## 1NC – T

#### The role of the ballot is to determine the desirability of a topical advocacy.

Interp affs must defend a policy action

#### Resolved with a colon indicates policy action.

Parcher 1 [Jeff; former debate coach at Georgetown; Feb 26, 2001; <https://web.archive.org/web/20020929065555/http://www.ndtceda.com/archives/200102/0790.html>] brett

(1) Pardon me if I turn to a source besides Bill. American Heritage Dictionary: Resolve: 1. To make a firm decision about. 2. To decide or express by formal vote. 3. To separate something into constiutent parts See Syns at \*analyze\* (emphasis in orginal) 4. Find a solution to. See Syns at \*Solve\* (emphasis in original) 5. To dispel: resolve a doubt. - n 1. Frimness of purpose; resolution. 2. A determination or decision.

(2) The very nature of the word "resolution" makes it a question. American Heritage: A course of action determined or decided on. A formal statemnt of a deciion, as by a legislature.

(3) The resolution is obviously a question. Any other conclusion is utterly inconcievable. Why? Context. The debate community empowers a topic committee to write a topic for ALTERNATE side debating. The committee is not a random group of people coming together to "reserve" themselves about some issue. There is context - they are empowered by a community to do something. In their deliberations, the topic community attempts to craft a resolution which can be ANSWERED in either direction. They focus on issues like ground and fairness because they know the resolution will serve as the basis for debate which will be resolved by determining the policy desireablility of that resolution. That's not only what they do, but it's what we REQUIRE them to do. We don't just send the topic committtee somewhere to adopt their own group resolution. It's not the end point of a resolution adopted by a body - it's the prelimanary wording of a resolution sent to others to be answered or decided upon.

(4) Further context: the word resolved is used to emphasis the fact that it's policy debate. Resolved comes from the adoption of resolutions by legislative bodies. A resolution is either adopted or it is not. It's a question before a legislative body. Should this statement be adopted or not.

#### “Appropriation of outer space” is a term of art that refers to the OST, which regulates private, national, and international conduct.

Thornburg 19 [Matthew, Associate Editor for the Michigan Journal of International Law; Vol 40; “Are the Non-appropriation Principle and the Current Regulatory Regime Governing Geostationary Orbit Equitable for All of Earth’s States?” <http://www.mjilonline.org/are-the-non-appropriation-principle-and-the-current-regulatory-regime-governing-geostationary-orbit-equitable-for-all-of-earths-states/>] brett

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

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

#### A practice being unjust entails legal action.

Black’s Law [The Law Dictionary Featuring Black's Law Dictionary Free Online Legal Dictionary 2nd Ed. No Date. <https://thelawdictionary.org/unjust/>] brett

What is UNJUST?

Contrary to right and justice, or to the enjoyment of his rights by another, or to the standards of conduct furnished by the laws.

#### Violation: They affirm a method of imaginary ruins.

#### Prefer:

#### 1---Ground---absent meeting precise words in the res, we lose all the pre-round prep we did around the resolution, killing neg ground.

#### 2---Vagueness---debates inevitably involve the AFF defending something, but only our interp lets them to clearly define that from the start. Their model leads to late-breaking debates that destroy ground, for example we won’t know if asteroid mining or space exploration are offense until the 1AR, which skews neg prep.

#### 3---Topic ed---specific policies teaches lets us go deep into the topic, uniquely important given the evolving character of space law. outweighs bc we only have 2 month topics, and phil ed is solved by free textbooks.

#### CI bc reasonability is arbitrary and invites judge intervention

#### DTD to deter future abuse

#### No RVIs: 1] illogical, you shouldn’t win for being topical, 2] good theory debaters will read abusive positions to bait theory and dump on an RVI, 3] trades off with substance since we can’t kick out of T

#### Neg theory first because AFF abuse made it impossible to engage so any neg abuse was to get back in the game.

#### CI bc reasonability is arbitrary and invites judge intervention

#### DTD to deter future abuse

#### No RVIs: 1] illogical, you shouldn’t win for being topical, 2] good theory debaters will read abusive positions to bait theory and dump on an RVI, 3] trades off with substance since we can’t kick out of T

## 1NC – DA

#### Mining is now – multiple companies are competing in mineral exploitation to obtain rare earth metals.

Gilbert 21 [Alex Gilbert is a complex systems researcher and a PhD student in space resources at the Colorado School of Mines. Milken Institute, “Mining in Space Is Coming”; <https://www.milkenreview.org/articles/mining-in-space-is-coming>] kelvin

Space exploration is back. after decades of disappointment, a combination of better technology, falling costs and a rush of competitive energy from the private sector has put space travel front and center. indeed, many analysts (even some with their feet on the ground) believe that commercial developments in the space industry may be on the cusp of starting the largest resource rush in history: mining on the Moon, Mars and asteroids.

While this may sound fantastical, some baby steps toward the goal have already been taken. Last year, NASA awarded contracts to four companies to extract small amounts of lunar regolith by 2024, effectively beginning the era of commercial space mining. Whether this proves to be the dawn of a gigantic adjunct to mining on earth — and more immediately, a key to unlocking cost-effective space travel — will turn on the answers to a host of questions ranging from what resources can be efficiently.

As every fan of science fiction knows, the resources of the solar system appear virtually unlimited compared to those on Earth. There are whole other planets, dozens of moons, thousands of massive asteroids and millions of small ones that doubtless contain humungous quantities of materials that are scarce and very valuable (back on Earth). Visionaries including Jeff Bezos imagine heavy industry moving to space and Earth becoming a residential area. However, as entrepreneurs look to harness the riches beyond the atmosphere, access to space resources remains tangled in the realities of economics and governance.

Start with the fact that space belongs to no country, complicating traditional methods of resource allocation, property rights and trade. With limited demand for materials in space itself and the need for huge amounts of energy to return materials to Earth, creating a viable industry will turn on major advances in technology, finance and business models.

That said, there’s no grass growing under potential pioneers’ feet. Potential economic, scientific and even security benefits underlie an emerging geopolitical competition to pursue space mining. The United States is rapidly emerging as a front-runner, in part due to its ambitious Artemis Program to lead a multinational consortium back to the Moon. But it is also a leader in creating a legal infrastructure for mineral exploitation. The United States has adopted the world’s first space resources law, recognizing the property rights of private companies and individuals to materials gathered in space.

However, the United States is hardly alone. Luxembourg and the United Arab Emirates (you read those right) are racing to codify space-resources laws of their own, hoping to attract investment to their entrepot nations with business-friendly legal frameworks. China reportedly views space-resource development as a national priority, part of a strategy to challenge U.S. economic and security primacy in space. Meanwhile, Russia, Japan, India and the European Space Agency all harbor space-mining ambitions of their own. Governing these emerging interests is an outdated treaty framework from the Cold War. Sooner rather than later, we’ll need new agreements to facilitate private investment and ensure international cooperation.

What’s Out There

Back up for a moment. For the record, space is already being heavily exploited, because space resources include non-material assets such as orbital locations and abundant sunlight that enable satellites to provide services to Earth. Indeed, satellite-based telecommunications and global positioning systems have become indispensable infrastructure underpinning the modern economy. Mining space for materials, of course, is another matter.

In the past several decades, planetary science has confirmed what has long been suspected: celestial bodies are potential sources for dozens of natural materials that, in the right time and place, are incredibly valuable. Of these, water may be the most attractive in the near-term, because — with assistance from solar energy or nuclear fission — H2O can be split into hydrogen and oxygen to make rocket propellant, facilitating in-space refueling. So-called “rare earth” metals are also potential targets of asteroid miners intending to service Earth markets. Consisting of 17 elements, including lanthanum, neodymium, and yttrium, these critical materials (most of which are today mined in China at great environmental cost) are required for electronics. And they loom as bottlenecks in making the transition from fossil fuels to renewables backed up by battery storage.

The Moon is a prime space mining target. Boosted by NASA’s mining solicitation, it is likely the first location for commercial mining. The Moon has several advantages. It is relatively close, requiring a journey of only several days by rocket and creating communication lags of only a couple seconds — a delay small enough to allow remote operation of robots from Earth. Its low gravity implies that relatively little energy expenditure will be needed to deliver mined resources to Earth orbit.

The Moon may look parched — and by comparison to Earth, it is. But recent probes have confirmed substantial amounts of water ice lurking in permanently shadowed craters at the lunar poles. Further, it seems that solar winds have implanted significant deposits of helium-3 (a light stable isotope of helium) across the equatorial regions of the Moon. Helium-3 is a potential fuel source for second and third-generation fusion reactors that one hopes will be in service later in the century. The isotope is packed with energy (admittedly hard to unleash in a controlled manner) that might augment sunlight as a source of clean, safe energy on Earth or to power fast spaceships in this century. Between its water and helium-3 deposits, the Moon could be the resource stepping-stone for further solar system exploration.

Asteroids are another near-term mining target. There are all sorts of space rocks hurtling through the solar system, with varying amounts of water, rare earth metals and other materials on board. The asteroid belt between the orbits of Mars and Jupiter contains most of them, many of which are greater than a kilometer in diameter. Although the potential water and mineral wealth of the asteroid belt is vast, the long distance from Earth and requisite travel times and energy consumption rule them out as targets in the near term.

Even the surface of celestial bodies pose a challenge to mining machinery since they consist of unconsolidated rocky materials called regolith instead of more familiar soil.

Wannabe asteroid miners will thus be looking at smaller near-Earth asteroids. While they are much further away than the Moon, many of them could be reached using less energy — and some are even small enough to make it technically possible to tow them to Earth orbit for mining.

Space mining may be essential to crewed exploration missions to Mars. Given the distance and relatively high gravity of Mars (twice that of the Moon), extraction and export of minerals to Earth seems highly unlikely. Rather, most resource extraction on Mars will focus on providing materials to supply exploration missions, refuel spacecraft and enable settlement.

Technology Is the Difference

The prospects for space mining are being driven by technological advances across the space industry. The rise of reusable rocket components and the now-widespread use of off-the-shelf parts are lowering both launch and operations costs. Once limited to government contract missions and the delivery of telecom satellites to orbit, private firms are now emerging as leaders in developing “NewSpace” activities — a catch-all term for endeavors including orbital tourism, orbital manufacturing and mini-satellites providing specialized services. The space sector, with a market capitalization of $400 billion, could grow to as much as $1 trillion by 2040 as private investment soars.

But despite the high-profile commercial advances, governments still call the shots on the leading edge of space resource technologies. The United States extracted the first extraterrestrial materials in space from the Moon during the Apollo missions, followed by the Soviet Union’s recoveries from crewless Luna missions. President Biden recently borrowed one of the Apollo lunar rocks for display in the Oval Office, highlighting the awe that deep space can still summon.

For the time being, scientific samples remain the goal of mining. Last October, NASA’s OSIRIS-REx mission — due to return to Earth in 2023 — collected a small amount of material from the asteroid Bennu. In December, Japan returned a sample of the asteroid Ryugu with the Hayabusa2 spacecraft. And several weeks later, China’s Chang’e 5 mission returned the first lunar samples since the 1970s.

Sample collection is accelerating, with recent missions targeting Mars. Japan is planning to visit the two moons of Mars and extract a sample from one. NASA’s robotic Perseverance rover will collect and cache drilled samples on Mars that could later be returned to Earth. Perseverance also carries gear for the unique MOXIE experiment on Mars — an attempt to produce oxygen on the planet with technologies that could eventually extract oxygen for astronauts to breath and refuel spacecraft.It’s about as wide as the Eiffel Tower is tall and it could be where we obtain the elements needed to power bases on the moon, Mars or in orbit one day.

#### Space mining is key to sustain global resources -- otherwise, resource wars.

MacWhorter 16 [Kevin; J.D. Candidate, William & Mary Law School, "Sustainable Mining: Incentivizing Asteroid Mining in the Name of Environmentalism", William & Mary Environmental Law and Policy Review, Vol 40, Issue 2, Article 11, <https://scholarship.law.wm.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1653&context=wmelpr>] brett

A. Rare Element Mining on Earth

In the next sixty years, scientists predict that certain elements crucial to modern industry such as platinum, zinc, copper, phosphorous, lead, gold, and indium could be exhausted on Earth. 12 Many of these have no synthetic alternative, unlike chemical elements such as oil or diamonds.13 Liquid-crystal display (LCD) televisions, cellphones, and laptops are among the various consumer technologies that use precious metals.14Further, green technologies including wind turbines, solar panels, and catalytic converters require these rare elements. 15 As demand rises for both types of technologies, and as reserves of rare metals fall, prices skyrocket.16 Demand for nonrenewable resources creates conflict, and consumerism in rich countries results in harsh labor treatment for poorer countries.17

In general, the mining industry is extremely destructive to Earth’s environment.18 In fact, depending on the method employed, mining can destroy entire ecosystems by polluting water sources and contributing to deforestation.19 It is by its nature an unsustainable practice, because it involves the extraction of a finite and non-renewable resource.20 Moreover, by extracting tiny amounts of metals from relatively large quantities of ore, the mining industry contributes the largest portion of solid wastes in the world.21 The Environmental Protection Agency (EPA) describes the industry as the source of more toxic and hazardous waste than any other industrial sector [in the United States], costing billions of dollars to address the public health and environmental threats to communities. 22 Poor regulations and oxymoronic corporate definitions of sustainability, however, make it unclear as to just how much waste the industry actually produces.23

Platinum provides an excellent case study of the issue, because it is an extremely rare and expensive metal—an ore expected to exist in vast quantities in asteroids.24 Further, production of platinum has increased sharply in the past sixty years in order to keep up with growing demand for use in new technologies.25 In fact, despite their high costs, platinum group metals are so useful that [one] of [four] industrial goods on Earth require them in production. 26 Scholars do not expect demand to slow any time soon.27 Among other technologies, industries use platinum in products such as catalytic converters, jewelry production, various catalysts for chemical processing, and hydrogen fuel cells.28 While there is no consensus on how far the Earth’s reserves of platinum will take humanity, many scientists agree that platinum ore reserves will deplete in a relatively short amount of time.29

With the rate of mining at an all-time high,30 it is increasingly clear that historical patterns of mineral resources and development cannot simply be assumed to continue unaltered into the future. 31 The platinum mining industry, however, has a strong incentive to increase its rate of extraction as profits grow with the rate of demand. Without any alternative, this destructive practice will continue into the future.32

So-called platinum-group metal (PGM) ores are mined through underground or open cut techniques.33 Due to these practices, all but a very small fraction of the mined platinum ore is disposed of as solid waste.34 The environmental consequences of platinum production are thus quite significant, but like the mining industry in general, the amount of waste is typically under-reported.35

While this is due to high production levels at the moment, those levels will only increase given the estimated future demand of platinum.36 In spite of the negative consequences, mining continues unabated because it is economically important to many areas.37 The future environmental costs provide a major challenge in creating a sustainable system. Relegating at least some mining companies to near-Earth asteroids would reduce the negative effects of future mining levels on Earth. The economic benefits of mining need not be sacrificed for the sake of the environment.38

#### Terrestrial resource scarcity goes nuclear---we outweigh on timeframe, just the prospect of shortages triggers escalation.

Klare 13 [Michael T., The Nation’s defense correspondent, is professor emeritus of peace and world-security studies at Hampshire College and senior visiting fellow at the Arms Control Association in Washington, D.C. His newest book, All Hell Breaking Loose: The Pentagon’s Perspective on Climate Change, will be published this fall. 2013. “How Resource Scarcity and Climate Change Could Produce a Global Explosion,” <https://www.thenation.com/article/archive/how-resource-scarcity-and-climate-change-could-produce-global-explosion/>] brett

Brace yourself. You may not be able to tell yet, but according to global experts and the US intelligence community, the earth is already shifting under you. Whether you know it or not, you’re on a new planet, a resource-shock world of a sort humanity has never before experienced.

Two nightmare scenarios—a global scarcity of vital resources and the onset of extreme climate change—are already beginning to converge and in the coming decades are likely to produce a tidal wave of unrest, rebellion, competition and conflict. Just what this tsunami of disaster will look like may, as yet, be hard to discern, but experts warn of “water wars” over contested river systems, global food riots sparked by soaring prices for life’s basics, mass migrations of climate refugees (with resulting anti-migrant violence) and the breakdown of social order or the collapse of states. At first, such mayhem is likely to arise largely in Africa, Central Asia and other areas of the underdeveloped South, but in time, all regions of the planet will be affected.

To appreciate the power of this encroaching catastrophe, it’s necessary to examine each of the forces that are combining to produce this future cataclysm.

Resource Shortages and Resource Wars

Start with one simple given: the prospect of future scarcities of vital natural resources, including energy, water, land, food and critical minerals. This in itself would guarantee social unrest, geopolitical friction and war.

It is important to note that absolute scarcity doesn’t have to be on the horizon in any given resource category for this scenario to kick in. A lack of adequate supplies to meet the needs of a growing, ever more urbanized and industrialized global population is enough. Given the wave of extinctions that scientists are recording, some resources—particular species of fish, animals and trees, for example—will become less abundant in the decades to come, and may even disappear altogether. But key materials for modern civilization like oil, uranium and copper will simply prove harder and more costly to acquire, leading to supply bottlenecks and periodic shortages.

Oil—the single most important commodity in the international economy—provides an apt example. Although global oil supplies may actually grow in the coming decades, many experts doubt that they can be expanded sufficiently to meet the needs of a rising global middle class that is, for instance, expected to buy millions of new cars in the near future. In its 2011 World Energy Outlook, the International Energy Agency claimed that an anticipated global oil demand of 104 million barrels per day in 2035 will be satisfied. This, the report suggested, would be thanks in large part to additional supplies of “unconventional oil” (Canadian tar sands, shale oil and so on), as well as 55 million barrels of new oil from fields “yet to be found” and “yet to be developed.”

However, many analysts scoff at this optimistic assessment, arguing that rising production costs (for energy that will be ever more difficult and costly to extract), environmental opposition, warfare, corruption and other impediments will make it extremely difficult to achieve increases of this magnitude. In other words, even if production manages for a time to top the 2010 level of 87 million barrels per day, the goal of 104 million barrels will never be reached and the world’s major consumers will face virtual, if not absolute, scarcity.

Water provides another potent example. On an annual basis, the supply of drinking water provided by natural precipitation remains more or less constant: about 40,000 cubic kilometers. But much of this precipitation lands on Greenland, Antarctica, Siberia and inner Amazonia where there are very few people, so the supply available to major concentrations of humanity is often surprisingly limited. In many regions with high population levels, water supplies are already relatively sparse. This is especially true of North Africa, Central Asia and the Middle East, where the demand for water continues to grow as a result of rising populations, urbanization and the emergence of new water-intensive industries. The result, even when the supply remains constant, is an environment of increasing scarcity.

Wherever you look, the picture is roughly the same: supplies of critical resources may be rising or falling, but rarely do they appear to be outpacing demand, producing a sense of widespread and systemic scarcity. However generated, a perception of scarcity—or imminent scarcity—regularly leads to anxiety, resentment, hostility and contentiousness. This pattern is very well understood, and has been evident throughout human history.

In his book Constant Battles, for example, Steven LeBlanc, director of collections for Harvard’s Peabody Museum of Archaeology and Ethnology, notes that many ancient civilizations experienced higher levels of warfare when faced with resource shortages brought about by population growth, crop failures or persistent drought. Jared Diamond, author of the bestseller Collapse, has detected a similar pattern in Mayan civilization and the Anasazi culture of New Mexico’s Chaco Canyon. More recently, concern over adequate food for the home population was a significant factor in Japan’s invasion of Manchuria in 1931 and Germany’s invasions of Poland in 1939 and the Soviet Union in 1941, according to Lizzie Collingham, author of The Taste of War.

Although the global supply of most basic commodities has grown enormously since the end of World War II, analysts see the persistence of resource-related conflict in areas where materials remain scarce or there is anxiety about the future reliability of supplies. Many experts believe, for example, that the fighting in Darfur and other war-ravaged areas of North Africa has been driven, at least in part, by competition among desert tribes for access to scarce water supplies, exacerbated in some cases by rising population levels.

“In Darfur,” says a 2009 report from the UN Environment Programme on the role of natural resources in the conflict, “recurrent drought, increasing demographic pressures, and political marginalization are among the forces that have pushed the region into a spiral of lawlessness and violence that has led to 300,000 deaths and the displacement of more than two million people since 2003.”

Anxiety over future supplies is often also a factor in conflicts that break out over access to oil or control of contested undersea reserves of oil and natural gas. In 1979, for instance, when the Islamic revolution in Iran overthrew the Shah and the Soviets invaded Afghanistan, Washington began to fear that someday it might be denied access to Persian Gulf oil. At that point, President Jimmy Carter promptly announced what came to be called the Carter Doctrine. In his 1980 State of the Union Address, Carter affirmed that any move to impede the flow of oil from the Gulf would be viewed as a threat to America’s “vital interests” and would be repelled by “any means necessary, including military force.”

In 1990, this principle was invoked by President George H.W. Bush to justify intervention in the first Persian Gulf War, just as his son would use it, in part, to justify the 2003 invasion of Iraq. Today, it remains the basis for US plans to employ force to stop the Iranians from closing the Strait of Hormuz, the strategic waterway connecting the Persian Gulf to the Indian Ocean through which about 35 percent of the world’s seaborne oil commerce passes.

Recently, a set of resource conflicts have been rising toward the boiling point between China and its neighbors in Southeast Asia when it comes to control of offshore oil and gas reserves in the South China Sea. Although the resulting naval clashes have yet to result in a loss of life, a strong possibility of military escalation exists. A similar situation has also arisen in the East China Sea, where China and Japan are jousting for control over similarly valuable undersea reserves. Meanwhile, in the South Atlantic Ocean, Argentina and Britain are once again squabbling over the Falkland Islands (called Las Malvinas by the Argentinians) because oil has been discovered in surrounding waters.

By all accounts, resource-driven potential conflicts like these will only multiply in the years ahead as demand rises, supplies dwindle and more of what remains will be found in disputed areas. In a 2012 study titled Resources Futures, the respected British think-tank Chatham House expressed particular concern about possible resource wars over water, especially in areas like the Nile and Jordan River basins where several groups or countries must share the same river for the majority of their water supplies and few possess the wherewithal to develop alternatives. “Against this backdrop of tight supplies and competition, issues related to water rights, prices, and pollution are becoming contentious,” the report noted. “In areas with limited capacity to govern shared resources, balance competing demands, and mobilize new investments, tensions over water may erupt into more open confrontations.”

## 1NC – CP

#### CP Text – The Appropriation of Outer space is unjust except for space based solar power.

#### Space based solar power is coming now – but it depends on private actors.

Kaplan 21 [Spencer Kaplan, 7-26-2021, "Op-ed," SpaceNews, <https://spacenews.com/op-ed-its-time-to-seriously-consider-space-based-solar-power/> [accessed 2-7-22] lydia

Although space-based solar power (SBSP) sounds like science fiction, scientists and engineers have explored developing the futuristic technology for decades but repeatedly came to the same [conclusion](https://www.nasa.gov/pdf/716070main_Mankins_2011_PhI_SPS_Alpha.pdf): SBSP is likely technologically possible but for it to be feasible, launch costs will have to come down considerably. Now that companies like SpaceX, Blue Origin, and Rocket Lab have demonstrated re-use capabilities and launch costs are plummeting, it is time to think seriously and boldly about the development of SBSP. It is difficult to overstate the benefits of SBSP. For one, it could eventually provide inexhaustible clean energy to civilians because SBSP produces no harmful byproducts and uses solar radiation as its fuel. The United States could also use SBSP to create a dynamic national energy system modeled after the Strategic Petroleum Reserve. If the United States had a national SBSP constellation when Texas experienced widespread outages in February, the federal government could have supplied emergency power to civilians instantly. Scientists and engineers have even [proposed](https://www.nasa.gov/pdf/716070main_Mankins_2011_PhI_SPS_Alpha.pdf) using SBSP to power lunar exploration and resource extraction operations in the moon’s permanently shaded regions (PSRs), where traditional solar power would be impossible to utilize. SBSP has enormous military uses as well. The military [could use](https://www.nasa.gov/pdf/716070main_Mankins_2011_PhI_SPS_Alpha.pdf) SBSP to power remote bases instead of using dangerous fuel convoys that cost up to hundreds of dollars per gallon. SBSP could also theoretically be used to power unmanned aerial vehicles (UAVs), allowing them to stay in the air until their components fail. Removing energy as a limiting factor in military operations stands to radically change conventional military doctrine. In recognition of the vast potential of SBSP, nations around the world have begun heavily investing in the potentially transformative technology. Japan [enacted](https://www.nasa.gov/pdf/716070main_Mankins_2011_PhI_SPS_Alpha.pdf) legislation in 2009 that requires its government to research SBSP and plans to build a 1 GW system in the 2030s. The European Union and India have also [begun](https://www.esa.int/Enabling_Support/Preparing_for_the_Future/Discovery_and_Preparation/Space-based_solar_power_seeking_ideas_to_make_it_a_reality) [considering](https://www.newindianexpress.com/states/karnataka/2018/jul/08/india-needs-to-create-solar-power-satellite-indian-space-research-organisation-1840117.html) SBSP as a potential power system for the future. No country, though, has approached China’s interest and level of investment. China has[built](https://www.uscc.gov/sites/default/files/Namrata%20Goswami%20USCC%2025%20April.pdf) the world’s first SBSP base plant and plans to build a 100 kW satellite in LEO by 2025, a 1 mW satellite in GEO by 2035, and a full, commercial satellite in 2050. Since SBSP could be a transformative technology, it is reasonable to ask why the United States is not investing heavily in SBSP. In fairness, the United States has launched a few research projects like the Naval Research Laboratory’s (NRL)[Lectenna](https://www.nrl.navy.mil/Careers/STEM/LEctenna-Challenge/), [Photovoltaic Radio-frequency Antenna Module](https://www.nrl.navy.mil/Careers/STEM/LEctenna-Challenge/) (PRAM), and [Power Transmitted Over Laser](https://www.nrl.navy.mil/Media/News/Article/2504007/researchers-transmit-energy-with-laser-in-historic-power-beaming-demonstration/) (PTROL) experiments. The Department of Defense also launched a 100 million dollar partnership with Northrop Grumman on [Space Solar Power Incremental Demonstrations and Research](https://afresearchlab.com/technology/successstories/space-power-beaming/) (SSPIDR), which aims to launch an SBSP demonstration spacecraft called Arachne in 2024. Still, though, the United States lacks a clear plan for SBSP and is dangerously at risk of falling behind its competitors. To position itself well for the future, the United States should begin treating space-based solar power like the groundbreaking technology that it could be. The government could start by naming a point organization to coordinate and lead SBSP research. Naming a lead organization will give SBSP a congressional “cheerleader” to attract federal funding while also clarifying domestic and international regulatory responsibilities. The United States should also engage the private sector by subsidizing research and development of SBSP. As it stands, SBSP is likely viewed as too risky for robust private investment, but if the government shouldered some of the cost, as it does with other forms of green energy, the private sector might be more willing to develop SBSP capabilities.

#### SSP has net 0 emissions with no pollution

Esther **Katete, 21** (Esther Katete, Is Space-Based Solar Power Our Future? (2022), No Publication, https://www.greenmatch.co.uk/blog/2020/02/space-based-solar-power, 12-17-2021)//iLake-💣🍔

According to the [National Space Society](https://space.nss.org/space-solar-power/), space-based solar power has the potential to dwarf all the other sources of energy combined. They argue that space-based solar power can provide large quantities of energy with very little negative environmental impact. It can also solve our current energy and greenhouse gas emissions problems. The infographic below highlights information about space-based solar power, current related trends, and what different countries are doing in terms of research and funding. Current Global Energy Consumption and Trends The world’s energy consumption is only growing. According to a report by the University of Oxford’s Our World in Data, on the global primary energy consumption, the current world consumption is over 160,000 TWh annually. Solar energy contributes only 585 TWh. Although there is an increase in renewable energy solutions, investments, and usage, oil, coal, and gas still generate more than 80% of the global energy that is consumed - with solar energy generating less than 1%. Between 2004 and 2015, investments in renewable energy increased by 600% from £36.2 billion (US$46.7 billion) to £220.6 billion (US$284.8 billion). Current predictions indicate that the world population will reach [9.7 billion by 2050](https://www.un.org/development/desa/en/news/population/world-population-prospects-2019.html). With the increase in population, the world energy consumption is also predicted to grow by 50% by 2050. In addition, climate change impacts are accelerating. Although we generate a big percentage of the world energy from fossil fuels, fossil fuels contribute significantly to the increase of climate change. Comparatively, solar energy is the [safest source of energy](https://ourworldindata.org/uploads/2020/02/Safest-source-of-energy.png) today - though it still only contributes a small percentage of the global energy production. The death rates from solar production are 1,230 times lower than coal, and it has one of the lowest CO2 emissions, at 5g CO2 eq per kWh. Why Space-Based Solar Power? Space-based solar power has several benefits; unlike solar panels on our roofs that can only generate electricity during the day, space-based solar power can generate continuous electricity, 24 hours a day, 99% of the year. This is because, unlike Earth, the space environment does not have night and day, and the satellites are in the Earth's shadow for only a maximum of 72 minutes per night. Space-based solar panels can generate 2,000 gigawatts of power constantly. This is 40 times more energy than a solar panel would generate on Earth annually. This is also several folds higher than the [efficiency of solar panels](https://www.greenmatch.co.uk/blog/2014/11/how-efficient-are-solar-panels) today. What’s more, is that space-based solar power would generate [0% greenhouse gas emissions](https://space.nss.org/space-solar-power/) unlike other alternatives energy like nuclear, coal, oil, gas, and ethanol. The current source of energy that generates the lowest CO2 is nuclear power, which generates CO2 of 5g CO2 eq per kWh. Space-based solar power generates almost 0% hazardous waste to our environment compared to nuclear power.

#### It solves existential warming.

Ravisetti 21 [Monisha Ravisetti, 11-8-2021, "Harvesting energy with space solar panels could power the Earth 24/7," CNET, <https://www.cnet.com/news/harvesting-energy-with-space-solar-panels-could-power-the-earth-247/> [accessed 2-8-22] lydia

But there's a caveat to this wonderful power source. Solar panels can't collect energy at night. To work at peak efficiency, they need as much sunlight as possible. So to maximize these sun catchers' performance, researchers are toying with a plan to send them to a place where the sun never sets: outer space.

Theoretically, if a bunch of solar panels were blasted into orbit, they'd soak up the sun even on the foggiest days and the darkest nights, storing an enormous amount of power. If that power were wirelessly beamed down to Earth, our planet could breathe in renewable clean energy, 24/7. That would significantly reduce our carbon footprint. Against the backdrop of a worsening climate crisis, the success of space-based solar power could be more important than ever. The state of the climate is in the spotlight right now as world leaders gather in Glasgow, Scotland, for the COP26 summit, which has been called [the "world's best last chance" to get the crisis under control](https://www.cnet.com/news/cop26-kicks-off-what-is-it-and-why-is-it-the-worlds-best-last-chance-for-climate-action-glasgow-climate-change/). [CNET Science](https://www.cnet.com/topics/science/) is highlighting a few futuristic strategies intended to aid countries in cutting back on human-generated carbon emissions. Next-generation tech like space-based solar power can't solve our climate problems -- we still need to rapidly decarbonize our energy systems -- but green innovation could help achieve the goals of the Paris Agreement: Limit global warming to well below 2 degrees Celsius (3.6 degrees Fahrenheit) by the end of the century.  An unlimited supply of renewable energy from the sun might help us do that. From science fiction to fact For decades, space solar power has lived in the minds of science fiction lovers and scientists alike. In the early 1900s, [Russian scientist-mathematician Konstantin Tsiolkovsky](https://www.esa.int/Science_Exploration/Human_and_Robotic_Exploration/Exploration/Konstantin_Tsiolkovsky) was steadily churning out a stream of futuristic designs envisioning human tech beyond Earth. He's responsible for conjuring things like space elevators, steerable rockets and, you guessed it, [space solar power](https://go.gale.com/ps/i.do?id=GALE%7CA62793333&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=03623416&p=AONE&sw=w&userGroupName=anon%7Ed5adf45d). Since Bell Labs invented the [first concrete "solar panel" in the '50s](https://www.smithsonianmag.com/sponsored/brief-history-solar-panels-180972006/), international scientists have been working to make  Tsiolkovsky's sci-fi fantasy a reality. They include [Japanese researchers](https://nextrendsasia.org/japan-pioneer-of-transferring-solar-energy-from-space-to-earth/#:~:text=Konstantin%20Tsiolkovsky%2C%20commonly%20known%20to,the%20%E2%80%9Cconquest%20of%20planets%E2%80%9D.), the [US military](https://www.space.com/x-37b-space-plane-solar-power-beaming) and a team from the California Institute of Technology [spearheading the Space Solar Power Project](https://www.spacesolar.caltech.edu/).  Space solar power "was investigated extensively in the late 1960s and the 1970s, sort of in the heyday of the Apollo program," said Michael Kelzenberg, senior research scientist on the project.  Unfortunately, due to the materials' weight and bulk, the era's technology wasn't advanced enough to cost-effectively achieve the feat. It would've been exceptionally difficult to send classic solar panels to space via a rocket without breaking the bank. "The distinctively unique and defining feature of the Caltech approach is a focus on reducing the component mass by 10 to 100 times," said Harry Atwater, the project's principal investigator. "This is essential to reducing both the manufacturing and the launch costs to make space solar power economical."

## Case

### 1NC – Framing

#### Framing – ROB – if we win that cap good then that indicts the ROB bc we don’t need to withdrawl from the system , and counter ROB is to determine of the resolution is a good or bad idea

#### Only constructive policy debates nurture information literacy necessary for every model of politics – the process of sifting through evidence and subjecting positions to researched scrutiny is essential to managing emerging crises and information overload – answrs all the warrants of exhaution and withdrawl

Leek 16 [Danielle R. Leek, professor of communications at Grand Valley State University, “Policy debate pedagogy: a complementary strategy for civic and political engagement through service-learning,” Communication Education, 65:4, 399-405]

Through policy debate, students can develop information literacy and learn how to make critical arguments of fact. This experience is politically empowering for students who will also build confidence for political engagement. Information literacy While there are many definitions of information literacy, the term generally is understood to mean that a student is “able to recognize when information is needed , and have the ability to locate, evaluate, and use effectively the information needed” for problem- solving and decision-making (Spitzer, Eisenberg, & Lowe, 1998, p. 19). Information exists in a variety of forms, in visual data, computer graphics, sound-recordings, film, and photographs. Information is also constructed and disseminated through a wide range of sources and mediums. Therefore, “information literacy” functions as a blanket term which covers a wide range of more specific literacies. Critiques of service-learning’s knowl- edge-building power, such as those articulated by Eby (1998) and Colby (2008), are chal- lenging both the emphasis the pedagogy places on information gained through experience and the limited scope of political information students are exposed to in the process. Policy debate can augment a student’s civic and political learning by fostering extended information literacies. Snider and Schnurer (2002) identify policy debate as an especially research intensive form of oral discussion which requires extensive time and commitment to learn the dimensions of a topic. Understanding policy issues calls for contemplating a range of materials, from traditional news media publications to court proceedings, research data, and institutional propaganda. Moreover, the nature of policy debate, which involves public presentation of arguments on two competing sides of a question, motivates students to go beyond basic information to achieve a more advanced level of expertise and credibility on a topic (Dybvig & Iverson, n.d.). This type of work differs from traditional research projects where students gather only the materials needed to support their argument while neglecting contrary evidence. Instead, the “debate research process encourages a kind of holistic approach, where students need to pay attention to the critics of their argument because they will have to respond to those attacks” (Snider & Schnurer, 2002, p. 32). In today’s attention economy, cultivating a sensibility for well- rounded information gathering can also aid students in recognizing when and how the knowledge produced in their social environments can be effectively translated to specific contexts. The “cultural shift in the production of data” which has followed the emergence of Web 2.0 technologies means that all students are likely “prosumers”—that is, they consume, produce, and coproduce information online all at the same time (Scoble, 2011). Coupling service- learning with policy debate calls on students to apply information across registers of public engagement, including their own service efforts and their own public argumentation, in and outside of their debates. Information is used in the service experience, which in turn, informs the use of information in debates, where students then produce new information through their argumentation. The process is what Bruce (2008) refers to “informed learning,” or “using information in order to learn.” When individuals move from learning how to gather materials for a task to a cognitive awareness and understanding of how the information-seeking process shapes their learning, they are engaged in informed learning. Through this process, students can come to recognize that information management and credibility is deeply disciplinary and historically con- textual (Bruce & Hughes, 2010). This understanding, combined with practical experience in locating information, is a critical missing element in contemporary political engage- ment. Over 20 years ago, Graber (1994) argued that one of the biggest obstacles to political engagement was not apathy, but a gap between the way news media presents information during elections, and the type of information voters need and will listen to during electoral campaigns. The challenge extends beyond elections into policy-making, especially as younger generations continue to revise their notions of citizenship away from institutional politics towards more social forms of activism (Bennett, Wells, & Freelon, 2011). For stu- dents to effectively practice more expressive forms of citizenship they need experience managing the breadth of information available about issues they care about. As past research indicates a strong correlation between service-learning experience and the motiv- ation and desire for post-graduation service, it seems likely that students who debate about policy issues related to service areas will continue their informed learning practices after they have left the classroom (Soria & Thomas-Card, 2014). Arguing facts In addition to building information literacies, students who combine policy debate with service-learning can practice “politically relevant skills,” which will help them have confidence for political engagement in the future. As Colby (2008) explains, this confidence should be tempered by tolerance for difference and differing opinions. On the surface, debating about institutional politics might seem counterintuitive to this goal. Politicians and the press have a credibility problem among college-aged students, and this leaves younger generations less inclined to feel obligated to the state or to look to traditional modes of policy- making for social change (Bennett et al., 2011; Manning & Edwards, 2014). This lack of faith in government and media outlets also makes political argument more difficult (Klumpp, 2006). Whereas these institutions once served as authoritative and trustworthy sources of information, the credibility of legislators and journalists has decreased over the last 40 years or so. Today, politicians and pundits are viewed as political actors interested in spectacle, power, and profit rather than truth-seeking or the common good. While some political controversies are rooted in competing values, Klumpp (2006) explains that arguments about policy are more often based in fact. Indeed, when engaged in public arguments over questions of policy, people tend to “invoke the authority of facts to support their positions.” Likewise, “the governmental sphere has developed elaborate legal and deliberative processes in recognition of the power of facts as the basis for a decision.” Yet, while shared values are often quickly agreed upon, differences over fact are more difficult to resolve. Without credible institutions of authority that can disseminate facts, public deliberation requires more time, information-gathering, evaluation, and reasoning. The Bush administration’s decision to take military action in Iraq, for example, was presumably based on the “fact” that Saddam Hussein had acquired weapons of mass destruction. This has now become a classic example of poor policy-making grounded in faulty factual evidence. This shortcoming is precisely why policy debate is a valuable complement to service- learning activities. Not only can students use their developing literacies to better understand social problems, they can also learn to access a broader range of knowledge sources, thereby mitigating the absence of fact-finding from traditional institutions. Fur- thermore, policy advocacy gives students experience testing the reasoning underlying claims of fact. Issues of source credibility, analogic comparisons, and data analysis are three examples of the type of critical thinking skills that students may need to apply in order to engage a question of policy (Allen, Berkowitz, Hunt, & Louden, 1999). While the effect may be to undermine government action in some instances, in others students will gain a better understanding of when and where institutional activities can work to make change. As students gain knowledge about the relationship between institutional structures and the communities they serve, they grow confidence in their ability to engage in future conversations about policy issues. Zwarensteyn’s (2012) research high- lights these sorts of effects in high school students who engage in competitive policy debate. Zwarensteyn theorizes that even minimal increases in technical knowledge about politics can translate to significant increases in a student’s sense of self-efficacy. Many students start off feeling very insecure when it comes to their mastery of insti- tutional politics; policy debate helps overcome that insecurity. Moreover, because training in policy debate encourages students to address issues as arguments rather than partisan positions, it encourages them to engage policy-making without the hostility and incivility that often characterizes today’s political scene. Indeed, it is precisely that perceived hostility and incivility that prompts many young people to avoid politics in the first place. I do not mean to imply that students who debate about their service-learning experi- ences will draw homogenous conclusions about policies. Quite the contrary. Students who engage in service-learning still bring their personal visions and history to bear on their debates. As a result, students will often have very different opinions after engaging in a shared debate experience. More importantly, the practice of debating should operate to particularize students’ knowledge of community partners and clients, working against the destructive generalizations and power dynamics that can result when students feel privileged to serve less fortunate “others.” For civic and political engagement through service-learning to be meaningful and productive, it must do more to challenge students’ concepts of the homogenous “we” who helps “them.” Seligman (2013) argues that this civic spirit can be cultivated through the core pedagogical principle of a “shared practice,” which emphasizes the application of knowledge to purpose (p. 60). Policy debate achieves this outcome by calling on students to consider and reconsider their understanding of themselves, institutions, community, and policy every time the question “should” may arise. As Seligman writes: ... the orientation of thought to purpose (having an explanation rest at a place, a purpose) is of extreme importance. We must recognize that the orientation of thought to purpose is to recognize moving from providing a knowledge of, to providing a knowledge for. This means that in the context of encountering difference it is not sufficient to learn about (have an idea of) the other, rather it means to have ideas for certain joint purposes—for a set of “to-does.” A purpose becomes the goal towards which our explanations should be oriented. (p. 61) Put another way, policy debate challenges students “to maintain a sense of doubt and to carry on a systematic and protracted inquiry” in the process of service-learning itself (Seligman, 2013, p. 60). This is precisely the type of complex, ongoing, reflective inquiry that John Dewey had in mind. Political engagement through policy debate This essay began with a discussion of the growing attention to civic engagement programs in higher education. The national trend is to accomplish higher levels of student civic responsibility during and after their time in college through service-learning experiences tied to curricular learning objectives. A challenge for service-learning scholars and teachers is to recognize a distinction between civic activities that are accomplished by helping others and political activities that require engagement with the collective institutional structures and processes that govern social life. Both are necessary for democracy to thrive. Policy debate pedagogy can help service-learning educators accomplish these dual objectives. To call policy debate a pedagogy rather than just a style of debate is purposeful. A pedagogy is a praxis for cultivating learning in others. The pedagogy of service-learning helps students to know and engage social conditions through physical engagement with their environments and communities. Policy debate pedagogy leads students to know and engage these same social conditions while also challenging them to apply their knowledge for the purpose of political advocacy. These pedagogies are natural compliments for cul- tivating student learning. Therefore, future studies should explore how well service-learn- ing combined with policy debate can resolve concerns that policy debate alone does not go far enough to invest students with political agency (Mitchell, 1998). The present analysis suggests the potential for such an outcome is likely. Moreover, research is clear that the civic effects of service-learning as an instructional method are improved simply by increasing the amount of time spent on in-class discus- sion about the service work students do (Levesque-Bristol, Knapp, & Fisher, 2010). Policy debates related to students’ service can accomplish this goal and more. Policy debates can also facilitate the political learning students need to build their political efficacy and capacity for political engagement. Through informed learning about the political process—especially in the context of service practice—students develop literacies that will extend beyond the classroom. Using this knowledge in reasoned public argument about policy challenges invites students to move beyond cynical disengagement towards a productive recognition of their own potential voice in the political world. Policy debate pedagogy brings unique elements to the process of political learning. By emphasizing the conditional and dynamic nature of political arguments and processes, debates can work to relieve students of the misconception that there is a single “right answer” for questions about policy-making and politics, especially during election time. The communication perspective on policy debates also highlights students’ collective involvement in the ever-changing field of political terms, symbols, and meanings that constitute interpretations of our social world. In fact, the historical roots of the term “communication” seem to demand that speech and debate educators call for such emphasis on political learning. “To make common,” the Latin interpretation of communicare, situ- ates our discipline as the heart of public political affairs (Peters, 1999). Connecting policy debate to service-learning helps highlight the common purpose of these approaches in efforts to promote civic engagement in higher education.

#### T/L – make the aff contextualize how they solve for all of cap- just rejecitng space cap doesn’t change the mode of production that exists on earth right now, independent alt cause

#### Extinction outweighs

Baum 16 [Seth, @ Global Catastrophic Risk Institute, In “The Ethics of Space Exploration”, ed. James S.J. Schwartz & Tony Milligan, Springer, 2016, pages 109-123. This version 29 July 2016. <https://sethbaum.com/ac/2016_SpaceEthics.pdf>] brett

A basic conclusion of this paper is that consequentialists should pay attention to outer space. This is because outer space can be the location of immense consequences (via space colonization) and because outer space scenarios can force us to rethink our consequentialist ethics (via ETI encounter).

Attention to outer space prompts us to recognize the big picture. This holds for consequentialist ethics as much as it does for anything else. Only by thinking through the possibilities of outer space can we understand how our lives could matter in the grand scheme of things. And the fact of the matter is that our lives can matter immensely. We can set the pieces in motion for an immense cosmic civilization. We can help prevent civilization-ending global catastrophe so as to enable future space colonization. And we can determine whether or not to try messaging to ETI.

Should we do these things? Answering this all-important question requires ethics. Therefore, just as consequentialists should pay attention to outer space, so too should outer space analysts pay attention to consequentialism, and indeed to ethics in general. Defensible forms of consequentialism will generally conclude that (1) humanity today should focus on avoiding global catastrophe, (2) space colonization should proceed with caution, but ultimately should proceed at immense scale, and (3) high-power/long-duration METI should not be conducted until more effort is put to assessing whether the consequences are likely to be good.

The ethical arguments and empirical analyses in this paper are quite brief and are not the final word on the subject. I have said little in defense of consequentialism and my preferred form of it. The analyses of space colonization and ETI encounter are likewise at best only approximate and leaving much for future work. Some of it is due to space constraints in this paper, but much of it is due to the fact that the research simply has not yet been performed. Outer space consequentialism could make for a fruitful line of inquiry.

The merits of this line of inquiry are diminished by the conclusion to focus on avoiding global catastrophe. Any global catastrophe would preclude the possibility of future research on all topics, including outer space consequentialism. Likewise, any hopes of resolving the ethical dilemmas and empirical uncertainties depend on us surviving long enough to do the research. An argument can thus be made against any work on outer space in favor of work on the global catastrophic risks. My own view is that work on outer space should be pursued mainly to the extent that it is instrumentally valuable towards reducing the global catastrophic risks. To that end it can be quite instrumentally valuable. Outer space can offer great motivation due to its immense opportunities, and it can be deeply inspirational due to its beauty and wonder and the big-picture perspective it offers. While attention to outer space should not distract humanity from the urgent threats that it faces, some attention is very much worthwhile.

### Offense

#### Affirming a method of withdrawal from modern structures of semiotics and truth ends in extinction by making responses to collective action crises impossible and guaranteeing lash out.

Al-Rodhan, 17 [Prof Nayef Al-Rodhan is an Honorary Fellow at St Antony’s College, University of Oxford, and Senior Fellow and Head of the Geopolitics and Global Futures Programme at the Geneva Centre for Security Policy, Post-Truth Politics, the Fifth Estate and the Securitization of Fake News, June, <https://www.globalpolicyjournal.com/blog/07/06/2017/post-truth-politics-fifth-estate-and-securitization-fake-news>]

Even so, what we are witnessing today, in the “post-truth” era is more menacing because of the multiplication of channels of communication. Information now can circulate freely and unverified on the Internet, providing possibilities of misinformation and propaganda on a scale that was previously virtually impossible. In effect, it is now possible to share fake news more frequently than verified news, also due to the fact that social media has enabled the proliferation of authentic-looking or misleading fake accounts that help spread lies, most often directed against the liberal public.

What is truth anyway?

The Oxford Dictionaries dates the first use of the term to a 1992 essay by Steve Tesich, a Serbian-American playwright writing in The Nation following the Iran/Contra scandal. Tesich reflected that after the Watergate revelations and reporting of atrocities from Vietnam, Americans had become contemptuous of uncomfortable truths. He noted: “we came to equate the truth with bad news (…). We looked to our government to protect us from the truth”.

Journalist David Roberts also used the term “post-truth” more than two decades ago to refer to the response of some US politicians refuting scientific claims about climate change.

In 2004, Ralph Keyes proclaimed we had reached the age of “post-truth”. In his 2004 book, “The Post-Truth Era: Dishonesty and Deception in Contemporary Life”, Keyes expressed the concern that we are losing the stigma attached to lying, meaning that lies can be told with impunity. For Keyes, such times of “post truthfulness” represent an ethical twilight zone.

The common theme running across the history of the term is that post-truth is defined by lies spread routinely by politicians, with little or no significant consequences for their legitimacy and reputation. But there are inevitable consequences for the future of democracy and the future of humanity: a future in which scientific facts are repudiated cannot be anything but insecure. Veritas, or truth, and facts are crucial for humanity, and indispensible for effective decision-making and ultimately, for human progress. Moreover, facts-based policies are also important in an existential sense and indispensible to our own survival – the case of the debate on climate change being a prime example.

Geopolitics and Fake News

Geopolitics in the era of fake-news is also complicated because post-truth disrupts a fundamental element of diplomacy and international politics, namely communication. Unsubstantiated allegations and groundless claims will distort diplomatic relations and lead political and military processes astray. False claims about the money ‘extorted’ from the UK by the European Union helped build the case for Brexit, with its ensuing implications for stability in Europe and elsewhere. The Russian state used social media to spread allegations that the Ukranian government crucified a child – a claim later debunked, yet telling of how fake news can help fuel wars. Similarly, populist rhetoric about NATO’s inadequacy and misinformation about its funding mask ignorance about the real benefits of the alliance for its members’ common security. Although unsubstantiated, such comments are enough to create anxiety in political quarters and prompt some Eastern European nations to see their state security in a wholly different geopolitical light. In the post-truth era, a complete lack of understanding of military strategy and the intricacies of warfare will be less relevant in devising policies, and this comes at the risk of dismantling security communities and the foundations of the liberal order.

#### The 1AC gets coopted by fascism. Info’s not dissuasive---shared meaning-making is inevitable and can generate positive value and political change.

Bailey, 20—Assistant Professor in Politics in the School of International Studies at the University of Nottingham (Mark, “Cassirer, Fatalism and Political Myth: Historical Lessons in the Consequences of Pessimism for International Relations,” *Pessimism in International Relations*, Chapter 4, pg 57-64, SpringerLink, dml)

Specifically, Heidegger’s work was instrumental in sowing a public mood of deep pessimism about the future in its assertions that humanity is defined by Geworfenheit, the condition of being involuntarily ‘thrown’ into the stream of time, leaving it permanently a prisoner of the conditions and temporality of its existence.12 Coupled with the successive political and economic crises of the interwar period—which provided considerable apparent veracity to the principal theses of both Spengler and Heidegger)—this climate of fatalism and pessimism was fundamentally explosive, potentially creating ‘a pliable instrument in the hands of the political leaders’.13 In making these points, Cassirer recognised that a culture of fatalism also represented the death of politics. As Colin Hay explains, ‘fatalism and resignation are the antithesis of politics. The extent to which our destiny is determined by processes beyond our control is the extent to which it is non-political… Similarly, the extent to which we entrust our destiny to fate is the extent to which we deny ourselves the capacity to shape outcomes’,14 Unable to perceive an escape from their present torment, millions of Germans in the 1930s were prepared to surrender their political and ethical freedoms to those who proclaimed that they could.

It was an attempt to find answers to the questions raised by the rise of uniquely modern forms of political mythology that spurred Cassirer to write The Myth of the State. In answer to the crises of the time, the Nazis proved particularly adept at offering a carefully fabricated, superficially plausible and emotionally compelling account of the reasons behind the contemporary political and economic situation that made the complex and multifaceted beguilingly simple. Moreover, by capitalising on a deep sense of historical fatalism and pessimism, the Nazi account of the reasons for Germany’s woes effectively delivered them carte blanche to remake German society and culture in their own genocidal image.

Cassirer’s Historical Context

Cassirer was writing in response to a twin crisis in Continental philosophy and the increasing degeneration of the political situation in interwar Germany. In many respects, he was embarking on a doomed mission to save the existing liberal order, consummated in Germany in the formation of the Weimar Republic. He also sought to preserve the liberal, Kulturphilosophie tradition of figures such as Goethe, Herder and Humboldt from being consumed by reactionary and anti-rationalist political and cultural forces in interwar Germany that despised the fundamental optimism that underpinned this movement’s view of culture as the source of human self-liberation. The first of these twin philosophical crises was the impact of Darwinism on philosophy, which Cassirer argued had led to ‘a complete anarchy in thought’.15 The publication of the Origin of the Species (1859) resulted in a major shift in the character of anthropological philosophy from mathematical explanations of human nature to biological ones. It similarly encouraged a widespread belief that the empirical facts of evolution would similarly lead to a metaphysical revelation of the fundamental principles underpinning evolution’s dynamic processes of change. This would contribute to the uncritical projection of the telos of natural evolution onto the world of culture, and the concomitant belief that a cultural telos could be discerned by reference to the empirical facts of human cultural life. The result was a race to reduce the evolution of human culture to a primum mobile, so as to systematise human culture along ‘scientific’ lines in a quest to prove conclusively the essential unity and homogeneity of human nature. However, this race produced multiple theories of human nature that were at once reductive and utterly mutually exclusive in their different accounts of human nature’s essential motivating force. Moreover, they each exhibited a tendency to be inflated (deliberately or otherwise) into Grand Theories of everything. These exhibited tendencies that philosopher Mary Midgley later saw as reflecting a symbiotic relationship between ‘reductionism’ and ‘payoff’: the reduction of social phenomena to a singular cause that then becomes a universal solution to all problems.16

The appearance of this multitude of conflicting explanations concerning the underlying metaphysical principles of human nature resulted in a complete loss of an ‘intellectual centre’; an absence of any general frame of reference against which philosophical claims might be judged for their veracity. It also contributed to a growing personalisation of intellectual disciplines and the increasing ‘barbarism of specialization’ in philosophy and the social sciences as more and more disciplines emerged, focusing on ever-more limited aspects of human activity. This narrowing of focus, together with the tendency towards the formation of ‘schools’ of thought within, between and in some cases across disciplines, centred on individual scholars whose words quickly assumed quasi-theological and eschatological qualities in the hands of their numerous disciples. For Cassirer, this situation was increasingly intolerable, leading to a crisis in humanity’s knowledge of itself that presented a ‘grave threat to…ethical and cultural life’.17

The second philosophical crisis that Cassirer confronted was the growing emergence of Liebensphilosophie, the ‘Philosophy of Life’, in the early years of the twentieth century. This was a form of that fundamentally clashed with the kind of idealist philosophy of Spirit (Geist) that Cassirer’s work typifed. Closely associated with the philosophies of Kierkegaard, Bergson, Simmel, Nietzsche, Heidegger and Scheler, Liebensphilosophie completely rejected the historicist optimism omnipresent in Cassirer’s work, which placed a deep-seated faith in the progress of the human spirit in history. In contrast, Liebenphilosophie asserted an equally deep-seated, reactionary and highly anti-rationalist pessimism, in which Geist ‘is seen not as a transformation of life but as alienation, an inauthentic relationship to Being’.18 Thus, Liebensphilosophie sought a more ‘authentic’ and immediate mode of existence through the rejection of modern rationalism and the perceived arid technicism of modern, liberal, capitalist civilisation. In particular, it encapsulated a deep disenchantment and regarded Cassirer’s Enlightenment-based Kantian liberalism as being fundamentally deluded in the face of the experiences of the war and the economic and political crises that followed.19 Cassirer himself was not entirely unsympathetic to many of the arguments of the life-philosophers. He was alive to the threat to modern society presented by technological alienation and the manner in which consumer capitalism portended society’s moral debasement, thanks to its reduction of life to a fruitless quest to satisfy material desires.20 Moreover, in the case of the life-philosophers’ understanding of the purely expressive nature of myth, he was in complete agreement, even as he contested their assertion that myth presented a more ‘authentic’ mode of existence than that of reason.

In response to these twin crises, Cassirer offered the three volumes of The Philosophy of Symbolic Forms, and a series of later works, such as The Myth of the State and The Logic of the Cultural Sciences. The Philosophy of Symbolic Forms, in particular, can be seen as Cassirer’s attempt to provide, first, an answer to the crisis of self-knowledge that he held responsible for many of the failings of modernity and, second, to provide the general philosophical framework against which truth claims could be tested. Through all of these works, Cassirer continues to assert his fundamentally optimistic, liberal idealism. Here we learn that humanity is fundamentally a symbolic animal; it is the power to engage in the process of meaning-creation through symbolisation that separates humanity from other animals. No other creature has the power to create abstract meanings and concepts in the manner that, for instance, distinguishes humanity’s experience of time as a concrete past, present and future from the animal world’s experience of pure immediacy.21

These works reflected Cassirer’s need to balance the relationship between the various symbolic forms, from the pure irrational expressiveness of myth to the rationalist signification of natural science.22 They allowed Cassirer to identify the significant fallacies of both Liebensphilosophie and of the logical positivists, who had narrowed the focus of philosophy to purely logical questions.23 For one thing, as a fundamentally symbolic animal, all human meaning-creation, even at its most primeval and expressive in the form of myth, requires mediation through the process of symbolic creation. We simply cannot recognise anything as being meaningful without the process of conceptual formation that symbolisation involves. Therefore, for humanity, a world of pure immediacy cannot exist.24 Further, those such as Simmel who despaired of the process of self-alienation of creator from object of cultural creation discounted the truly democratising effects of culture. It presented a realm in which all could play their part, no matter how small it might prove to be. Rather than see culture as a source of alienation and pessimism, therefore, humanity needs to recognise that we are all participants in the dance of cultural creation; it is fundamental to our very existence as human beings and is therefore inescapable.25

However, perhaps the most potent critique of life-philosophy was one that Cassirer advanced only tenuously in the famous 1929 Davos debate with the figure often presented as his philosophical nemesis, Martin Heidegger. This critique can be effectively summarised in a single question: ‘if not this, then what?’ Cassirer challenged Heidegger’s radical rejection of any form of universality, rooted in the latter’s ontological insistence of the lonely finitude of Dasein—human existence—and of the nature of universality as the very expression of inauthentic existence. Similarly, for Heidegger, the temporal finitude of Dasein limited all products of culture to the same impermanence as human beings themselves. Pointing to the fact of linguistic communication, and by extension to a situation in which he and Heidegger could conduct such a conversation, Cassirer challenged this assertion. That linguistic communication was possible at all pointed to the necessary existence of some forms of intersubjective universality that made human social life possible, and which were therefore key to determining the very nature of our existence.26 This critique is potentially highly illuminating. It indicates one of the core reasons why Cassirer accused Heidegger and Spengler, and life-philosophy in general, of contributing, however unintentionally, to the climate of fatalism and pessimism in German society that afforded National Socialism the opportunity to occupy political and cultural space. In his extreme ontological solipsism, Heidegger undermined the possibility of a common morality, of a shared, intersubjective criteria for assessing that which is true and that otherwise. If this was Heidegger’s intention, therefore, with what did he intend to replace these things, other than a Darwinistic ‘war of all against all’?27 What then were the prospects for human civilisation other than a slide into the abyss?

In their cultivation of a culture of pessimism in German life, their rejection of reason as ‘inauthentic’, their purifying elision of truth in favour of the expressive irrationalities of myth, and their consequent failure to stand up to (and even, in Heidegger’s case, the acceptance of) the violent mythical fantasies of Nazism, many of the life-philosophers, and indeed the German academy in general, stood accused of a fundamental dereliction of their philosophical duty in warning of the dangers Nazism presented to cultural life.28 Moreover, in their active embrace of disenchantment with Enlightenment ideals and its consequent pessimism concerning the future, the life-philosophers and their followers forgot another of the aphorisms of the Nietzsche they so venerated: that when you stare into the abyss, the abyss stares back at you.

Political Myth, Philosophy and Pessimism in the Present

As when Cassirer was composing his later works, our contemporary period sees a liberal world order threatening to collapse under the weight of its own contradictions. A combination of near-continuous economic and financial crisis, technological alienation, ecological destruction, cultural and demographic shifts, disillusionment with and distrust of the institutions of liberal democracy especially, and soaring rates of wealth and income inequality have contributed to the irruption of highly anti-rationalist, reactionary populist movements across the world. Accompanying the rise of these movements has been the emergence of a form of ‘post-truth’ political discourse that shows complete indifference to questions of truth or falsity and exhibits many of the characteristics of the technique of the modern political myth Cassirer articulated in 1945. None of these movements exhibit anything like the ambitions for global conquest and genocide of the Nazis, but nevertheless they reflect a profound, increasingly global, culture of pessimism and political disenchantment that portends great uncertainty with respect to the future. Of particular concern to this chapter is one of the fundamental questions that Cassirer posed in The Myth of the State with respect to Heidegger and Spengler especially: what has been the role of scholarship in precipitating this state of affairs? This is a question that brings the problem of ‘if not this, then what?’ to the very centre of critical analysis.

This question is of specific interest when considering the increasing ubiquity of post-structuralist forms of critical inquiry in the social science s. Is perhaps the cultural legacy of post-structuralism the exact opposite of what post-structuralists themselves actually intended? In short, to what extent has the post-structuralist determination to problematise all forms of ontological certainty, of fixed identity and secure foundations to knowledge, together with its often aggressively anti-rationalist rejection of both liberalism and the Enlightenment (for all the considerable flaws of both), actually become part of the problem, as opposed to part of the solution?29

For example, the post-structuralist claim that there are no authoritative ontological claims as to what is ‘real’, only a multiplicity of interpenetrating and competing interpretations of the nature of existence, historical events and the social world is seriously problematic. Rather than being a source of political emancipation, the bleak post-structuralist assessment of modern political communities contributes to a profound sense of ontological disorientation, not least in its linkage of the absence of truth to the operations of political violence in the form of power and the sovereign state.30 Moreover, it leads to the question as to whether such positions fuel the quest for ontological certainty that often fuel the discourses of reactionary populist political myths, not least in the form of some notion of the ‘true’ or ‘authentic’ community of ‘the nation’. Questions remain, therefore, as to whether post-structuralism, for all the undoubtedly valuable work it has done in identifying cultural, political, ethnic, racial, socioeconomic and other forms of (often hidden) exclusions and acts of oppression and violence, might not have ended up doing more harm than good in terms of presenting new forms of political possibility (which in the case of Foucault are deemed impossible, anyway).31

Rather than the radical, liberatory and emancipatory rethinking of contemporary life and history its adherents have often claimed, this line of argument posits that post-structuralism has instead been profoundly debilitating to the remaking of political life in a manner that might address the many issues of the relationship between power and knowledge (especially in contemporary capitalism). Instead of leading to a revolution in thinking and a rejuvenation of political communities, therefore, post-structuralism has served to inculcate a deep current of solipsism, pessimism, confusion and nihilistic cynicism in both popular and intellectual life that has served to open a considerable political space in which the political myths of post-truth have been able to thrive in the absence of any firm counterweight.32

These problems serve to bring us back to one of the fundamental questions in Cassirer’s philosophy that post-structuralism lacks an answer to: how can a ‘crisis in self-knowledge’ and ‘what counts as truth’ be addressed in an intellectual climate in which the possibility of either has been obliterated? In denying any ethical foundation to knowledge, post-structuralism denies any ethical foundation to politics and, in the process, negates the possibility of holding to account even the most ludicrously fantastical, outright fictional and frighteningly totalising accounts of political and historical events. This has proven profoundly destructive to the ability to maintain the kind of pluralistic and respectful dialogue necessary to the maintenance of functional, accountable, transparent and deliberative democratic politics advocated by Cassirer. Such a politics remains the starting point for any kind of emancipatory process focused on the delivery of social justice, not least to those amongst the silenced, oppressed and marginalised. However, it is difficult to see how such a politics is possible if it is not conceivable to at least agree dialogically on a set of processes through which claims to truth and knowledge can be verified, validated and accepted. This ontological dislocation begs the question as to how, and on what grounds, individuals may make rational and morally autonomous judgements in a polity in which the emotionally centred narratives of political myths have become dominant. Faced with this problem, the question of ‘if not this, then what?’ assumes a degree of importance that has arguably never been more acute since the time of Cassirer himself.

#### Capitalism solves war.

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Liberals view that increasing ties between countries in some fields encourages them to achieve greater cooperation in other fields. These linkages are supposed to strengthen communication and reduce misunderstandings which may cause tension and creates cultural and institutional mechanisms capable of mediating conflicts that may arise between them. At the same time, mutual recognition of mutual benefits enhances peace.

Liberals believe that economic relations between nations lead to peace, with liberals pointing to three important points (Korbel and Chen, 2009, p. 15):

(1) The costs of waging a war against state’s economic partner are very high because fighting against a partner with which the state trade and invest, the state actually fights against itself because a war between the state and its partner must have a negative effect on the state’s economy.

(2) Economic ties change states’ preferences when economic ties between two states become stronger and these two states become more economically interdependent or even integrated, economic interests – compared with other national interests such as military buildup – become the most important.

(3) Strong economic ties make non-military threats such as economic sanctions credible. Therefore, when there is a conflict between two states that have strong economic ties, a non-military threat is more likely to be the choice.

Liberals, assuming that states seek to maximize absolute welfare, maintain that situations of high trade should continue into the foreseeable future as long as states are rational; such actors have no reason to forsake the benefits from trade, especially defection from the trading arrangement will only lead to retaliation. Liberals can argue that interdependence as reflected in high trade at any particular moment in time-will foster peace, given the benefits of trade over war (Copeland, 1996, p. 16).

The core liberal position is straightforward trade provides valuable benefits, or “gains from trade,” to any particular state. A dependent state should therefore seek to avoid war, as peaceful trading gives it all the benefits of close ties without any of the costs and risks of war. Trade pays more than war, so dependent states should prefer to trade not invade (Copeland, 1996, p. 8).

#### [Optional] Studies prove.

Dafoe 14, Political Science and International Economics (Allan & Nina Kelsey; assistant professor in political science at Yale & research associate in international economics at Berkeley; Journal of Peace Research, “Observing the capitalist peace: Examining market-mediated signaling and other mechanisms,” http://jpr.sagepub.com.proxy.lib.umich.edu/content/51/5/619.full)

Countries with liberal political and economic systems rarely use military force against each other. This anomalous peace has been most prominently attributed to the ‘democratic peace’ – the apparent tendency for democratic countries to avoid militarized conflict with each other (Maoz & Russett, 1993; Ray, 1995; Dafoe, Oneal & Russett, 2013).More recently, however, scholars have proposed that the liberal peace could be partly (Russett & Oneal, 2001) or primarily (Gartzke, 2007; but see Dafoe, 2011) attributed to liberal economic factors, such as commercial and financial interdependence. In particular, Erik Gartzke, Quan Li & Charles Boehmer (2001), henceforth referred to as GLB, have demonstrated that measures of capital openness have a substantial and statistically significant association with peaceful dyadic relations. Gartzke (2007) confirms that this association is robust to a large variety of model specifications. To explain this correlation, GLB propose that countries with open capital markets are more able to credibly signal their resolve through the bearing of greater economic costs prior to the outbreak of militarized conflict. This explanation is novel and plausible, and resonates with the rationalist view of asymmetric information as a cause of conflict (Fearon, 1995). Moreover, it implies clear testable predictions on evidential domains different from those examined by GLB. In this article we exploit this opportunity by constructing a confirmatory test of GLB’s theory of market-mediated signaling. We first develop an innovative quantitative case selection technique to identify crucial cases where the mechanism of market-mediated signaling should be most easily observed. Specifically, we employ quantitative data and the statistical models used to support the theory we are probing to create an impartial and transparentmeans of selecting cases in which the theory – as specified by the theory’s creators –makes its most confident predictions.We implement three different case selection rules to select cases that optimize on two criteria: (1) maximizing the inferential leverage of our cases, and (2) minimizing selection bias. We examine these cases for a necessary implication of market-mediated signaling: that key participants drew a connection between conflictual events and adverse market movements. Such an inference is a necessary step in the process by which market-mediated costs can signal resolve. For evidence of this we examine news media, government documents, memoirs, historical works, and other sources. We additionally examine other sources, such as market data, for evidence that economic costs were caused by escalatory events. Based on this analysis, we assess the evidence for GLB’s theory of market mediated costly signaling. Our article then considers a more complex heterogeneous effects version of market-mediated signaling in which unspecified scope conditions are required for the mechanism to operate. Our design has the feature of selecting cases in which scope conditions are most likely to be absent. This allows us to perform an exploratory analysis of these cases, looking for possible scope conditions. We also consider alternative potential mechanisms. Our cases are reviewed in more detail in the online appendix.1 To summarize our results, our confirmatory test finds that while market-mediated signaling may be operative in the most serious disputes, it was largely absent in the less serious disputes that characterize most of the sample of militarized interstate disputes (MIDs). This suggests either that other mechanisms account for the correlation between capital openness and peace, or that the scope conditions for market-mediated signaling are restrictive. Of the signals that we observed, strategic market-mediated signals were relatively more important than automatic market-mediated signals in the most serious conflicts. We identify a number of potential scope conditions, such as that (1) the conflict must be driven by bargaining failure arising from uncertainty and (2) the economic costs need to escalate gradually and need to be substantial, but less than the expected military costs of conflict. Finally, there were a number of other explanations that seemed present in the cases we examined and could account for the capitalist peace: capital openness is associated with greater anticipated economic costs of conflict; capital openness leads third parties to have a greater stake in the conflict and therefore be more willing to intervene; a dyadic acceptance of the status quo could promote both peace and capital openness; and countries seeking to institutionalize a regional peace might instrumentally harness the pacifying effects of liberal markets. The correlation: Open capital markets and peace The empirical puzzle at the core of this article is the significant and robust correlation noted by GLB between high levels of capital openness in both members of a dyad and the infrequent incidence of militarized interstate disputes (MIDs) and wars between the members of this dyad (Gartzke, Li & Boehmer, 2001). The index of capital openness (CAPOPEN) is intended to capture the ‘difficulty states face in seeking to impose restrictions on capital flows (the degree of lost policy autonomy due to globalization)’ (Gartzke & Li, 2003: 575). CAPOPEN is constructed from data drawn from the widely used IMF’s Annual Reports on Exchange Arrangements and Exchange Controls; it is a combination of eight binary variables that measure different types of government restrictions on capital and currency flow (Gartzke, Li & Boehmer, 2001: 407). The measure of CAPOPEN starts in 1966 and is defined for many countries (increasingly more over time). Most of the countries that do not have a measure of CAPOPEN are communist.2 GLB implement this variable in a dyadic framework by creating a new variable, CAPOPENL, which is the smaller of the two dyadic values of CAPOPEN. This operationalization is sometimes referred to as the ‘weak-link’ specification since the functional form is consonant with a model of war in which the ‘weakest link’ in a dyad determines the probability of war. CAPOPENL has a negative monotonic association with the incidence of MIDs, fatal MIDs, and wars (see Figure 1).3 The strength of the estimated empirical association between peace and CAPOPENL, using a modified version of the dataset and model from Gartzke (2007), is comparable to that between peace and, respectively, joint democracy, log of distance, or the GDP of a contiguous dyad (Gartzke, 2007: 179; Gartzke, Li & Boehmer, 2001: 412). In summary, CAPOPENL seems to be an important and robust correlate of peace. The question of why specifically this correlation exists, however, remains to be answered. The mechanism: Market-mediated signaling? Gartzke, Li & Boehmer (2001) argue that the classic liberal account for the pacific effect of economic interdependence – that interdependence increases the expected costs of war – is not consistent with the bargaining theory of war (see also Morrow, 1999). GLB argue that ‘conventional descriptions of interdependence see war as less likely because states face additional opportunity costs for fighting. The problem with such an account is that it ignores incentives to capitalize on an opponent’s reticence to fight’ (Gartzke, Li & Boehmer, 2001: 400.)4 Instead, GLB (see also Gartzke, 2003; Gartzke & Li, 2003) argue that financial interdependence could promote peace by facilitating the sending of costly signals. As the probability of militarized conflict increases, states incur a variety of automatic and strategically imposed economic costs as a consequence of escalation toward conflict. Those states that persist in a dispute despite these costs will reveal their willingness to tolerate them, and hence signal resolve. The greater the degree of economic interdependence, the more a resolved country could demonstrate its willingness to suffer costs ex ante to militarized conflict. Gartzke, Li & Boehmer’s mechanism implies a commonly perceived costly signal before militarized conflict breaks out or escalates: if market-mediated signaling is to account for the correlation between CAPOPENL and the absence of MIDs, then visible market-mediated costs should occur prior to or during periods of real or potential conflict (Gartzke, Li & Boehmer, 2001). Thus, the proposed mechanism should leave many visible footprints in the historical record. This theory predicts that these visible signals must arise in any escalating conflict, involving countries with high capital openness, in which this mechanism is operative Clarifying the signaling mechanism Gartzke, Li & Boehmer’s signaling mechanism is mostly conceptualized on an abstract, game-theoretic level (Gartzke, Li & Boehmer, 2001). In order to elucidate the types of observations that could inform this theory’s validity, we discuss with greater specificity the possible ways in which such signaling might occur. A conceptual classification of costly signals The term signaling connotes an intentional communicative act by one party directed towards another. Because the term signaling thus suggests a willful act, and a signal of resolve is only credible if it is costly, scholars have sometimes concluded that states involved in bargaining under incomplete information could advance their interests by imposing costs on themselves and thereby signaling their resolve (e.g. Lektzian & Sprecher, 2007). However, the game-theoretic concept of signaling refers more generally to any situation in which an actor’s behavior reveals information about her private information. In fact, states frequently adopt sanctions with low costs to themselves and high costs to their rivals because doing so is often a rational bargaining tactic on other grounds: they are trying to coerce their rival to concede the issue. Bargaining encounters of this type can be conceptualized as a type of war-of-attrition game in which each actor attempts to coerce the other through the imposition of escalating costs. Such encounters also provide the opportunity for signaling: when states resist the costs imposed by their rivals, they ‘signal’ their resolve. If at some point one party perceives the conflict to have become too costly and steps back, that party ‘signals’ a lack of resolve. Thus, this kind of signaling arises as a by-product of another’s coercive attempts. In other words, costly signals come in two forms: self-inflicted (information about a leader arising from a leader’s intentional or incidental infliction of costs on himself) or imposed (information about a leader that arises from a leader’s response to a rival’s imposition of costs). Additionally, costs may arise as an automatic byproduct of escalation towards military conflict or may be a tool of statecraft that is strategically employed during a conflict. The automatic mechanism stipulates that as the probability of conflict increases, various economic assets will lose value due to the risk of conflict and investor flight. However, the occurrence of these costs may also be intentional outcomes of specific escalatory decisions of the states, as in the case of deliberate sanctions; in this case they are strategic. Finally, at a practical level, we identify three different potential kinds of economic costs of militarized conflict that may be mediated by open capital markets: capital costs from political risk, monetary coercion, and business sanctions.

#### Trade decreases arms buildup – decline induces conflict pressures

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When the two countries in conflict also trade with each other, the impact of a country's arming on its TOT is negative. Provided these countries are sufficiently symmetric, not only in terms of technologies and preferences, but also in terms of the mix of their secure resource endowments, equilibrium arming by both is lower and their payoffs are higher under trade than under autarky. These results, which are robust to the presence of trade costs, provide theoretical support to the longstanding classical liberal hypothesis that increased trade openness can ameliorate conflict and thus amplify the gains from trade. With sufficiently extreme differences in the distribution of the primary resources, a shift to trade could induce one country to arm more heavily and to such an extent so as to imply that autarky is preferable over trade to the other country.65 Nevertheless, in an equilibrium that involves positive trade flows, the aggregate allocation of resources to dispute the insecure resource is lower than in an equilibrium with no trade at all. When the structure of comparative advantage is such that the two adversaries do not trade with each other, but instead trade with a third, friendly country and they compete in the same export market, the TOT effect of security policies is positive. As such, a shift from autarky to trade unambiguously intensifies international conflict, possibly with negative net welfare consequences. Consistent with the model's predictions, our empirical analysis provides reduced-form evidence that the effects of trade costs on a country's military spending depend qualitatively on whether trade is with a rival or with a friend. Our findings complement the more structural evidence presented by Martin et al.'s (2008), that increased opportunities for multilateral trade can aggravate bilateral conflict, increasing the likelihood of war. They also complement Seitz et al. (2015)’s evidence that a decrease in trade costs between two countries reduces their military spending, which reduces such spending by other countries.

#### Growth and innovation solves warming.

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In the middle of a climate emergency, it is challenging to stay upbeat. Yet the good news is that investment in climate technology has continued to grow since the early 2010s. US-listed companies involved with providing technology solutions that support global decarbonisation have consistently outperformed the average since 2019 (Figure 7). Venture capital (VC) investment in the sector grew tenfold between 2013 and 2018, representing five times the growth rate of the overall VC market. By comparison, the growth rate of VC investment in Artificial Intelligence was a third of climate tech between 2013 and 2018 although AI is renowned for its uptick within the same timeframe. Beyond VC, public investment in climate technology research has continued to grow too. In 2019, government research and development funding for energy technologies alone stood at $30 billion, with around 80 per cent of it aimed at low-carbon solutions.

In addition to the positive role of technology, political leaders are increasingly showing a willingness to make ambitious commitments on climate. The Paris Agreement is a case in point. The international treaty was adopted in 2015 and ratified internationally within a year – a much quicker pace than its predecessor, the Kyoto Protocol, which took eight years. The Paris deal grew into a political snowball, galvanising further commitment from most of the world’s leading emitters and arguably becoming the most symbolic climate event of the 21st century. The US withdrawal from the Paris Agreement in 2019 dealt a political blow to the global pact although the decision, since reversed by President Biden, did not resonate or last long enough to have any major impact.

The Biden-Harris administration has already indicated that it will not sit on the fence but will instead revive the country’s leadership on climate action. In the UK and elsewhere, similar efforts can be observed as more countries commit to some form of net zero target. More than 100 countries have pledged a commitment towards net zero, with estimates suggesting that over 70 per cent of global GDP and 55 per cent of CO2 emissions are now covered by a similar target. A Climate Action Tracker Report indicates that the cumulative effect of countries’ pledges to the Paris Agreement – if kept and fully achieved – could keep global temperature rise below 2.1°C by 2100, putting the stated goal of 1.5°C within striking distance.

As explored in our recent Institute paper, there are also important insights for politicians in terms of applying lessons from the Covid-19 pandemic to the climate emergency. Although the pandemic is different in scale, complexity and timeline, it offers an immediate window into how policy leaders can adapt and make decisions in order to better support climate innovation. Countries can also apply the “recovering better together” principles outlined by the UN, which calls for a commitment to climate-related actions as economies recover from the Covid-19 slowdown. More than 60 countries, including high emitters, are already making an explicit promise to link their nationally determined contributions (NDC) to Covid-19 recovery, supported by the United Nations Development Programme’s Climate Promise programme. Countries in the Global South are equally aligning their climate mission with international support for various NDC support programmes. A green recovery can cut the level of 2030 emissions to 25 per cent lower than projections based on pre-Covid commitments and put the world close to a 2°C pathway. The pandemic has also highlighted the significance of tech innovation, not least in record-breaking vaccine delivery but also in the suite of digital solutions developed for contact tracing, compliance monitoring and management of health-care records.

The global financial landscape is evolving to become more responsive to climate innovation. Since they were first issued in 2007, green bonds have grown into what is now estimated to become a $1 trillion market. Analysts expect as much as $500 billion of green bonds this year as the EU raises capital for its Covid recovery fund. From target-linked to transition bonds, innovations in this green market are being used to bring projects in energy, transport, buildings and other economic sectors to life. Investor-led initiatives such as Climate Action 100+, whose members control over $50 trillion of assets, are actively using funds to ensure the world’s largest corporate greenhouse gas emitters commit to climate action. Other investor networks are pursuing a similar agenda, including Europe’s Institutional Investors Group on Climate Change (IIGCC) and Australia and New Zealand’s Investor Group on Climate Change (IGCC). Humanity’s competence in technology and innovation will be central to the race in mitigating and tackling climate change.

#### Capitalism is sustainable

Bailey ’18 [Ronald; March 12; B.A. in Economics from the University of Virginia, member of the Society of Environmental Journalists and the American Society for Bioethics and Humanities, citing a compilation of interdisciplinary research; Reason, “Climate Change Problems Will Be Solved Through Economic Growth,” <https://reason.com/2018/03/12/climate-change-problems-will-be-solved-t>; RP]

"It is, I promise, worse than you think," David Wallace-Wells wrote in an infamously apocalyptic 2017 New York Magazine article. "Indeed, absent a significant adjustment to how billions of humans conduct their lives, parts of the Earth will likely become close to uninhabitable, and other parts horrifically inhospitable, as soon as the end of this century." The "it" is man-made climate change. Temperatures will become scalding, crops will wither, and rising seas will inundate coastal cities, Wallace-Wells warns. But toward the end of his screed, he somewhat dismissively observes that "by and large, the scientists have an enormous confidence in the ingenuity of humans….Now we've found a way to engineer our own doomsday, and surely we will find a way to engineer our way out of it, one way or another." Over at Scientific American, John Horgan considers some eco-modernist views on how humanity will indeed go about engineering our way out of the problems that climate change may pose. In an essay called "Should We Chill Out About Global Warming?," Horgan reports the more dynamic and positive analyses of two eco-modernist thinkers, Harvard psychologist Steven Pinker and science journalist Will Boisvert. In an essay for The Breakthrough Journal, Pinker notes that such optimism "is commonly dismissed as the 'faith that technology will save us.' In fact, it is a skepticism that the status quo will doom us—that knowledge and behavior will remain frozen in their current state for perpetuity. Indeed, a naive faith in stasis has repeatedly led to prophecies of environmental doomsdays that never happened." In his new book, Enlightenment Now, Pinker points out that "as the world gets richer and more tech-savvy, it dematerializes, decarbonizes, and densifies, sparing land and species." Economic growth and technological progress are the solutions not only to climate change but to most of the problems that bedevil humanity. Boisvert, meanwhile, tackles and rebuts the apocalyptic prophecies made by eco-pessimists like Wallace-Wells, specifically with regard to food production and availabilty, water supplies, heat waves, and rising seas. "No, this isn't a denialist screed," Boisvert writes. "Human greenhouse emissions will warm the planet, raise the seas and derange the weather, and the resulting heat, flood and drought will be cataclysmic. Cataclysmic—but not apocalyptic. While the climate upheaval will be large, the consequences for human well-being will be small. Looked at in the broader context of economic development, climate change will barely slow our progress in the effort to raise living standards." Boisvert proceeds to show how a series of technologies—drought-resistant crops, cheap desalination, widespread adoption of air-conditioning, modern construction techniques—will ameliorate and overcome the problems caused by rising temperatures. He is entirely correct when he notes, "The most inexorable feature of climate-change modeling isn't the advance of the sea but the steady economic growth that will make life better despite global warming." Horgan, Pinker, and Boisvert are all essentially endorsing what I have called "the progress solution" to climate change. As I wrote in 2009, "It is surely not unreasonable to argue that if one wants to help future generations deal with climate change, the best policies would be those that encourage rapid economic growth. This would endow future generations with the wealth and superior technologies that could be used to handle whatever comes at them including climate change." Six years later I added that that "richer is more climate-friendly, especially for developing countries. Why? Because faster growth means higher incomes, which correlate with lower population growth. Greater wealth also means higher agricultural productivity, freeing up land for forests to grow as well as speedier progress toward developing and deploying cheaper non–fossil fuel energy technologies. These trends can act synergistically to ameliorate man-made climate change." Horgan concludes, "Greens fear that optimism will foster complacency and hence undermine activism. But I find the essays of Pinker and Boisvert inspiring, not enervating….These days, despair is a bigger problem than optimism." Counseling despair has always been wrong when human ingenuity is left free to solve problems, and that will prove to be the case with climate change as well.

#### Don’t restructure the world---Transition goes nuclear:

#### 1---Security threats.

Mann 14 [Eric Mann is a special agent with a United States federal agency, with significant domestic and international counterintelligence and counter-terrorism experience. Worked as a special assistant for a U.S. Senator and served as a presidential appointee for the U.S. Congress. He is currently responsible for an internal security and vulnerability assessment program. Bachelors @ University of South Carolina, Graduate degree in Homeland Security @ Georgetown. “AUSTERITY, ECONOMIC DECLINE, AND FINANCIAL WEAPONS OF WAR: A NEW PARADIGM FOR GLOBAL SECURITY,” May 2014, <https://jscholarship.library.jhu.edu/bitstream/handle/1774.2/37262/MANN-THESIS-2014.pdf>]

The conclusions reached in this thesis demonstrate how economic considerations within states can figure prominently into the calculus for future conflicts. The findings also suggest that security issues with economic or financial underpinnings will transcend classical determinants of war and conflict, and change the manner by which rival states engage in hostile acts toward one another. The research shows that security concerns emanating from economic uncertainty and the inherent vulnerabilities within global financial markets will present new challenges for national security, and provide developing states new asymmetric options for balancing against stronger states.¶ The security areas, identified in the proceeding chapters, are likely to mature into global security threats in the immediate future. As the case study on South Korea suggest, the overlapping security issues associated with economic decline and reduced military spending by the United States will affect allied confidence in America’s security guarantees. The study shows that this outcome could cause regional instability or realignments of strategic partnerships in the Asia-pacific region with ramifications for U.S. national security. Rival states and non-state groups may also become emboldened to challenge America’s status in the unipolar international system.¶ The potential risks associated with stolen or loose WMD, resulting from poor security, can also pose a threat to U.S. national security. The case study on Pakistan, Syria and North Korea show how financial constraints affect weapons security making weapons vulnerable to theft, and how financial factors can influence WMD proliferation by contributing to the motivating factors behind a trusted insider’s decision to sell weapons technology. The inherent vulnerabilities within the global financial markets will provide terrorists’ organizations and other non-state groups, who object to the current international system or distribution of power, with opportunities to disrupt global finance and perhaps weaken America’s status. A more ominous threat originates from states intent on increasing diversification of foreign currency holdings, establishing alternatives to the dollar for international trade, or engaging financial warfare against the United States.

#### 2---Violent collapse.

Milne and Kinsella, 17—Faculty of English, University of Cambridge AND School of Media, Culture and Creative Arts, Faculty of Humanities, Curtin University (Drew and John, “NUCLEAR THEORY DEGREE ZERO, WITH TWO CHEERS FOR DERRIDA,” Angelaki, 22:3, 1-16,) brett

Another version of the “accelerationist” argument captures some of the ideological workings of the term. In Marxist circles, an “accelerationist” is someone who thinks that the collapse of capitalism will be hastened by allowing reactionary forces to speed up capitalism’s self-destruction. There are occasions when such an argument has validity: nothing about the form of the argument makes it inherently or structurally wrong. There are revolutionary moments when allowing capitalism to collapse in order to rebuild a socialist society is a better path than propping up a failing capitalist regime. The judgement is political rather than philosophical. In most contexts, however, the accelerationist argument, especially as a political principle, is deeply dangerous. It would be better, for example, to preserve a failing US capitalist regime while building social forces to take it over, than to allow the nuclear weapons of the United States to fall into the hands of a suicidal military rearguard or some counter-revolutionary terrorist organisation. Preserving the possibility of human life might involve propping up collapsing capitalist institutions, not least the nuclear safety inspectorate, rather than allowing humanity to be swallowed up by some death spiral of presidential dictators in fear of being toppled. These are critical judgements that could arise at any moment, with real risks that poor judgements will hasten a nuclear confrontation that leads to mutually assured annihilation. The formal shape of an accelerationist argument needs to be understood strategically and politically if it is to address nuclear questions.