing: as . . . addition or enlargement in size, extent, quantity. Webster's Ninth New Collegiate Dictionary 611 (1990) (emphasis added). 26 As noted, the "reasonably equivalent value" test appears in Section 548(a)(2)(A) of the Bank-ruptcy Code, and provides that the trustee may avoid certain transfers and obligations, if the debtor voluntarily or involuntarily "received less than reasonably equivalent value in exchange for such transfer or obligation." [**51] 27 Section 3 of the UFCA provides as follows: Section 3. Fair Consideration. Fair consideration is given for property, or obligation, (a) When in exchange for such property, or obligation, as a fair equivalent therefor, and in good faith, property is conveyed or an antecedent debt is satisfied, or (b) When such property, or obligation is received in good faith to secure a present advance or antecedent debt in amount not dis-proportionately small as compared with the value of the property, or obligation obtained. UFCA, 7 U.L.A., section 3. As noted, the Stacy Trust, but not Richardson, asserts that the UFCA utilizes a "reasonably equivalent value" test. Richardson correctly acknowledges that the UFCA utilizes a "fair consideration" test, rather than a "reasonably equivalent value" test, but essentially the tests are identical. 28 See Pioneer Inv. Services v. Brunswick As-sociates, 507 U.S. 380, 20113 S.Ct. 1489, 1494-95, 123 L. Ed. 2d 74 (1993). As Webster's Dictionary states, **the word "increase" means a *progressive* growth, that is, an *incremental*** [**52] **growth**. Such progressive and incremental growth implies that when Article 2036 was drafted, the codifiers used the simple and easily-understood word "increase" because they meant to imply a "dollar-for-dollar" increase in the obligor's insolvency, rather than a "reasonably equivalent value" increase. **Otherwise, the codifiers would not have chosen to use the word "increase" with no obvious limitation on its meaning**. Moreover, since Article 2036 was crafted in 1984, well after the UFCA, which was enacted in 1918, the drafters of Article 2036 must have been well aware of the "fair consideration" requirement in Section 3 of the UFCA, and chose not to adopt such a limitation. Therefore, the Court may reasonably conclude that [HN19] the plain meaning of "increases the obligor's insolvency" means a "dollar-for-dollar," incremental growth, rather than insolvency as measured by a "reasonably equivalent value" standard.