Reed Graff & Connor Liu States Debate 2021 2/19/2021

#### Pro Case:

Value Premise: General Welfare of The US

We strongly affirm the resolution: On balance, the benefits of creating the United States Space Force do outweigh the harms. We rely on the GPS constellation, operated by the US Space Force, for every aspect of our modern lives, and through the expansion of space technology that is sure not to change. We have once viewed the visiting of the moon as anything but a pipe dream, however, now there have even been propositions to mine asteroids for their valuable resources. By all means, the Space industry will become an integral part of the world economy. With the coming scientific advancements there comes the possibility of a more ideal society and the plentiful benefits associated with that. With such a vastly profitable frontier before us, we should seek to secure a domain of liberty, prosperity, and freedom for not only ourselves, but for our posterity, and anyone else who wishes to participate under our auspices. We recognize the necessity for a US Space Force because it propels scientific development, dissuades war, and protects US interests.

What this debate truly comes down to is whether or not the space force prepares the US for the coming exponential growth in science and technology. As well as whether or not the space force is beneficial as a long-term investment in order to nurture the growth of scientific development, and as a way to streamline efficiency with the allocation of resources.

#### Contention 1: Scientific development

It is no mystery that growth in the military leads to growth in the scientific field, and the correlation between the military and major scientific advancements should not be overlooked. Innovation and practice is what has always kept America at the forefront of military operations. This innovation has been evident throughout all of history. For the sake of time, I will highlight the most well-known cases of developmental inventions spurred by the military: Radar (Here), GPS (Here), Nuclear Capabilities (Here), Submarines (Here), The EpiPen (Here), and even The Internet (Here).

The Space Force can not only lead to new innovations but will also spur development in the free market by creating a demand for more advanced technology. This is evident in their plan to work in close proximity with Lockheed Martin and SpaceX (Here). The Cambridge University Press also calculated the benefits of the military in relation to a capitalist economy, and their results are closely related to our perspective. A quote from their abstract reads "The nature of military priorities favors some areas of technological development over others, and when these favored areas are opened up for military purposes, it is often possible to build a major civil industry on the resultant technology. Examples of this process include nuclear power, civil aviation, space satellites, and computers." (Here).

#### Contention 2: Deterrence Theory

If a non-nuclear conflict was to break out many believe that the effects can be more catastrophic than if a war was to break out in any other medium. Space is such a powerful asset, that it may have the ability to vitiate ICBMs. (Here)(Here)

In Layman Terms, Deterrence Theory is the fear of mutual destruction and has proven to be extremely effective in bringing foreign adversaries to the negotiating table. When this theory is paired with the exponential growth of scientific development the lethality of weapons becomes greater, and yet death rates from war have plummeted. According to One Earth Future Research, we see, quote: "war is indeed declining" (Here)... Another research institution titled Our World in Data has done similar research and has come to the exact same conclusion (Here).

#### Contention 3: Protection of US Space Assets

Our very way of life as an American citizen is reliant on satellites. Every banking system in the US requires a GPS timing signal in order to function. Even the regulation of power flow on a power grid is reliant on a timing grid from GPS, which just so happens to be owned and operated by the US Space Force. If the GPS constellation was to go down it will cause an entire societal collapse in the United States. That is precisely why China has openly referred to space as the United State's Achilles heel (Here). Both Russia and China not only have the ability to negatively affect US satellites but have also enforced a will to do so. According to EurasiaTimes, "In 2007-08, the US Air Force accused Chinese hackers of using the connection from a ground station to affect the operation of the earth observation Landsat 7 and Terra satellites (Here). "In 2014 they hacked into the national weather service of the United States and compelled us to shut down ground stations, and we lost weather forecasting for 3 days" (Here). On June 19th, 2018 the Security software company Symantec revealed that quote: "A hacking campaign based in China had burrowed into satellite operators, defense contractors and telecom companies in the US and southeast Asia." (Here).

Unless the United States is able to protect against foreign attacks, deterrence will forever only be a mental consideration and not a real reason for foreign adversaries not to attack. That is why it is vital that we implement the Space Force into our military.

In conclusion, the United States Space Force is necessary because it benefits private enterprises, deters deadly conflict, and guarantees the protection of US assets. It might take time for the US Space Force to show its worth, but that is precisely why we must establish it sooner rather than later. It is for these reasons that, judge, we strongly urge you to pick the Pro ballot.

Final Focus: Judge, in order for the Con side to win the debate, they would have had to prove that the Space Force is NOT a precedent for growth, innovation, and greater security in the future

as a long-term investment. Since the Pro side has failed to do so, the benefits of creating the US Space Force outweigh the harms.

- Make a joke about Edwin Starr's "War, what is it good for"

#### **Crossfire Questions**

- How are your arguments unique to our framework in preparation for a scientific revolution?
- Are you aware of the existence and the dangers posed by High-altitude Electromagnetic Pulse Weapons?
- My side argues that due to deterrence theory there have been less wars... Why has there been less war in your point of view??
- How will the Space Force support the rest of the US military?
- When do you believe that war can be justified?
  - Should we not have fought WW2
- Do you believe that arms races are bad?
- If the Space Force was a problem (or if it was obsolete), it would have been easiest to axe it when it was created, wouldn't it? If it was a bad deal, when would the Biden administration or future administrations tear it down?
  - Or is the US government just stupid?
    - Debatable
- When talking about the United States Space Force, do you refer to the one created by the Fiscal Year 2020 National Defense Authorization Act?
- How exactly do you foresee the United States Space Force to go about accomplishing its mission?
- What is the mission of the United States Space Force?

#### Rebuttals

#### Nuclear Technology isn't a good thing

- Nuclear Medicine
- Nuclear Power
- Further Cont. 1
- Further Cont. 2

#### The Space Force Deters international diplomacy

- We would not be opposed to the ussf being a subset of NATO
- Deterrence brings adversaries to negotiation tables

# The Space Force is costly... and their Budget Is Extremely Expensive

- Do any of your sources include how much money that will be added to the economy through the implementation of the space force?
  - The GPS satellite, which is run by the Space Force, has contributed at least 1.4 trillion dollars alone to the american economy according to the national institute of standards and technology
    - That number is projected to continue adding and adding to our economy as we continue to grow as a nation
      - It defends it
- The budget of the Space Force is miniscule compared to the pentagon's budget
  - The Space Force's first annual budget, for the fiscal year that began in October, was \$15.5 billion. That's roughly 2 percent of the annual Pentagon budget.
    - For Fiscal Year 2020 (FY2020), the Department of Defense's budget authority is approximately \$721.5 billion (Here)
- The Space Force is even smaller when compared to the national military budget
  - According to the Balance, the estimated US spending on Military is \$934 billion (<u>Here</u>)
- The Space Force is even smaller when compared to the total federal spending
  - The US Government spent 4.4 trillion dollars in 2019.
  - The Space force is 0.3% of the federal budget.

# **Deterrence Theory Is Not Unique To Space...**

#### US Hegemony...

- U.S. military capabilities not only protect the United States and its citizens from direct threats, they also help maintain peace and stability in regions critical to U.S. interests and underwrite U.S. defense commitments around the world. Maintaining a strong defense capability means that the U.S. Armed Forces, and the Department of Defense more broadly, must be prepared to conduct the following kinds of missions, as described in the President's national security strategy:
- Benefits of being a super power
- Just as these other power factors influence a country's ability to develop military power, a country's military power also plays a key role in its development of these other factors of power.
- Economic: A state that can protect its territory, resources and trade routes has a major economic advantage over others that are unable to do so. Furthermore, military power can be a catalyst for economic growth, if applied properly.
- Demographic: A state with a relatively high degree of military power has the capability to protect its population and to allow for its population to grow at a healthy pace.

- Environmental and Natural Resources: A strong military allows a country to protect its environmental and resource wealth, while giving it the option to seize the environmental and resource wealth of its weaker rivals.
- Political: For better or worse, armed forces have played a major role in determining the level of political stability in states throughout history. When political-military relations are strong and stable, a country is able to achieve a higher degree of political power.
- Technology: The armed forces have been the catalyst and the source for many of the major technological achievements reached throughout human history and are likely to remain so for the foreseeable future.
- Cultural: Military power plays a lesser role in determining a country's level of cultural power, although states with dominant military positions are often able to force their cultural norms on weaker states.

### **Deterrence Does Not Work... Gives Examples...**

- Mutually assured destruction is no happy way of going about life, however it gives us a bulwark against a devastating outcome
- According to a social science research network you are wrong... "A well planned deterrence strategy can be a very effective way of defending a nation. In an uncertain world it can help reassure a nation's populace, policy makers and allies. But it is a tool for providing a respite from violence. It will be most effective if combined with a foreign policy that promotes the integration of nations and works to counter the problems of the twenty-first century that require nations to adopt strategies of deterrence in the first place "- https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2055749
- A nuclear deterrent is sometimes composed of a nuclear triad, as in the case of the nuclear weapons owned by the United States, Russia, the China and India. Other countries, such as the United Kingdom and France, have only sea-based and air-based nuclear weapons.
  - Mission: The Department of the Navy will recruit, train, equip, and organize to deliver combat ready Naval forces to win conflicts and wars while maintaining security and deterrence through sustained forward presence. Vision: We are an integrated Naval force that will provide maritime dominance for the Nation.
- This is a classic example of a strongman fallacy
  - My opponents have seized upon the few individual episodes of deterrence theory not working, and then they attempted to extrapolate that to every instance of our military, with a country as big as America you can throw together a select dozen of terrible examples to make an argument against anything you please... Their argument is inconsequential when stacked against the overwhelming majority of evidence that strongly disagrees with my opponent's view
- Albeit there are some failures to deterrence theory... Deterrence theory has proven to be so effective that even NATO has adopted the policy, and has had access to Nuclear

capabilities for 70 years... In an article they published they quote: "Nuclear deterrence has been at the core of NATO's collective defence for 70 years. In an uncertain world, nuclear weapons continue to play a critical role in NATO's deterrence and defence. The purpose of NATO's nuclear capability is to preserve peace, prevent coercion, and deter aggression"

- <a href="https://www.nato.int/nato\_static\_fl2014/assets/pdf/2020/2/pdf/200224-factsheet-n">https://www.nato.int/nato\_static\_fl2014/assets/pdf/2020/2/pdf/200224-factsheet-n</a> uclear-en.pdf
- Cuban missile crisis of 1962. When it became clear that Washington was ready to defend its core security interests, the Soviet Union withdrew the missiles it had started to deploy in Cuba.
- During the Cold War, the realization came that strategic deterrence just might be the most successful means of preventing major wars. The long peace that has extended from 1945, when nuclear weapons brought an end to the worst world war in history, continues today
- It is very difficult to show proof of wars averted...
  - As proof to show the value of deterrence I show historical evidence... Since August 9th 1945 there has not been an atomic weapon dropped.

#### Why Should We Allow Private Businesses to Benefit from the Military?

- All Ships Rise With The Tide
- Rapid access to space, trillions of dollars in revenue
  - It benefits the fellow man in countless ways
    - Millions of jobs
    - Trillions in revenue
    - Fueling our economy
    - Countless Contributions to society

#### **Inventions by the Military Are Not Constant**

- The ones that do make it to the public have a much more significant impact than other civilian inventions, which are focused more on improving daily life rather than preparing for paradigm shifts.
- The point is not that we should rely on the military for these things. The military will provide security for these things. Similar to the Urbanization argument in February, if entrepreneurs are scared of the well-being of themselves and their business, then they will likely move their business elsewhere or not start new businesses at all.
- Logic... If I am a military general, by all means I want and should equip my men with the most scientifically advanced weapons and medicine on the market.

# The Space Force has the possibility to lead us towards an arms race as it will provoke other countries.

- What is inherently bad about an arms race? Many arms races aren't even hostile, one very simple example would be the space race.

- Many philosophers actually believe that arms races are beneficial for multiple reasons, 2 of which are my contentions
  - 1. Arms races are historically well known for contributing to the exponential growth of scientific development
  - 2. The further development of weapons lead to the further influence of deterrence theory.
    - Through the implementation of deterrence theory people will fear mutual destruction, and be less inclined to participate in war...
      - We can see this exact logic being carried out in history when in association with the decline of war as history progresses.
        - According to One Earth Future Research we see, quote: "war is indeed declining" (Here)... Another research institution titled Our World in Data has done similar research, and has come to the exact same conclusion (Here).

## The Space Force is not of Our Concern At the Moment, We Should Wait

- Throughout the history of mankind, technology has always changed world power...
  - Competitive advantage
  - Optimisation
  - Darwinism
- Space is going to change world power
- World paradigms crash
  - Rejections of new technologies and values is why no civilization has lasted eternity
    - England in WW1...
      - England wanted to go to war... they were certain that their napoleonic style of warfare that has dominated in the past would dominate once again...
        - Strategists pointed out machine gun and the development of poison gas...
          - They failed to accept this new technology and suffered...
    - Germany in WW2...
      - Didn't accept the atomic bomb...
        - Could have taken over the world...
- In order to prepare for the scientific revolution we must put in place the Space Force

### The bureaucracy gets in the way of development in the space force

- According to defense gov you are fundamentally mistaken (Here).
- I have a whole article here of changes, however in short the Space Force organizes a more streamlined structure for teaching and preparing individuals for space related activities, as well as maximizing efficiency in command in the space force... New jobs, and new generals are also being put into place to help expedite the expansion of ideas...
  - They actually remove bureaucratic procedures
    - A quote from the commander reads quote: "A big part of the leaning effort, he said, is the reduction of bureaucracy." "Since establishment, we've been in the business of slashing bureaucracy, delegating authority and enhancing accountability at every crossroad," Raymond said. "My opinion: big organizations are slow. We must move at speed to outpace the threats that we face."

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- A big part of the leaning effort, he said, is the reduction of bureaucracy.
- "Since establishment, we've been in the business of slashing bureaucracy, delegating authority and enhancing accountability at every crossroad," Raymond said. "My opinion: big organizations are slow. We must move at speed to outpace the threats that we face."
- The general said the Space Force, in an effort to reduce bureaucracy, implemented a large-scale reorganization that involved removing two echelons of command, including a numbered Air Force and an O-6-level command.
- "We've also reduced the size of our planned staff at the Pentagon," Raymond said. "Back when we started, the Pentagon staff was going to be over 1,000 people. That was the initial plan. We've slashed that by 40%. We're shortening the distance between decision makers and you, the experts, conducting our mission."
- Also part of eliminating bureaucracy, Raymond said, is a hard look at the agencies that
  exist now that are involved in acquisition for the space enterprise. He said Congress has
  identified some 65 different organizations involved in space-related acquisition.

# The Space Force is not unique... It is simply a copy of the Air Force Space Command

- That is a fundamentally flawed argument...
  - Albeit the Space Force and Space Command carry similar responsibilities, the structure and organization of the organizations are vastly different... My side is

attempting to prove that the organizational differences are key when determining the benefits of a long term investment

- The Air Force Space Command, predecessor for the US Space Force, supports the US Air Force. The US Space Force, on the other hand, has as its mission statement, "to organize, train, and equip space forces in order to protect U.S. and allied interests in space and to provide space capabilities to the joint force." United States Space Command (USSPACECOM) conducts operations in, from, and to space to deter conflict, and if necessary, defeat aggression, deliver space combat power for the Joint/Combined force, and defend U.S. vital interests with allies and partners.
- According to the Space Force's website
- I have a whole article here of changes, however in short the Space Force organizes a more streamlined structure for teaching and preparing individuals for space related activities, as well as maximizing efficiency in command in the space force... New jobs, and new generals are also being put into place to help expedite the expansion of ideas...
  - the U.S. Space Force executed numerous organization changes in its first realignment actions to transition from the previous Air Force major command structure into the new service's flatter field organization structure announced June 30.
  - When fully implemented, the field organization will consist of three echelons of command named field command, delta or garrison depending on focus, and squadron, eliminating one general officer echelon and one O-6 echelon of command.
  - In the ceremony, the Space Force inactivated three space wings and eight lower echelon commands, and in place activated Space Training and Readiness Delta Provisional, two garrison commands and eight mission deltas.
  - "The United States Space Force is being structured to organize, train, and equip a lean and agile force spreading the responsibilities across the future units to more quickly enable space operators to protect and defend America's interests in space," said Col. Suzy Streeter, the narrator for the ceremony.
- The main issue with the Air Force is that the AirForce is the old way of doing things, and as comes with bureaucratic institutions, advancement and innovation has been stifled...
- Thomas Kuhn is a renowned philosopher who wrote the book entitled "The Structure of Scientific Revolution"

- He pointed out that the issue with paradigms such as the AirForce force people down only one way of thought, and make it extremely difficult for innovation to flourish.
  - At the moment there are 2 competing paradigms...
    - The old paradigm being the air force space command
    - The new paradigm being the Space Force
  - He pointed out that these paradigms are incommensurable to each other AKA if you are in one paradigm you can't understand the other paradigm... The few people that can jump out of an old paradigm are often commemorated as the greatest inventors...
    - The Wright brothers
    - Elon Musk
    - Jeff Bezoz
      - A more relatable example of a shifting paradigm was when the US made the AirForce and jumped out of the old paradigm... Very few philosophers now argue that we shouldn't have made that jump...
        - The same will soon be said for the Space Force
    - History proves this with FDR... We saw that Germany was pursuing the Atomic bomb... He did not turn to the army and say "build me a bomb" because he understood human nature and the inability to look into a new paradigm especially with the types of bureaucratic organizations that never can jump out of its paradigm...

#### - "THE PIG DOES NOT SLAUGHTER ITSELF"

- That is why he always got outsiders
  - The same can be said today... That is why we need a space force that isn't run by the airforce
- In Short, the reason we need the Space Force as opposed to the Space Command is because it requires outsiders, and less bureaucratic intervention in order to spur innovation

#### America is not Dependant/Reliant on Space

- High-altitude Electromagnetic Pulse
  - Not only will the GPS system go down, everything that can short-circuit will short-circuit because of the nature of the EMP. This means that all electronic devices and appliances will be rendered useless, and we will be sent back to the Middle Ages.
- American Dependency on space
  - Weather

- Imagine... hurricane...
- Navigate, communicate, food, energy, banking
  - How many days can the US survive if the GPS constellation goes down?
    - Our very way of life is reliant on space
- Every banking system in the US requires a timing signal from GPS
  - That is reliant on satellites
- Regulation of flow on a power grid is reliant on flow on a timing grid is reliant on GPS
  - Satellites
- Flows of data through wireless connection is reliant on a timing signal from GPS
- Existential threat
  - And is as China calls it "America's achilles heel"

## The Space Force will not make US Satellites impermeable

- The solution is to spread infrastructure and scientific development that will lead to more satellites...
  - Make the possibility of a Space Pearl harbor ineffective,
  - And make our ability to recoup our losses and fire back more effective
    - No reason for China to send a 1B dollar missile into orbit just to have a possibility of taking out one satellite
      - Not to mention it won't have much of an effect
    - Put in place the Space Renaissance Act

# The Space Force is not needed, as we already have existing infrastructure such as NASA... What events of Chinese/Russian aggression has been shown

- With such a vast frontier before us, we should seek to ensure it is a domain of liberty for ourselves, our posterity and anyone who wishes to participate under our umbrella.
   Merchant, pioneers and settlers have always required guardians to make secure the frontier.
  - It is for this reason for the hundreds of trillions of dollars of opportunity in this new gold rush, to enable a new frontier of liberty, and ensure the benefits that frontier can provide to ourselves and our posterity that we embark now upon creating a U.S. Space Force. It is not so that we can make war. It is rather to assure that the vast economic potential and all it can do for our children and our environment is not, and will never be closed to America.
- Without the utilization of the Space Force It would be equivalent to sending wagon trains out west with no cavalry
- Chinese aggression:

- In 2014 they hacked into the national weather service of the united states, and compelled us to shut down ground stations, and we lost weather forecasting for 3 days...
  - Thank God we didn't have severe weather during those 3 days...
  - Our constituents would have been the recipients of a lot of pain during those days if not
  - https://www.businessinsider.com/china-based-hacking-campaign-breached-satellite-defense-companies-us-asia-2018-6#:~:text=Hackers%20in%20China%20infected%20computers%20that%20control%20satellites%20in%20the%20US%20and%20Asia&text=Security%20software%20company%20Symantec%20revealed,the%20US%20and%20southeast%20Asia.
    - https://www.c4isrnet.com/opinion/2020/12/01/cross-agency-plans-for-space-cvbersecurity-will-strengthen-the-us-in-all-domains/
  - https://www.defensenews.com/opinion/commentary/2020/06/23/china-wants-to-dominate-space-and-the-us-must-take-countermeasures/
    - Failure to deliver on key capabilities in space opens the door for China to undermine U.S. strategic advantages, which will be far more costly in the long run.
  - Russia has anti satellite power...
  - The way you win wars is through information dominance...
    - That's The way we have always fought and won wars... WW2 planes... WW1 scouts...
      - Modern day satellites
        - In the 1930's airplanes proved their value and worth that supported new innovations..
        - Military drove that innovation
    - The enemies of the US knows that information dominance is how you win wars...
      - If they can deny us information, and acquire their own information then they are going to have the advantage.
        - That is why they have called space our achilles heel
        - <a href="https://ndsmcobserver.com/2019/09/the-u-s-militarys-achilles-heel/">https://ndsmcobserver.com/2019/09/the-u-s-militarys-achilles-heel/</a>
    - Space is more deadly than nuclear warfare
      - Satellites can have the ability to shoot down missiles the second they lift off... earth based military can be rendered useless by space weapons...
        - Reagan's "brilliant pebbles"

- Originally seemed to be a pipe dream now it is extremely feasible
  - https://www.newsmax.com/peterpry/ brilliant-pebbles-star-wars-ronald-rea gan-russia/2018/04/09/id/853492/
  - Been recommended by the missile...
- Space can render ICBMs antiques of the past wars
- In 2007-08, the US Air Force accused Chinese hackers of using the connection from a ground station to affect the operation of the earth observation Landsat 7 and Terra (EOS AM-1) satellites. The Chinese government was suspected of sponsoring the hackers trying to find out how vulnerable the satellite control systems were to cyber-attack.
- The Chinese were suspected to have been also involved in the interception of a conversation happening through video chat via satellite, of a high-profile Indian government meeting in October 2017. The hackers continued to intercept the link for almost 4-5 minutes before a counter-offensive was launched to neutralise it, the Indian media reported.
  - Here
- The reason that this is an urgent need for the government is because a majority of the U military relies on Satellites
  - Space force is key to deterring anti-satellite attacks

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# Cyber Security is very important to be paying attention to... Hacking

- The Pentagon is to significantly increase the size of the United States Space Force's cybersecurity team.
- https://www.infosecurity-magazine.com/news/us-to-grow-space-force/

# What is to be said about other Countries? May other Countries not seek the benefits of space?

- All ships rise with the tide... if they optimise like japan, France, UK, Germany did... they can have just as much of an opportunity as the Global powers
  - We may be the ones mining, however they will benefit because we will sell to them... we benefit from making money, and they will benefit because they get access to higher quality resources.

# The Space Force Violates Space Law

- Where and When? The Outer Space treaty of 1967 gave no provisions on the militarization of space, only that placement of weapons of mass destruction in space

is illegal and no militarization of celestial bodies. The Space Force defends a country
on Earth, after all.