# R2 D7 Disclosure

# 1NC

### T---1NC

Topicality---

**Interpretation---the aff should only win the debate if they can prove the resolution is true**

**The USfg is made up of three branches in Washington D.C.**

**Dictionary of Government and Politics ’98** (Ed. P.H. Collin, p. 292)

United States of America (USA) [ju:’naitid ‘steits av e’merike] noun independent country, a federation of states (originally thirteen, now fifty in North America; the United States Code = book containing all the permanent laws of the USA, arranged in sections according to subject and revised from time to time COMMENT: the federal government (based in Washington D.C.) is formed of a legislature (the Congress) with two chambers (the Senate and House of Representatives), an executive (the President) and a judiciary (the Supreme Court). Each of the fifty states making up the USA has its own legislature and executive (the Governor) as well as its own legal system and constitution

**“Core antitrust laws” refers to the Sherman and Clayton Act**

**The Antitrust Division 07** – Law enforcement agency that enforces the U.S. antitrust laws

“Antitrust Division Statement Regarding the Release of the Antitrust Modernization Commission Report,” The Antitrust Division, Department of Justice, April 2007, https://www.justice.gov/archive/atr/public/press\_releases/2007/222344.htm

The AMC has made many specific recommendations in its report, and the Division is in the process of reviewing all of them. The Division commends the AMC for its three primary conclusions:

Free-market competition should remain the touchstone of United States' economic policy. The Commission's conclusion in this regard is a fundamental starting point for policy makers. Over a century of experience has shown that robust competition among businesses, each striving to be increasingly successful, leads to better quality products and services, lower prices, and higher levels of innovation.

The **core antitrust laws**—**Sherman Act sections 1 and 2** and **Clayton Act section 7**—and their application by the courts and federal enforcement agencies are sound and appropriately safeguard the competitiveness of the U.S. economy.

New or different rules are not needed for industries in which innovation, intellectual property, and technological innovation are central features. Unlike some other areas of the law, the core antitrust laws are **general in nature** and have been **applied to many different industries** to protect free-market competition successfully over a long period of time despite changes in the economy and the increasing pace of technological advancement. One of the great benefits of the Sherman and Clayton Acts is their **adaptability** to **new economic conditions** without sacrificing their ability to protect competition.

**Expanding the scope requires Congressional action**

**King 19** – Attorney, BurnsBarton PLC

Kathryn Hackett King, Defendants State of Arizona, Davidson, and Shannon’s Reply in Support of Motion to Dismiss Complaint, Toomey v. State of Arizona, et al., US District Court for the District of Arizona, January 2019, LexisNexis

In Title VII, Congress made clear it was unlawful for an employer to discriminate “because of sex.” Plaintiff claims the State Defendants discriminated against him because of his transgender status, but as explained in the Motion (with supporting case law), (i) courts cannot expand Title VII without congressional action, and (ii) Congress has repeatedly had the opportunity to enact legislation to add gender identity to Title VII, but has not done so. (Doc. 24, p.9-10). Plaintiff cannot refute that when Title VII does not protect a particular category, legislative action is required to change that.5 Plaintiff argues Congress’s failure to enact new legislation to add gender identity is not relevant because later acts of Congress are not probative of prior legislative intent. But the point is that **expanding** the **scope** of a **federal statute requires congressional**, **not judicial**, **action**. Gunnison v. Comm. of Int. Rev., 461 F.2d 496, 499 (7th Cir. 1972) (“Further expansion of the favored treatment specifically provided in §402(a)(2) as an exercise of legislative grace is a **function for the Congress**, **not for the Courts**”). Yet here, Congress has failed to act to expand Title VII. Congress’s failure to act demonstrates Title VII does not include unenumerated categories. Bibby v. Phil. Coca Cola, 260 F.3d 257, 265 (3d Cir. 2011) (“Harassment on the basis of sexual orientation has no place in our society….Congress has not yet seen fit, however, to provide protection against such harassment”).

**“Prohibitions” are laws that forbid action**

**Sweet 03** – Judge, United States District Court, New York Southern

Robert W. Sweet, Am. Nat'l Fire Ins. Co. v. Mirasco, Inc., 249 F. Supp. 2d 303, United States District Court for the Southern District of New York, March 2003, LexisNexis

In any case, even if the word "embargo" does not stretch so far, there is no doubt that the restriction against the importation of all IBP goods constitutes a "prohibition" under Clause D. HN15 "**Prohibition**" is defined by **Black's Law Dictionary** to be "a **law or order** that **forbids a certain action**." Black's Law Dictionary 1228 (7th ed. 1999). The dictionary definition is similar: "a **declaration** or **injunction forbidding some action**." Webster's New International Dictionary, Unabridged 1978 (2d ed. 1944). The common understanding of the word "prohibition" has similar connotations, with one exception. As Mirasco points out, any governmental action -- including the rejection on which insurance coverage is based -- could potentially be deemed a prohibition under the definitions above as a declaration forbidding the entry of goods. Therefore, a **prohibition** must be **qualitatively different** from a **rejection**. That difference is that the **prohibition occurs prior to** the government's dealing with the **specific** cargo at issue and is of a **more sweeping nature** than the **simple administrative function** performed by customs officials determining whether or not goods should be permitted into the country. Decree # 6 is such a prohibition, in that it was a **law or declaration** -- **issued prior to**, **separate from and broader than** the Egyptian authorities' administrative determination of whether the M/V Spero cargo should be permitted entry -- that forbids the importation of IBP products.

#### 2 impacts---

**[1]---Burdens---the affirmative has failed to meet their burden to prove the resolution is true---that necessitates voting negative because there is no rational basis for voting aff---the neg should not be expected to uphold their burden of rejoinder sans a topical aff because neg ground is inherently reactionary and reliant upon the aff meeting their burden first. Winning the ballot is thus concomitant with the acceptance of the undergirding structure of resolutional debate to give coherence to the ballot**

**It’s an impact---debate is not monolithic, but we each have a reason for participating in this debate that is important to us---absent a structure that provides logical meaning to things like pairings, judges, speech times, and ballots, the activity ceases to exist which forecloses the ability for anybody to realize their own imbued value in it**

**[2]---Incentives---abdicating the resolution allows the aff to call shotgun on truth and monopolize the moral high ground, but our model guarantees negative teams can be prepared for and have substantive answers to any 1AC---that creates sustainable and prolonged engagement over the course of a year, which is a better internal link to solving their aff, but that can only happen via a predictable structure of debate**

#### Independently, their refusal to defend anything is exactly what makes nouveau radicalism so useless

**Smulewicz-Zucker**, Editor of Logos and adjunct professor of Philosophy at Baruch College, CUNY, **and Thompson**, Associate Professor of Political Science at William Paterson University, **‘15**

(Gregory and Michael J., “The Treason of Intellectual Radicalism and the Collapse of Leftist Politics,” <http://logosjournal.com/2015/thompson-zucker/>)

But this is merely one fringe expression of what we see as a corrupted, simplified and de-politicized “new” radicalism. Once grounded in the Enlightenment impulse for progress, equality, rationalism, and the critical confrontation with asymmetrical power relations, the dominant trends of radical political thought now **evade** the concrete nature of these concerns. The battles that raged in the 1980s and 1990s between postmodernists and defenders of modernity – while serving as a harbinger of the contemporary split between the radical theorists divorced from reality and those who seek to establish anti-foundationalist conceptions of democratic discourse – were attached to a strong sense that the future of rationalism and radical politics hung in the balance. Today’s radical intellectuals **do not feel compelled to defend their arguments** **or respond to their critics.** Their purported radicalism becomes all the more **opaque** when the coherence of their claims is called into question. A concern for an exaggerated **subjectivity**, **identity politics**, **anti-empirical theories of power**, an **obsession with “difference**” – all serve to **deplete the radical tradition of its potency**. Radical intellectuals now formulate new vocabularies, **invent new forms of “subjectivity**,” and concoct **new languages** of discourse that only serve to **splinter** forms of political resistance, **consigning radicalism to the depths of incoherence** and (academic success notwithstanding) **political irrelevance**.

Indeed, the disintegration of the great radical movements of the nineteenth and twentieth centuries – from the labor movement to the Civil Rights movement – has **detached philosophical thinking** **from the mechanisms of power and political reality more broadly**. The result has been – despite the ironic new turn toward “anti-philosophy” – the conquest of politics by poorly constructed philosophy. **Abstraction has been the result**, as well as a panoply of **shibboleths** that have only served to **sever “radical” thought** from its relevance to contemporary politics and society. It seems to us that the survival of the tradition of rational, radical political and social criticism pivots on a confrontation with these new academic trends and fads.

### DA---1NC

Blockchain DA---

**Antitrust scrutiny deters investment in finance---wards away big tech**

**Pedersen 20** – Brendan Pedersen covers federal bank regulation and fintech policy for American Banker

Brendan Pedersen, "Congress's scrutiny of tech giants could be blessing and curse for banks," American Banker, 10-13-2020, https://www.americanbanker.com/news/congresss-scrutiny-of-amazon-google-could-be-blessing-curse-for-banks

WASHINGTON — A Democratic proposal to reform antitrust law to limit the reach of the largest technology firms may hearten banks, but analysts say the financial services sector is not immune from a revived focus on breaking up megacompanies.

In the sweeping 400-page report by the House Judiciary Committee’s antitrust law subcommittee, lawmakers laid out a sweeping case for reforming laws that allow the colossal growth of just a handful of tech giants: Amazon, Apple, Facebook and Google.

“To put it simply, companies that once were scrappy, underdog startups that challenged the status quo have become the kinds of monopolies we last saw in the era of oil barons and railroad tycoons,” the report said, adding later that “the totality of the evidence produced during this investigation demonstrates the pressing need for legislative action and reform.”

The U.S. banking industry has long worried about the **financial ambitions of leading tech firms** and even the possibility that one of the four Big Tech giants could charter or **acquire a bank** with significant competitive advantages at the expense of traditional financial services firms. While none of the four companies have applied for banking powers, past reports have circulated of Google and Amazon being among those having engaged with bank regulators.

The report authored by subcommittee staff did not specifically focus on the tech giants' financial services aims, but rather on how their global reach and impact on sectors like the news media could threaten democratic norms.

But observers said **tighter restrictions** on acquisitions by tech leaders could put them on more equal footing with banks and even **discourage their potential interest** in acquiring financial technology startups. The report also appears to validate the regulatory regime for bank parents as a potential model for reining in growth of the tech sector.

“A **more aggressive antitrust stance** would reduce the likelihood that those companies get even **deeper into financial services**, so it protects some turf for banks that don't have to compete with a Bank of Amazon or an Apple Bank,” said Jeremy Kress, an associate professor of business law at the University of Michigan.

**Big tech in finance is key to widespread blockchain adoption**

**Pejic 17** – author of "Blockchain Babel," a strategy guide to blockchain based on management theory and scientific research. He was voted by McKinsey and the Financial Times as one of three finalists in the Bracken Bower Prize for his work on blockchain in 2016

Igor Pejic, "Tech giants will not be silent about blockchain for long," American Banker, 5-18-2017, https://www.americanbanker.com/opinion/tech-giants-will-not-be-silent-about-blockchain-for-long

The hunt for the killer blockchain application is in full swing. The emergence of the technology saw something akin to a Cambrian explosion for blockchain startups. Now, more than 300 of them are vying to be the global economy’s “next best thing,” posing an obvious competitive threat to traditional financial institutions.

Banks, payment processors and credit card companies worry that brainy entrepreneurs, who transform high IQs into billions of dollars, could cast a pall over their core business. But **it is not fintechs** they should be worried about. It’s the **tech titans** in Silicon Valley that should keep them up at night.

Management theory makes the distinction between de novo market entrants and diversifying market entrants. The former are complete newcomers; they include fintech companies. But diversifying market entrants are firms that have been successful in other arenas. In most technological shifts, it is diversifying entrants that grab market share because they are experts in capabilities that suddenly become relevant to the new product or service generation. And unlike startups, they come with legions of experts, a global network and stuffed pockets. When the camera maker Polaroid failed, it was not de novo entrants that took over. Rather, it was Canon and Nikon that brought to the table their experience with optoelectronics. But how do you spot diversifying entrants in advance? A good start is to identify which competencies will become central once the blockchain hits the market.

For example, a technology like blockchain, challenging one of the world’s largest industries, needs more than just programmers and algorithms. The storage, archiving, communication and file serving needed to run distributed ledgers **gobble up** hard-drive space at **unprecedented speeds**. Moreover, blockchains have an end of life. When they go out of business, they still need to be accessible.

These requirements call out for the capabilities of the cloud-computing giants, such as Amazon, Microsoft and IBM. Banks must not underestimate what these companies can contribute to the blockchain; they offer more than just raw server resources.

At the same time, pure cloud companies will never be able to cut into banks’ core business; they are too far away from the end customer. The really dangerous diversifying entrants will come from somewhere else: **internet giants** such as Google, Apple and Facebook, which already collect massive amounts of data.

Globally dominating data-collecting companies — search platforms, social networks, e-commerce giants — are neglected in the discussion about blockchain. Internet firms haven’t shown a lot of interest in lowering the blockchain gauntlet onto the banking world. **But they will**.

Data behemoths are pointedly silent about the new technological development. Yet their core competencies will be crucial in a blockchain-based banking world. According to a Finextra Research report, companies such as Google and Facebook are **perfectly suited** to outdo banks in driving blockchain mass adoption (particularly in payments) due to their large global customer base. Already, large data collectors are entering payments with Android or Apple Pay and the companies are positioning themselves where they are the strongest: at the front end.

The likes of Google know what we search, what we write in emails, with whom we interact, and which places we frequent. And they know how to turn that data into dollars. Blockchain technology **trims transaction costs to the bone**, and financial services can be offered for free. This model p**lays into the hands of data behemoths**, whose business models are already geared to making money out of free services. Selling highly accurate personalized advertising in two-sided platforms is in their DNA.

Secondly, globally recognizable and trusted brands are another major asset of the tech titans. Google, Apple, and Amazon have been at the pinnacle of global brand valuation lists for years. The gap between these top three and other brands is stunning. Their brands are worth, respectively, $109 billion, $108 billion and $106 billion. People spend hours staring at their logos while checking emails, searching the web, chatting with friends or shopping online. AT&T comes in fourth with “only” $87 billion.

Silicon Valley’s behemoths are also competing to place their brands on payment interfaces.

To be sure, banks are likely to stay on top of global finance for some time to come. But, as it is the painful case with most technological leaps, the **barriers to entry** for nonbank competitors **will eventually disappear**. By how much will depend on identifying the right challengers on time and fending them off. Banks are well advised to keep a close eye on the blockchain activities of data behemoths.

**Financial blockchain is key to preventing terrorism**

**Readling and Schardin 16** – Justin Schardin is the Former Director of the Financial Regulatory Reform Initiative

Kristofer Readling and Justin Schardin, "Why Blockchain Could Bolster Anti-Money Laundering Efforts | Bipartisan Policy Center," Bipartisanpolicy, 6-2-2016, https://bipartisanpolicy.org/blog/blockchain-anti-money-laundering/

Blockchain could dramatically improve the **speed** and **effectiveness** of AML/CTF efforts by creating a **system-wide** ledger accessible in **real time**. This ledger would maintain **all transactional data** throughout a network of institutions rather than at a single institution. Thus, a network that included all financial institutions could **avoid** the information **asymmetry problem** above by giving law enforcement the ability to **see the entire system’s ledger** rather than just the suspicious activity reports **currently submitted** by individual institutions.

Wikipedia uses an analogous structure to maintain its articles by crowdsourcing knowledge from anyone willing to author or edit them. If someone adds erroneous information, the community’s editors will generally correct it. Since all of the articles and the history of edits to those articles are simultaneously visible to everyone who views the site, it is difficult for con-artists to make lasting changes.

Blockchain goes further than Wikipedia by storing an **entire database** of transactions (in the case of a financial blockchain) with each party **on the network** rather than on a single third-party server. This provides **enormous security benefits** because in order for a hacker to fraudulently edit the blockchain and thus steal money or assets, they would have to hack **more than half the network** rather than a single server. The more institutions that are part of the blockchain, the more difficult that becomes.

The security benefits of blockchain mean that transactions can be cleared faster because there is no need for third party verification of transactions. It also means that records of those transactions are **much more trustworthy**. This combination of **speed and trust** is an **essential improvement** over the current framework because of the **need to prevent** rather than prosecute **terrorism**.

A significant problem with blockchain that would need to be overcome is how to store the entire database at each institution while still protecting people’s privacy. There are good reasons for people to hide information from their bank or insurance company that have nothing to do with illegal activity. Therefore, many elements of any future financial system blockchain would likely need to be encrypted to protect personal information and corporate secrets.

With an encrypted blockchain, procedures could be put in place to grant financial regulators and law enforcement access **when they needed it**. This is similar to the current system except that instead of waiting for each bank to review its own transactions for suspicious activity and report them, law enforcement would be able to **review the entire network** at once **without waiting** for a bank to check its books. This could provide **essential time savings** in a world where **terrorism is a chief concern**.

**Terrorism causes nuclear escalation and extinction.**

Matthew **Bunn &** Nickolas **Roth 17**. \*Professor of practice at the Harvard Kennedy School. \*\*Research associate at the Belfer Center’s Project on Managing the Atom at Harvard University and research fellow at the Center for International and Security Studies at the University of Maryland. “The effects of a single terrorist nuclear bomb.” Bulletin of the Atomic Scientists, http://thebulletin.org/effects-single-terrorist-nuclear-bomb11150

The escalating threats between North Korea and the United States make it easy to forget the “nuclear nightmare,” as former US Secretary of Defense William J. Perry put it, that could result even from the use of just a single terrorist nuclear bomb in the heart of a major city. At the risk of repeating the vast literature on the tragedies of Hiroshima and Nagasaki—and the substantial literature surrounding nuclear tests and simulations since then—we attempt to spell out here the likely consequences of the explosion of a **single terrorist nuclear bomb** on a major city, and its **subsequent ripple effects** on the rest of the planet. Depending on where and when it was detonated, the blast, fire, initial radiation, and long-term radioactive fallout from such a bomb could leave the heart of a major city a smoldering radioactive ruin, killing tens or **hundreds of thousands of people** and wounding hundreds of thousands more. Vast areas would have to be evacuated and might be uninhabitable for years. Economic, political, and social **aftershocks** would **ripple throughout the world**. A single terrorist nuclear bomb would change history. The country attacked—and the world—would never be the same. The idea of terrorists accomplishing such a thing is, unfortunately, not out of the question; it is far easier to make a crude, unsafe, unreliable nuclear explosive that might fit in the back of a truck than it is to make a safe, reliable weapon of known yield that can be delivered by missile or combat aircraft. **Numerous government studies** have concluded that **it is plausible** that a sophisticated terrorist group could make a crude bomb if they got the needed nuclear material. And in the last quarter century, there have been some 20 seizures of stolen, weapons-usable nuclear material, and at least two terrorist groups have made significant efforts to acquire nuclear bombs. Terrorist use of an actual nuclear bomb is a low-probability event—but the **immensity** of the consequences means that even a small chance is enough to justify an intensive effort to reduce the risk. Fortunately, since the early 1990s, countries around the world have significantly reduced the danger—but **it remains very real**, and there is more to do to ensure this nightmare never becomes reality. Brighter than a thousand suns. Imagine a crude terrorist nuclear bomb—containing a chunk of **highly enriched uranium** just under the size of a regulation bowling ball, or a much smaller chunk of plutonium—suddenly detonating inside a delivery van parked in the heart of a major city. Such a terrorist bomb would release as much as 10 kilotons of explosive energy, or the equivalent of 10,000 tons of conventional explosives, a volume of explosives large enough to fill all the cars of a mile-long train. In a millionth of a second, all of that energy would be released inside that small ball of nuclear material, creating temperatures and pressures as high as those at the center of the sun. That furious energy would **explode outward**, releasing its energy in three main ways: **a powerful blast wave**; **intense heat**; **and deadly radiation**. The ball would expand almost **instantly** into a fireball the width of four football fields, **incinerating** essentially everything and **everyone** within. The heated fireball would rise, sucking in air from below and expanding above, creating the **mushroom cloud** that has become the symbol of the terror of the nuclear age. The ionized plasma in the fireball would create a localized **electromagnetic pulse** more powerful than lightning, **shorting out communications and electronics nearby**—though most would be destroyed by the bomb’s other effects in any case. (Estimates of heat, blast, and radiation effects in this article are drawn primarily from Alex Wellerstein’s “Nukemap,” which itself comes from declassified US government data, such as the 660-page government textbook The Effects of Nuclear Weapons.) At the instant of its detonation, the bomb would also release an **intense** burst of gamma and neutron radiation which would be lethal for nearly everyone directly exposed within about two-thirds of a mile from the center of the blast. (Those who happened to be shielded by being inside, or having buildings between them and the bomb, would be partly protected—in some cases, reducing their doses by ten times or more.) The nuclear flash from the heat of the fireball would radiate in both visible light and the infrared; it would be “brighter than a thousand suns,” in the words of the title of a book describing the development of nuclear weapons—adapting a phrase from the Hindu epic the Bhagavad-Gita. Anyone who looked directly at the blast would be blinded. The heat from the fireball would ignite fires and horribly burn everyone exposed outside at distances of nearly a mile away. (In the Nagasaki Atomic Bomb Museum, visitors gaze in horror at the bones of a human hand embedded in glass melted by the bomb.) No one has burned a city on that scale in the decades since World War II, so it is difficult to predict the full extent of the fire damage that would occur from the explosion of a nuclear bomb in one of today’s cities. Modern glass, steel, and concrete buildings would presumably be less flammable than the wood-and-rice-paper housing of Hiroshima or Nagasaki in the 1940s—but many questions remain, including exactly how thousands of broken gas lines might contribute to fire damage (as they did in Dresden during World War II). On 9/11, the buildings of the World Trade Center proved to be much more vulnerable to fire damage than had been expected. Ultimately, even a crude terrorist nuclear bomb would carry the possibility that the countless fires touched off by the explosion would **coalesce** into a **devastating firestorm**, as occurred at Hiroshima. In a firestorm, the rising column of hot air from the massive fire sucks in the air from all around, creating **hurricane-force winds**; everything flammable and everything alive within the firestorm would be consumed. The fires and the dust from the blast would make it extremely difficult for either rescuers or survivors to see. The explosion would create a **powerful blast** wave rushing out in every direction. For more than a quarter-mile all around the blast, the pulse of pressure would be over 20 pounds per square inch above atmospheric pressure (known as “overpressure”), destroying or severely damaging even sturdy buildings. The combination of blast, heat, and radiation would kill virtually everyone in this zone. The blast would be accompanied by winds of many hundreds of miles per hour. The damage from the explosion would extend far beyond this inner zone of almost total death. Out to more than half a mile, the blast would be strong enough to collapse most residential buildings and create a serious danger that office buildings would topple over, killing those inside and those in the path of the rubble. (On the other hand, the office towers of a modern city would tend to block the blast wave in some areas, providing partial protection from the blast, as well as from the heat and radiation.) In that zone, almost anything made of wood would be destroyed: Roofs would cave in, windows would shatter, gas lines would rupture. Telephone poles, street lamps, and utility lines would be severely damaged. Many roads would be blocked by mountains of wreckage. In this zone, many people would be killed or injured in building collapses, or trapped under the rubble; many more would be burned, blinded, or injured by flying debris. In many cases, their charred skin would become ragged and fall off in sheets. The effects of the detonation would act in deadly synergy. The smashed materials of buildings broken by the blast would be far easier for the fires to ignite than intact structures. The effects of radiation would make it far more difficult for burned and injured people to recover. The combination of burns, radiation, and physical injuries would cause far more death and suffering than any one of them would alone. The silent killer. The bomb’s immediate effects would be followed by a slow, lingering killer: radioactive fallout. A bomb detonated at ground level would dig a huge crater, hurling tons of earth and debris thousands of feet into the sky. Sucked into the rising fireball, these particles would mix with the radioactive remainders of the bomb, and over the next few hours or days, the debris would rain down for miles downwind. Depending on weather and wind patterns, the fallout could actually be deadlier and make a far larger area unusable than the blast itself. Acute radiation sickness from the initial radiation pulse and the fallout would likely affect tens of thousands of people. Depending on the dose, they might suffer from vomiting, watery diarrhea, fever, sores, loss of hair, and bone marrow depletion. Some would survive; some would die within days; some would take months to die. Cancer rates among the survivors would rise. Women would be more vulnerable than men—children and infants especially so. Much of the radiation from a nuclear blast is short-lived; radiation levels even a few days after the blast would be far below those in the first hours. For those not killed or terribly wounded by the initial explosion, the best advice would be to take shelter in a basement for at least several days. But many would be too terrified to stay. Thousands of panic-stricken people might receive deadly doses of radiation as they fled from their homes. Some of the radiation will be longer-lived; areas most severely affected would have to be abandoned for many years after the attack. The combination of radioactive fallout and the devastation of nearly all life-sustaining infrastructure over a vast area would mean that hundreds of thousands of people would have to evacuate. Ambulances to nowhere. The explosion would also destroy much of the city’s ability to respond. Hospitals would be leveled, doctors and nurses killed and wounded, ambulances destroyed. (In Hiroshima, 42 of 45 hospitals were destroyed or severely damaged, and 270 of 300 doctors were killed.) Resources that survived outside the zone of destruction would be utterly overwhelmed. Hospitals have no ability to cope with tens or hundreds of thousands of terribly burned and injured people all at once; the United States, for example, has 1,760 burn beds in hospitals nationwide, of which a third are available on any given day. And the problem would not be limited to hospitals; firefighters, for example, would have little ability to cope with thousands of fires raging out of control at once. Fire stations and equipment would be destroyed in the affected area, and firemen killed, along with police and other emergency responders. Some of the first responders may become casualties themselves, from radioactive fallout, fire, and collapsing buildings. Over much of the affected area, **communications would be destroyed**, by both the physical effects and the electromagnetic pulse from the explosion. Better preparation for such a disaster could save thousands of lives—but ultimately, there is no way any city can genuinely be prepared for a catastrophe on such a historic scale, occurring in a flash, with zero warning. Rescue and recovery attempts would be impeded by the destruction of most of the needed personnel and equipment, and by fire, debris, radiation, fear, lack of communications, and the immense scale of the disaster. The US military and the national guard could provide critically important capabilities—but federal plans assume that “no significant federal response” would be available for 24-to-72 hours. Many of those burned and injured would wait in vain for help, food, or water, perhaps for days. The scale of death and suffering. How many would die in such an event, and how many would be terribly wounded, would depend on where and when the bomb was detonated, what the weather conditions were at the time, how successful the response was in helping the wounded survivors, and more. Many estimates of casualties are based on census data, which reflect where people sleep at night; if the attack occurred in the middle of a workday, the numbers of people crowded into the office towers at the heart of many modern cities would be far higher. The daytime population of Manhattan, for example, is roughly twice its nighttime population; in Midtown on a typical workday, there are an estimated 980,000 people per square mile. A 10-kiloton weapon detonated there might well kill half a million people—not counting those who might die of radiation sickness from the fallout. (These effects were analyzed in great detail in the Rand Corporation’s Considering the Effects of a Catastrophic Terrorist Attack and the British Medical Journal’s “Nuclear terrorism.”) On a typical day, the wind would blow the fallout north, seriously contaminating virtually all of Manhattan above Gramercy Park; people living as far away as Stamford, Connecticut would likely have to evacuate. Seriously injured survivors would greatly outnumber the dead, their suffering magnified by the complete inadequacy of available help. The psychological and social effects—overwhelming sadness, depression, post-traumatic stress disorder, myriad forms of anxiety—would be profound and long-lasting. The scenario we have been describing is a groundburst. An airburst—such as might occur, for example, if terrorists put their bomb in a small aircraft they had purchased or rented—would extend the blast and fire effects over a wider area, killing and injuring even larger numbers of people immediately. But an airburst would not have the same lingering effects from fallout as a groundburst, because the rock and dirt would not be sucked up into the fireball and contaminated. The 10-kiloton blast we have been discussing is likely toward the high end of what terrorists could plausibly achieve with a crude, improvised bomb, but even a 1-kiloton blast would be a catastrophic event, having a deadly radius between one-third and one-half that of a 10-kiloton blast. These hundreds of thousands of people would not be mere statistics, but countless individual stories of loss—parents, children, entire families; all religions; rich and poor alike—killed or horribly mutilated. Human suffering and tragedy on this scale does not have to be imagined; it can be remembered through the stories of the survivors of the US atomic bombings of Hiroshima and Nagasaki, the only times in history when nuclear weapons have been used intentionally against human beings. The pain and suffering caused by those bombings are almost beyond human comprehension; the eloquent testimony of the Hibakusha—the survivors who passed through the atomic fire—should stand as an eternal reminder of the need to prevent nuclear weapons from ever being used in anger again. Global economic disaster. The economic impact of such an attack would be **enormous**. The effects would **reverberate** for so far and so long that they are difficult to estimate in all their complexity. Hundreds of thousands of people would be too injured or sick to work for weeks or months. Hundreds of thousands more would evacuate to locations far from their jobs. Many places of employment would have to be abandoned because of the radioactive fallout. Insurance companies would reel under the losses; but at the same time, many insurance policies exclude the effects of nuclear attacks—an item insurers considered beyond their ability to cover—so the owners of thousands of buildings would not have the insurance payments needed to cover the cost of fixing them, thousands of companies would go bankrupt, and banks would be left holding an immense number of mortgages that would never be repaid. Consumer and investor confidence would likely be **dramatically affected**, as worried people slowed their spending. Enormous new homeland security and military investments would be very likely. If the bomb had come in a shipping container, the targeted country—and possibly others—might stop all containers from entering until it could devise a system for ensuring they could never again be used for such a purpose, throwing a wrench into the gears of global trade for an extended period. (And this might well occur even if a shipping container had not been the means of delivery.) Even the far smaller 9/11 attacks are estimated to have caused economic aftershocks costing almost $1 trillion even excluding the multi-trillion-dollar costs of the wars that ensued. The cost of a terrorist nuclear attack in a major city would likely be many times higher. The most severe effects would be local, but the effects of trade disruptions, reduced economic activity, and more would reverberate around the world. Consequently, while some countries may feel that nuclear terrorism is only a concern for the countries most likely to be targeted—such as the United States—in reality it is a threat to everyone, everywhere. In 2005, then-UN Secretary-General Kofi Annan warned that these global effects would push “tens of millions of people into dire poverty,” creating “a second death toll throughout the developing world.” One recent estimate suggested that a nuclear attack in an urban area would cause a global recession, cutting global Gross Domestic Product by some two percent, and pushing an additional 30 million people in the developing world into extreme poverty. Desperate dilemmas. In short, an act of nuclear terrorism could rip the heart out of a major city, and cause ripple effects throughout the world. The government of the country attacked would face desperate decisions: How to help the city attacked? How to prevent further attacks? How to respond or retaliate? Terrorists—either those who committed the attack or others—would probably claim they had more bombs already hidden in other cities (whether they did or not), and threaten to detonate them unless their demands were met. The fear that this might be true could lead people to flee major cities in a large-scale, uncontrolled evacuation. There is very little ability to support the population of major cities in the surrounding countryside. The potential for widespread havoc and economic chaos is very real. If the detonation took place in the capital of the nation attacked, much of the government might be destroyed. A bomb in Washington, D.C., for example, might kill the President, the Vice President, and many of the members of Congress and the Supreme Court. (Having some plausible national leader survive is a key reason why one cabinet member is always elsewhere on the night of the State of the Union address.) Elaborate, classified plans for “continuity of government” have already been drawn up in a number of countries, but the potential for chaos and confusion—if almost all of a country’s top leaders were killed—would still be enormous. Who, for example, could address the public on what the government would do, and what the public should do, to respond? Could anyone honestly assure the public there would be no further attacks? If they did, who would believe them? In the United States, given the practical impossibility of passing major legislation with Congress in ruins and most of its members dead or seriously injured, some have argued for passing legislation in advance giving the government emergency powers to act—and creating procedures, for example, for legitimately replacing most of the House of Representatives. But to date, no such legislative preparations have been made. In what would inevitably be a desperate effort to prevent further attacks, traditional standards of civil liberties might be jettisoned, at least for a time—particularly when people realized that the fuel for the bomb that had done such damage would easily have fit in a suitcase. Old rules limiting search and surveillance could be among the first to go. The government might well impose martial law as it sought to control the situation, hunt for the perpetrators, and find any additional weapons or nuclear materials they might have. Even the far smaller attacks of 9/11 saw the US government authorizing torture of prisoners and mass electronic surveillance. And what standards of international order and law would still hold sway? The country attacked might well **lash out militarily** at whatever countries it thought might bear a portion of responsibility. (A terrifying description of the kinds of discussions that might occur appeared in Brian Jenkins’ book, Will Terrorists Go Nuclear?) With the nuclear threshold already crossed in this scenario—at least by terrorists—it is **conceivable** that some of the **resulting conflicts might escalate to nuclear use**. International politics could become more brutish and violent, with powerful states taking unilateral action, by force if necessary, in an effort to ensure their security. After 9/11, the United States led the invasions of two sovereign nations, in wars that have since cost hundreds of thousands of lives and trillions of dollars, while plunging a region into chaos. Would the reaction after a far more devastating nuclear attack be any less?

### CA---1NC

Platforms Counteradvocacy---

**The United States federal government should increase prohibitions on those anticompetitive business practices which cause net-harm on one side of platforms.**

**The aff solves—it enables tailored remedies that promote competition but maintain efficiency**

**Hovenkamp**, James G. Dinan University Professor, University of Pennsylvania Carey Law School and The Wharton School, **‘21**

(Herbert, “Antitrust and Platform Monopoly,” 130 Yale L.J. 1952)

More Creative Alternatives

Frequently, **neither** simple **injunctions** nor **simple breakups** will be **good solutions for platform monopoly**. Injunctions may be inadequate to restore competition, and breakups may **impair efficient operation** and **harm consumers** in the process.

The case for a breakup is strongest when noncompetitive performance or conduct seems to be inherent in a firm’s current structure. Even then, however, there is no guarantee that the firm, once dismantled, will perform any better than before. For example, how do we break up Facebook without harming the constituencies that it serves?

The approaches discussed briefly in this Section **do not require the breakup of assets** or the **spinoff of divisions** or subsidiaries other than some that have been acquired by merger. Rather, they alter the nature of ownership, managerial **decision making**, **contracts**, intellectual-property **licenses**, or information management. Instead of **attempting to force greater competition** between a dominant platform and its rivals, we might do better to **leave the firm intact** but **encourage more competition within it**. Alternatively, we might increase interoperability by requiring more extensive sharing of information or other inputs. While the current antitrust statutes grant the courts equitable power sufficient to accomplish these remedies,299 the proposals are novel and could provoke resistance.

These remedies can be applied to entities other than structural monopolies, and for offenses under both section 1 and **section 2 of the Sherman Act**. While less intrusive than asset breakups, however, they can be more intrusive than simple conduct injunctions. As a result, they should be limited to situations where **prohibitory injunctions alone are unlikely to be adequate**. **Occasional uses of unlawful** exclusive **dealing**, most-favored-nation agreements,300 or other anticompetitive contract practices **deserve an injunction**, but ordinarily **would not merit a breakup** of the entire firm or fundamental alteration of its management structure.

The traditional way that antitrust law applies structural relief is to break up firms’ various physical assets, through such devices as forcing selloffs (divestiture) of plants, products, or subsidiaries.301 To the extent these breakups interfere with a firm’s production and distribution, **they can produce harmful results** such as increased costs or loss of coordination. This is particularly true of integrated production units, such as single digital platforms. The D.C. Circuit noted this concern in Microsoft when it refused the government’s request for a breakup.302

a. Enabling Competition Within the Platform

One alternative to divestiture is to leave a platform’s physical assets and range of participants intact but change the structure of ownership or management so as to make it more competitive internally. A platform or other organization **can itself be a “market”** within which competition can occur. In that case, antitrust law can be applied to its internal decisions, **improving competition** **without** limiting the **extent of scale economies or beneficial network effects.**

Ordinarily, agreements among subsidiaries or other agents within a firm are counted as unilateral and so are attributed to the firm itself.303 That rule is a direct consequence of the separation of ownership and control. The all-important premise, however, is that the firm’s central management is the only relevant economic decisionmaker. When that is not the case, even agreements among the various constituents within the firm can be treated as cartels.

There is plenty of precedent on this issue. The history of antitrust law is replete with examples of incorporated firms that are owned or managed by distinct and often competing entities. The courts have treated these firms as cartels or joint ventures, even for practices that, from a corporate law perspective, appeared to be those of a single firm. If properly managed, the result can be to force entities within the same incorporated organization to behave competitively vis-à-vis one another.

Firms whose ownership is reorganized in this fashion **can still be very large** and **retain** most of the **attributes of large firms**. On the one hand, this will **satisfy** those concerned that the breakup of large firms can **result in the loss of economies of scale or scope**, or of other synergies that generally lead to high output and lower prices. **On the other hand,** it will not satisfy those who believe that “big is bad” for its own sake.304

Joint management of unified productive assets has a storied history that goes back to the Middle Ages. Farmers, ranchers, and fishermen produced cattle, sheep, and fish on various “commons,” or facilities that were shared among a large number of owners and subjected to management rules.305 Many of these operated on a mixed model that involved individual production for stationary products such as crops, but a commons for grazing cattle or other livestock. For mobile products such as cattle or fish, the costs of shared management were lower than the costs of creating or maintaining boundaries. That was not the case for radishes or wheat. So rather than cutting a large pasture or bay into 100 fenced-off plots, participating property owners operated it as a single economic unit, substituting management costs for fencing costs. Just as for any firm, size and shape are determined by comparing the costs and payoffs of alternative forms of organization.306

So while a commons can be a very large firm, it can be operated by a collaboration of competing entities rather than a single one. Output reductions and price setting by a single firm are almost always out of reach of the federal antitrust laws. On the other hand, if a market is operated by a joint venture of

active business participants, their pricing is subject to the laws against collusion. Their exclusions also operate under the more aggressive standards that antitrust applies to concerted, as opposed to unilateral, refusals to deal.307 The fact that this joint venture is a corporation organized under state law, as many ventures are, does not make any difference. It is still a collaboration as far as antitrust law is concerned.

The theory of the firm precludes claims of an antitrust conspiracy between a corporation and its various subsidiaries, officers, shareholders, or employees. This preclusion is an essential corollary to the proposition that a corporation is a single entity for most legal purposes and not simply a cartel of its shareholders or other constituent parts. This is how corporate law preserves the boundary between firms and markets.308

But important exceptions exist. While a corporation is a single entity for most antitrust purposes, if it is operated by its shareholders for the benefit of their own separate businesses, its conduct is reachable under section 1 of the Sherman Act. A cartel is still a cartel even if it organizes itself into a corporation.

The classic antitrust example of such a collaborative structure is in the 1918 Chicago Board of Trade case, which first articulated the modern rule of reason for antitrust cases.309 As Justice Holmes had described the Board thirteen years previously, 310 it was an Illinois state-chartered corporation whose 1600 members were themselves traders for their own individual accounts, and with individual exclusive rights to do business on the Board’s trading floor.311 The “call rule,” which prevented collaborative price making among the members except during exchange hours, could not have been challenged under the antitrust laws as unilateral conduct. A single firm may set any nonpredatory price it wishes. Further, all of the relevant participants were inside the firm. Nevertheless, they were regarded as independent actors for the purpose of trading among themselves.

Thus the United States challenged the call rule as price fixing among competitors. 312 Not only is the substantive law against such collaborative activity more aggressive than that against unilateral actions, but the remedial problems are less formidable. If a firm acting unilaterally should set an unlawful price, the court must order it to charge a different price, placing it in the awkward position of a utility regulator. By contrast, price fixing by multiple independent actors operating in concert is remedied by a simple order against price fixing, requiring each participant to set its price individually without dictating what the price must be. The Supreme Court ultimately found the Chicago Board’s call rule to be lawful. If it had not, however, the remedy would have been an injunction against enforcement of the rule, leaving the members free to set their own prices. In fact, the United States’ requested relief was precisely that.313

The same thing applies to refusals to deal. If a firm is acting unilaterally, its refusal to deal is governed by a strict standard under which liability is unlikely, particularly if there has not been an established history of dealing.314 Further, in many circumstances a court can enforce a dealing order only by setting the price and other terms. By contrast, if the entity that refuses to deal is operated by a group of active business participants, its collective refusal to deal is governed by section 1 of the Sherman Act. A court usually need do no more than issue an injunction against the agreement not to deal. This is true even if the actors have incorporated themselves into a single business entity, as in the Associated Press case, which involved a New York corporation whose members were 1200 newspapers. 315 The government charged the Association with “combining cooperatively” to prohibit news sales to nonmembers or making it more difficult for a newspaper to enter competition with an existing newspaper.316 The Court upheld an injunction against the restrictive rules under the Sherman Act.317

The modern business world provides many analogies to this structural situation. For example, each of the NCAA’s 1200 member schools operates as a single entity in the management of education, student housing and discipline, and financing of its own operations, including athletic departments. By contrast, the rules for recruiting and maintaining athletic teams, their compensation, as well as the scheduling, operation, and playing rules of games, are controlled through rulemaking by the collective group.318 While the schools compete with one another in recruiting athletes and coaches, in obtaining both live and television audiences, and in the licensing of intellectual property, all of these things fall within NCAA rulemaking and are reachable by antitrust law. Specifically, decisions to restrict the number of televised games;319 to limit the compensation of coaches320 or players;321 or to limit licensing of students’ names, images, and likenesses322 all fall within section 1 of the Sherman Act. When a violation is found, the antitrust remedy is an injunction permitting each team to determine its choices individually.

The same analysis drove the American Needle litigation, a refusal-to-deal case that involved the National Football League (NFL).323 The NFL is an unincorporated association controlled by thirty-two individual football teams, each of which is separately owned. NFL Properties (NFLP) is a separate, incorporated LLC in New York, controlled by the NFL. The individual teams are members, and they also collectively control the licensing of the teams’ substantial and individually owned intellectual-property rights. In this case, the team members voted to authorize NFLP to grant an exclusive license to Reebok to sell NFLlogoed headwear (i.e., helmets and caps) for all thirty-two teams.324 The plaintiff, American Needle, was a competing manufacturer that the agreement excluded.325

The issue for the Supreme Court was whether NFLP’s grant of an exclusive license should be addressed as a “unilateral” act of NFLP or as a concerted act by the thirty-two teams acting together, and the Court unanimously decided the latter.326 As a matter of corporate law, the refusal to deal appeared to be unilateral. NFLP, the licensing party, was an incorporated single entity. The lower court had relied on earlier Seventh Circuit decisions holding that professional sports leagues should be treated as single entities under these circumstances.327

The Supreme Court’s decision to the contrary was consistent with its earlier cases Sealy328 and Topco.329 In both of those cases, the Court held that even if an entity is incorporated, it can be addressed as a collaboration of its competing and actively participating shareholders. In Sealy, each member was a shareholder, and collectively the members owned all of Sealy’s stock.330 In Topco, each of the twenty-five members owned an equal share of the common stock, which had voting rights. They also owned all of the preferred stock, which was nonvoting, in proportion to their sales.331

Agreements among the active memb+ers or shareholders on incorporated real-estate boards are treated in the same way. Acting as a single entity, the board organizes the listing of properties for sale, formulates listing rules, promulgates standardized listing forms and sales agreements, and controls much of the conduct of individual brokers. Acting individually, the shareholder-brokers show properties to clients and obtain commissions from sales. Each real-estate office acts as not only a shareholder or partner in the overall organization, but also a competitor for individual real-estate sales.

Without discussing single-entity status, in 1950 the Supreme Court held that price fixing among real-estate agents who were members of an incorporated board was an unlawful conspiracy.332 A leading subsequent decision involved Realty Multi-List, a Georgia corporation organized and owned by individual real-estate brokers.333 Under the corporation’s arrangement, one shareholder member could show properties listed by a different shareholder member.334 The Fifth Circuit concluded that both the agreements among the members fixing commission rates and setting exclusionary and disciplinary rules for brokers who deviated from these rates were unlawful under section 1 of the Sherman Act.335

In the 2000s, the government and private plaintiffs sued several multiplelisting services, challenging their decisions to exclude real-estate sellers.336 The Fourth Circuit eventually applied American Needle, rejecting the contention that concerted action was lacking because the parties making the decision were acting as “agents of a single corporation.”337 Several other decisions have arrived at similar results reaching both price fixing and concerted exclusion.338

Hospital-staff-privileges boards also provide an analogy. Hospitals regularly use such boards to decide which physicians can be authorized to practice at the hospital. If physician-board members with independent practices deny staff privileges to someone, they may be treated as a conspiracy rather than a single actor.339

Even an incorporated natural monopoly can be subject to section 1 of the Sherman Act if it is controlled by its shareholders for their separate business interests. That issue arose in the 1912 Terminal Railroad decision.340 The railroadbridge infrastructure across the Mississippi was very likely a natural monopoly, given it operated as a bottleneck through which all traffic across the river had to pass.341 However, the facility was incorporated, and its shareholders were a group of thirty-eight firms and natural persons organized by railroad financier Jay Gould.342 The venture constituted a single corporation under Missouri law, but it was actively managed by its shareholder participants, all of whom had separate businesses. They were mainly individual railroads, a ferry company, bridges, a “system of terminals,” and several individuals.343 The venture thus controlled an extensive collection of railroad transportation, transfer, and storage facilities at a point at which all east-west traffic in that part of the country had to cross the Mississippi River.344

The Court’s order is both interesting and pertinent to platforms. It rejected the government’s request for dissolution. It noted that dissolving the corporation would do nothing to eliminate the bottleneck.345 Rather, it ordered the district court to fashion a “plan of reorganization” that permitted all shippers, whether or not they were members of the organization, to have access on fair and reasonable terms, with the goal of “plac[ing] every such company upon as nearly an equal plane as may be with respect to expenses and charges as that occupied by the proprietary companies.”346 Dissolution would be mandated only if the parties failed to agree on these terms.347

The *Terminal Railroad* decree suggests a way to remedy anticompetitive behavior by large digital platforms representing several sellers **without sacrificing operational efficiencies**. Rather than requiring divestiture of productive assets, which almost always leads to higher prices, we could restructure ownership and management. A large firm such as Amazon can attain economies of scale and scope that rivals cannot match. Further, **Amazon benefits consumers**, most suppliers, and labor, by selling its own house brands and the brands of third-party merchants on the same website. This is how a seller of house brands can break down the power of large name-brand sellers.348

The problem is not that Amazon sells too much, but rather that Amazon’s ownership and management make it **profitable for Amazon to discriminate** in favor of its own products and against those of third-party sellers, or to enter other anticompetitive agreements with independent sellers. Breaking up Amazon or forcing a physical separation of own-product and third-party sales would mean giving up a great deal of brand rivalry that benefits consumers.

Suppose a court required Amazon to turn important commercial decisions over to a board of active Amazon participants who made their own sales on the platform, purchased from Amazon, or dealt with it for ancillary services. Acting collaboratively, they could control product selection, distribution and customer agreements, advertising, internal product development, and pricing of Amazon’s own products. Their decisions would be subject to antitrust scrutiny under section 1 of the Sherman Act.

Such an approach could be particularly useful in situations involving **refusals to deal**. To illustrate, an important focus of the EU’s November 2020 Statement of Objections Against Amazon is on claims that Amazon “artificially favour[s] its own retail offers” in product areas where it sells both its own and third-party merchandise.349 Under current United States antitrust law, a firm acting unilaterally would not be prevented from discriminating between its own and thirdparty sales. That was the very issue in Trinko—namely, that monopolist Verizon discriminated against third-party carriers and favored its own.350

If decision making in this area were entrusted to a board of active sellers, including both Amazon itself and third parties, the section 1 standard would reach the conduct. Justice Scalia’s Trinko opinion, citing Terminal Railroad, observed that the Supreme Court had imposed nondiscrimination obligations under similar circumstances, but only when the government was attacking concerted rather than unilateral conduct.351 Further, when such conduct is concerted, it is “amenable to a remedy that does not require judicial estimation of free-market forces: simply **requiring** that the outsider be **granted nondiscriminatory admission** to the club.”352 The number and diversity of participants could vary, but they should be sufficiently numerous and diverse to make anticompetitive collusion unlikely. That could include individual merchants who sell on Amazon, principal shareholders, and perhaps customers and others. The Board should be subject to rules setting objective standards for product selection.

Numerosity should not interfere with effective operation. The Chicago Board of Trade had 1800 trading members and decisionmakers in 1918, when organizational rules and procedures were still being managed with pencil and paper.353 The NCAA has more than 1200 member schools,354 and the Associated Press had more than 1200 member newspapers in 1945.355 The Terminal Railroad Association had 38 shareholder members, but the decree contemplated nondiscriminatory sharing with any non-shareholder who wished to participate. 356 One large real-estate board, the Chicago Association of Realtors, has

over 15,500 members.357

The designated decisionmakers need not be Amazon shareholders, as long as they have independent business interests and operate on Amazon. In fact, the details of state corporate law or organization would not ordinarily affect the federal antitrust issue. For example, in some of these cases—such as Terminal Railroad, 358 Sealy,359 and Topco360—the relevant decisionmakers owned shares in the corporation. In American Needle, the organization in question was NFL Properties, an LLC,361 which does not have shareholders but rather owner-members similar to a partnership. Similarly, in Associated Press, the Court probed a cooperative association incorporated under the Membership Corporation Laws of New York.362

Whether the court applies the per se rule or the rule of reason in such cases would depend on the offense. In NCAA, the Supreme Court concluded that the rule of reason should apply to all restraints undertaken by the association because cooperation was necessary to the creation of the product: intercollegiate sports.363 That is not the case with product sales on Amazon. Rather, the traditional distinction between naked and ancillary restraints would work well. Price fixing or unjustified limitations on output would be strongly suspect.364 On the other hand, rules establishing uniform practices governing distribution and resolution of customer complaints could certainly be reasonable and thus lawful. Concerted refusals to deal can cover a range of practices from naked boycotts motivated by price (per se unlawful)365 to reasonable standard setting (rule of reason),366 and should be addressed accordingly.

Such an approach **would notably not aim at size *per se*.** An Amazon with competitively restructured management could be **just as large as it is now**. Indeed, **it could be even larger**. Cartels and monopolies function by **restricting output**, and facilitating internal competition could serve to increase it. Amazon would likely **retain the efficiencies that flow from its size and scope**. We would have effectively **turned the internal workings of its platform into a market**. It still might be in a position to undersell other businesses or to exclude products that its members and rules disapprove. **If it did so in an anticompetitive manner,** however, section 1 of **the Sherman Act could be applied**.

#### Only nascent firms foster transformative tech innovation across sectors, AND it can’t be predicted or directed

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(C. Scott, and Tim, “Nascent Competitors,” 168 U. Penn. L. Rev. 1879)

Over the last century and a half, small, innovative firms have played a particularly important role in the process of innovation and competition. This is not to discount the important history of innovation at big firms with large research laboratories, such as Bell Labs, Xerox PARC, and research labs at General Electric and Merck.30 However, over the same period, a significant number of disruptive innovations—those that transform industry—have come out of very small firms with new technologies unproven at the time: examples include the Bell Telephone Company, RCA, MCI, Genentech, Apple, Netscape, and dozens of others.31

There is a particular competitive significance of the big innovations at the smaller firms, for they also represent competitive entry, and sometimes completely transform the industry.32 New, unproven innovators are a key source of disruptive innovation.33 Consider that Bell’s telephone did not improve the telegraph, but replaced it, or the impact of Apple’s personal computer on the computing industry. As this suggests, nascent competitors can hold the promise of offering fresh competition for the market, not just in the market. They have the capacity to displace an incumbent through a paradigm shift—for example, a new platform for developing software or decoding a genome. Nascent competition tends to be important in industries marked by rapid innovation and technological change. Software, pharmaceuticals, mobile telephony, e-commerce, search, and social network services are leading examples.

Future potency. Second, a nascent competitor is relevant due to its promise of future innovation. Its potency is not yet fully developed and hence unproven. Whether that innovation will make a difference in the marketplace is subject to significant uncertainty. That is due to the unpredictable rate and direction of technological change. This uncertainty stems from the same forces of technological progress that make innovation so valuable. The nascent competitor may fail in various ways: the unproven cure, despite highest hopes, may flunk its clinical trials; the technologies thought to be the future might, in fact, be overrated. This uncertainty may not be a quantifiable risk, like the odds in a casino, but closer to Knightian true uncertainty—in other words, not readily susceptible to measurement.34 The unpredictable path of innovation often results in product plasticity, in which products evolve and are used for purposes different than the original. For example, in the 1990s, mobile telephones gained popularity as a complement to a wired telephone, as a means for making calls on the go.35 Today, they compete with land lines, cameras, computers, televisions, and credit cards. General purpose technologies such as computing and Internet connectivity act as powerful fuel for unpredictable change.36 Uncertainty about what products the incumbent and the nascent competitor will actually offer in the future has a further consequence—uncertainty about the degree to which those products will actually compete.

**Continued software breakthroughs vital to solution-development for every existential risk**

**Hayes 14** – Correspondent-Democrat & Chronicle

Matthew Hayes, Bill Gates sees innovation solving world problems, 2014, <http://www.democratandchronicle.com/story/money/business/2014/10/05/bill-gates-sees-innovation-solving-world-problems/16760969/>

ITHACA – Bill Gates delivered an optimistic message about the future to Cornell University students during a back-and-forth Wednesday evening with President David Skorton. Gates, who fielded questions from the audience, spoke to the packed auditorium at Bailey Hall with the message that innovations in science, medicine and computer technologies will continue to shape the world for the better. Progress in reducing health and income inequalities in developing countries gave him particular pride, he said. The Bill & Melinda Gates Foundation, which he co-chairs with his wife, has dispersed more than $30 billion in grants since its inception 14 years ago. The foundation has a mission to improve education in the United States and a global focus on improving people’s health in poor countries. “We saw that health was the greatest injustice,” he told Skorton about his foundation’s mission to improve people’s health. Feeding the poor is only one priority of the Gates Foundation. The philanthropic group has helped lower the number of childhood deaths from 10 million in 2000 to about 6 million today. His goal is to reduce that further to 2 million, he said. He expressed optimism that research into diseases that ravage the poorer parts of the world — malaria, cholera, tuberculosis and others — will continue to be funded. Economic development in poorer countries has helped reduce global inequality, which he said is at a lower level than it has ever been. “The world is A, much richer, and B, much richer in a far more equitable way,” he told the students. That has been the opposite of what has happened in the past three decades or so in the United States, he said. He called for tax policies to help level that inequality, with a progressive consumption tax and a high estate tax that limits the dynastic possession of wealth. While he expressed concern about the current political climate in the country, he felt that science innovations can overcome problems in Washington, D.C. “The things that count in society don’t depend on politicians being geniuses,” he said. At the dedication Gates had a similar optimistic message earlier in the day during the dedication ceremony of Gates Hall. Gates said it’s an exciting time to be involved in the computer sciences, even more than when he got involved 46 years ago. Despite the advances over the past few decades, he said, “the full dream of what is possible with computing has not yet been realized.” Problems like developing vaccines, energy sources without carbon dioxide emissions, and understanding issues as diverse as neurological disease and weather forecasting can all be tackled with emerging technologies. “With every one of these problems, the **digital tools combined with really amazing software are going to be the reason that we can solve these things**,” he said. He said **figuring out solutions depends on software-intensive techniques**, and that Cornell students will be poised to make gains in those fields.

**Specifically, solves synthetic biology advances elsewhere will inevitably result in easy global ability to engineer superbugs. ONLY the U.S. getting out ahead with new breakthroughs can solve**

**Lohr 11/23** – Quoting Endy, Professor of Bioengineering, Stanford University

Steve Lohr, Quoting Drew Endy, professor of bioengineering at Stanford University, 23 November 2021, https://www.nytimes.com/2021/11/23/business/dealbook/synthetic-biology-drew-endy.html

Synthetic biology holds great promise, but there is a dark side as well. Hacking biology and **democratizing the tools** to do so raises the specter of an **angry loner** or **terrorist group** creating a **build-your-own pandemic** **genetically targeted** at their enemies, among other potential horrors.

Mr. Endy, though synthetic biology’s champion, has been **cleareyed about the risks** since the outset. He was the lead author of a report for the Pentagon’s advanced research agency in 2003 that laid out a framework for developing synthetic biology and managing its risks. In the report, he assessed the spectrum of dangers and imagined the bad-actor threat as “Bin Laden Genetics.”

Today, **risk management**, Mr. Endy said, should **start with the assumption** that in the **not too distant future** “**anyone, anywhere can make any virus from scratch.”**

One **line of protection** is **synthetic biology itself**. For example, Mr. Endy points to the possibility of advanced technologies like **engineered chromosomes** that **would give humans a built-in defense system**, say, against the world’s **top 20 pathogens**.

**Defense doesn’t apply – engineered pathogens cause extinction**

**Sandberg et al 8**—Research Fellow at the Future of Humanity Institute at Oxford University. PhD in computation neuroscience, Stockholm—AND—Jason G. Matheny—PhD candidate in Health Policy and Management at Johns Hopkins. special consultant to the Center for Biosecurity at the University of Pittsburgh—AND—Milan M. Ćirković—senior research associate at the Astronomical Observatory of Belgrade. Assistant professor of physics at the University of Novi Sad. (Anders, How can we reduce the risk of human extinction?, 9 September 2008, http://www.thebulletin.org/web-edition/features/how-can-we-reduce-the-risk-of-human-extinction)

The risks from **anthropogenic** hazards appear at present larger than those from natural ones. Although great progress has been made in reducing the number of nuclear weapons in the world, humanity is still threatened by the possibility of a global thermonuclear war and a resulting nuclear winter. We may face even greater risks from emerging technologies. Advances in synthetic biology might make it possible to **engineer pathogens** capable of **extinction**-level pandemics. The knowledge, equipment, and materials needed to engineer pathogens are more accessible than those needed to build nuclear weapons. And unlike other weapons, pathogens are self-replicating, allowing a small arsenal to become exponentially destructive. Pathogens have been implicated in the extinctions of many wild species. Although most pandemics "fade out" by reducing the density of susceptible populations, pathogens with wide host ranges in multiple species can reach even isolated individuals. The intentional or unintentional release of engineered pathogens with high **transmissibility**, **latency**, and **lethality** might be capable of causing human extinction. While such an event seems unlikely today, the likelihood may increase as biotechnologies continue to improve at a rate rivaling Moore's Law.

### DA---1NC

Retrenchment DA---

**Rejecting US global empire would be an unprecedented and seismic shift. Sparks regional balancing, proliferation by allies in Europe, Asia, and the Middle East which goes nuclear, empowers right-wing nationalists, and causes wars that ultimately draw the US back in.**

**Wright 20** – Director, Center on the US & Europe and Sr. Fellow, Project on Internat’l Order & Strategy at Brookings

Thomas Wright, director of the Center on the United States and Europe, senior fellow in the Project on International Order and Strategy at the Brookings Institution, contributing writer for The Atlantic, and nonresident fellow at the Lowy Institute for International Policy, The Folly of Retrenchment: Why America Can’t Withdraw From the World, March/April 2020, https://www.foreignaffairs.com/articles/2020-02-10/folly-retrenchment

For seven decades, U.S. grand strategy was characterized by a bipartisan consensus on the United States’ global role. Although successive administrations had major disagreements over the details, Democrats and Republicans alike backed a system of alliances, the forward positioning of forces, a relatively open international economy, and, albeit imperfectly, the principles of freedom, human rights, and democracy. Today, that consensus has broken down.

President Donald Trump has questioned the utility of the United States’ alliances and its forward military presence in Europe, Asia, and the Middle East. He has displayed little regard for a shared community of free societies and is drawn to authoritarian leaders. **So far, Trump’s views are not shared** by the **vast majority of leading Republicans**. Almost **all leading Democrats**, for their part, are **committed** to the **U**nited **S**tates’ traditional role in Europe and Asia, if not in the Middle East. Trump has struggled to convert his worldview into policy, and in many respects, his administration has **increased U.S. military commitments**. But if Trump wins reelection, that **could change quickly**, as he would feel more empowered and Washington would need to adjust to the reality that Americans had reconfirmed their support for a more inward-looking approach to world affairs. At a private speech in November, according to press reports, John Bolton, Trump’s former national security adviser, even predicted that Trump could pull out of NATO in a second term. The receptiveness of the American people to Trump’s “America first” rhetoric has revealed that there is a market for a foreign policy in which the United States plays a smaller role in the world.

Amid the shifting political winds, a growing chorus of voices in the policy community, from the left and the right, is calling for a strategy of global retrenchment, whereby the United States would withdraw its forces from around the world and reduce its security commitments. Leading scholars and policy experts, such as Barry Posen and Ian Bremmer, have called on the United States to significantly reduce its role in Europe and Asia, including withdrawing from NATO. In 2019, a new think tank, the Quincy Institute for Responsible Statecraft, set up shop, with funding from the conservative Charles Koch Foundation and the liberal philanthropist George Soros. Its mission, in its own words, is to advocate “a new foreign policy centered on diplomatic engagement and military restraint.”

Global **retrenchment** is fast emerging as the most coherent and ready-made alternative to the United States’ postwar strategy. Yet **pursuing it would be a grave mistake**. By dissolving U.S. alliances and ending the forward presence of U.S. forces, this strategy would **destabilize the regional security orders** in **Europe** and **Asia**. It would also increase the risk of **nuclear proliferation**, empower **right-wing nationalists** in Europe, and aggravate the threat of **major-power conflict.**

This is not to say that U.S. strategy should never change. The United States has regularly increased and decreased its presence around the world as threats have risen and ebbed. Even though Washington followed a strategy of containment throughout the Cold War, that took various forms, which meant the difference between war and peace in Vietnam, between an arms race and arms control, and between détente and an all-out attempt to defeat the Soviets. After the fall of the Soviet Union, the United States changed course again, expanding its alliances to include many countries that had previously been part of the Warsaw Pact.

Likewise, the United States will now have to do less in some areas and more in others as it shifts its focus from counterterrorism and reform in the Middle East toward great-power competition with China and Russia. But **advocates of** global **retrenchment** are **not** so much proposing **changes within a strategy** as they are calling for the **wholesale replacement** of one that has **been in place since World War II**. What the United States needs now is a careful pruning of its overseas commitments—not the indiscriminate **abandonment** of a strategy that has **served it well for decades.**

RETRENCHMENT REDUX

Support for retrenchment stems from the view that the United States has overextended itself in countries that have little bearing on its national interest. According to this perspective, which is closely associated with the realist school of international relations, the United States is fundamentally secure thanks to its geography, nuclear arsenal, and military advantage. Yet the country has nonetheless chosen to pursue a strategy of “liberal hegemony,” using force in an unwise attempt to perpetuate a liberal international order (one that, as evidenced by U.S. support for authoritarian regimes, is not so liberal, after all). Washington, the argument goes, has distracted itself with costly overseas commitments and interventions that breed resentment and encourage free-riding abroad.

**Critics** of the status quo **argue** that the **U**nited **S**tates must take two steps to change its ways. The first is retrenchment itself: the action of **withdraw**ing **from** many of **the** **U**nited **S**tates’ **existing commitments**, such as the ongoing military interventions in the Middle East and one-sided alliances in Europe and Asia. The second is restraint: the strategy of **defining U.S. interests narrowly**, refusing to launch wars unless vital interests are directly threatened and Congress authorizes such action, compelling other nations to take care of their own security, and relying more on diplomatic, economic, and political tools.

In practice, this approach means ending U.S. military operations in Afghanistan, withdrawing U.S. forces from the Middle East, relying on an over-the-horizon force that can uphold U.S. national interests, and no longer **taking on responsibility** for the **security of other states**. As for alliances, Posen has argued that the United States should **abandon** the **mutual-defense** provision **of NATO**, **replace** the organization “with a **new, more limited** security cooperation agreement,” and **reduce U.S. commitments to Japan, South Korea, and Taiwan**. On the question of China, realists have split in recent years. Some, such as the scholar John Mearsheimer, contend that even as the United States retrenches elsewhere, in Asia, it must contain the threat of China, whereas others, such as Posen, argue that nations in the region are perfectly capable of doing the job themselves.

Since Trump’s election, some progressive foreign policy thinkers have joined the retrenchment camp. They diverge from other progressives, who advocate maintaining the United States’ current role. Like the realists, progressive retrenchers hold the view that the United States is safe because of its geography and the size of its military. Where these progressives break from the realists, however, is on the question of what will happen if the United States pulls back. While the realists favoring retrenchment have few illusions about the sort of regional competition that will break out in the absence of U.S. dominance, the progressives expect that the world will become more peaceful and cooperative, because Washington can still manage tensions through diplomatic, economic, and political tools. The immediate focus of the progressives is the so-called forever wars—U.S. military involvement in Afghanistan, Iraq, Syria, and the broader war on terrorism—as well as the defense budget and overseas bases.

Although the progressives have a less developed vision of how to implement retrenchment than the realists, they do provide some guideposts. Stephen Wertheim, a co-founder of the Quincy Institute, has called for bringing home many of the U.S. soldiers serving abroad, “leaving small forces to protect commercial sea lanes,” as part of an effort to “deprive presidents of the temptation to answer every problem with a violent solution.” He argues that U.S. allies may believe that the United States has been inflating regional threats and thus conclude that they do not need to increase their conventional or nuclear forces. Another progressive thinker, Peter Beinart, has argued that the United States should accept Chinese and Russian spheres of influence, a strategy that would include abandoning Taiwan.

IS LESS REALLY MORE?

The realists and the progressives arguing for retrenchment differ in their assumptions, logic, and intentions. The realists tend to be more pessimistic about the prospects for peace and frame their arguments in hardheaded terms, whereas the progressives downplay the consequences of American withdrawal and make a moral case against the current grand strategy. But they share a common claim: that the United States would be better off if it dramatically reduced its global military footprint and security commitments.

**This is a false promise**, for a number of reasons. First, retrenchment would worsen regional security competition in Europe and Asia. The realists recognize that the U.S. military presence in Europe and Asia does **dampen security competition**, but they claim that it does so at too high a price—and one that, at any rate, should be paid by U.S. allies in the regions themselves. Although pulling back would **invite regional security competition**, realist retrenchers **admit**, the United States could be safer in a more dangerous world because regional rivals would **check** one another. This is a **perilous gambit**, however, because regional conflicts **often end up implicating U.S. interests**. They might thus **end up drawing the United States back in after it has left**—resulting in a **much more dangerous venture** than **heading off the conflict in the first place by staying**. Realist retrenchment reveals a **hubris** that the **U**nited **S**tates can control consequences and **prevent crises from erupting into war.**

A U.S. pullback from Europe or Asia is more likely to embolden regional powers.

The progressives’ view of regional security is similarly flawed. These retrenchers reject the idea that regional security competition will intensify if the United States leaves. In fact, they argue, U.S. alliances often promote competition, as in the Middle East, where U.S. support for Saudi Arabia and the United Arab Emirates has **emboldened** those countries in their cold war with Iran. But **this logic does not apply to Europe or Asia**, where **U.S. allies have behaved responsibly**. A **U.S. pullback** from those places is **more likely to embolden** the regional powers. Since 2008, Russia has invaded two of its neighbors that are not members of NATO, and if the Baltic states were **no longer protected by a U.S. security guarantee**, it is conceivable that **Russia would test the boundaries** with gray-zone warfare. In East Asia, a U.S. withdrawal would force Japan to **increase its defense capabilities** and **change its constitution** to enable it to **compete with China on its own**, **straining relations with South Korea**.

The second problem with retrenchment involves **nuclear proliferation**. If the United States pulled out of NATO or ended its alliance with Japan, as many realist advocates of retrenchment recommend, some of **its allies**, no longer **protected** by the U.S. nuclear umbrella, would be tempted to **acquire nuclear weapons of their own**. Unlike the progressives for retrenchment, the realists are **comfortable** with that result, since they see deterrence as a stabilizing force. **Most Americans are not** so sanguine, and **rightly so**. There are **good reasons to worry** about nuclear proliferation: **nuclear materials could end up in the hands of terrorists**, **states with less experience** might be more **prone to nuclear accidents**, and **nuclear powers in close proximity have shorter response times** and thus **conflicts among them have a greater chance of spiraling into escalation.**

Third, **retrenchment** would **heighten nationalism and xenophobia**. **In Europe, a U.S. withdrawal** would **send the message that every country must fend for itself**. It would therefore **empower the far-right groups already making this claim**—such as the Alternative for Germany, the League in Italy, and the National Front in France—while **undermining the centrist democratic leaders** there **who told their populations that they could rely on the United States and NATO**. As a result, **Washington would lose leverage over the domestic politics of individual allies**, particularly younger and more fragile democracies such as Poland. And since these nationalist populist groups are almost always **protectionist**, retrenchment would **damage U.S. economic interests**, as well. **Even more alarming**, many of the **right-wing nationalists that retrenchment would empower** have **called for greater accommodation of China and Russia**.

A fourth problem concerns **regional stability** after global retrenchment. The **most likely end state** is a **spheres-of-influence system**, whereby China and Russia dominate their neighbors, but such an order is **inherently unstable**. The **lines of demarcation** for such spheres tend to be **unclear**, and there is no guarantee that **China and Russia** will not seek to **move them outward over time**. Moreover, the **U**nited **S**tates cannot simply grant other major powers a sphere of influence—the countries that would fall into those realms **have agency**, too. If the United States ceded Taiwan to China, for example, the Taiwanese people could **say no**. The **current U.S. policy** toward the country **is working** and may be **sustainable**. Withdrawing support from Taiwan against its will would plunge cross-strait relations into chaos. The entire idea of letting regional powers have their own spheres of influence has an imperial air that is at odds with modern principles of sovereignty and international law.

A fifth problem with retrenchment is that it lacks domestic support. The American people may favor greater burden sharing, but there is no evidence that they are onboard with a withdrawal from Europe and Asia. As a survey conducted in 2019 by the Chicago Council on Global Affairs found, seven out of ten Americans believe that maintaining military superiority makes the United States safer, and almost three-quarters think that alliances contribute to U.S. security. A 2019 Eurasia Group Foundation poll found that over 60 percent of Americans want to maintain or increase defense spending. As it became apparent that China and Russia would benefit from this shift toward retrenchment, and as the United States’ democratic allies objected to its withdrawal, the domestic political backlash would grow. One result could be a prolonged foreign policy debate that would cause the United States to oscillate between retrenchment and reengagement, creating uncertainty about its commitments and thus raising the risk of miscalculation by Washington, its allies, or its rivals.

Realist and progressive retrenchers like to argue that the architects of the United States’ postwar foreign policy naively sought to remake the world in its image. But the real revisionists are those who argue for retrenchment, a **geopolitical experiment** of **unprecedented scale in modern history**. If this camp were to have its way, Europe and Asia—**two stable, peaceful, and prosperous regions** that form the **two main pillars of the U.S.-led order**—would be **plunged into an era of uncertainty**.

**Disintegration of the unipolar alliance system creates an enormous structural propensity for crises and escalation---history proves that’ll be quick and ugly.**

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Robert Kagan, “The World America Made—and Trump Wants to Unmake,” POLITICO Magazine, September 28, 2018, <https://politi.co/2zB3qCg>.

So, yes, the liberal order has been flawed, with its share of failure and hypocrisy. Liberal goals have sometimes been pursued by illiberal means. Power, coercion and violence have played a big part. The order has been the product of American hegemony and it has also served to reinforce that hegemony. But to note these facts is hardly to condemn the order. **No order of any kind** can exist without some element of **hegemony**. The **Roman** order was based on the **hegemony of Rome**; the **British** order of the 18th and 19th centuries was based on the hegemony of the **Royal Navy**; such order as existed **briefly** in Europe after the defeat of Napoleon—the so-called **Concert of Europe**—rested on the **collective hegemony** of the four victorious great powers. The idea of a **peaceful, stable multipolar world** where no power or powers enjoy **predominance** is a dream that exists only in the minds of one-world idealists and international relations theorists.

The same is true of those who would condemn the liberal world order because of the persistence of violence, coercion, hypocrisy, selfishness, stupidity and all the other evils and foibles endemic to human nature. Perhaps in the confines of academia it is possible to imagine a system of international relations where our deeply flawed humanness is removed from the equation. But **in the real world**, even the best and most moral of international arrangements are going to have their dark, immoral aspects.

The question is, as **always, compared to what?** Patrick Porter, the author of a widely discussed critique of the liberal world order, acknowledges that “if there was to be a superpower emerging from the rubble of world war in midcentury, **we should be grateful it was the United States**, given the **totalitarian alternatives on offer**. Under America’s aegis, there were islands of liberty where prosperous markets and democracies grew.” Indeed, that would seem to be the key point. At any given time there are only so many alternatives, and usually the choice is between the bad and the worse.

Are the alternatives on offer so much better now? Graham Allison, dismissing any return to the “imagined past” when the United States shaped an international liberal order, proposes that we instead make the world “safe for diversity” and accommodate ourselves to “the reality that other countries have contrary views about governance and seek to establish their own international orders governed by their own rules.” Others, such as Peter Beinart, similarly argue that we should accommodate Russian and Chinese demands for their own spheres of interest, even if that entails the sacrifice of sovereign peoples such as Ukrainians and Taiwanese. This wonderfully diverse world would presumably be run partly by **Xi** Jinping, partly by Vladimir **Putin**, and partly, too, by the Ayatollah **Khamenei** and by **Kim** Jong Un, who would also like to establish orders governed by their own rules. We have not enjoyed such diversity since the world was **run partly by Hitler, Stalin and Mussolini**.

**The idea that this is the solution** to our problems **is laughable**. Porter points out American policy has led to “multiplying foreign conflicts” and put the **U**nited **S**tates “on a collision course with rivals.” Setting aside the fact that multiplying foreign conflicts and collisions between rivals is the natural state of international relations in any era, it is **hard for any student of history** to **imagine that these problems would lessen** if only we returned to the **competitive multipolar world** of the **19th and early 20th centuries**. To suggest that there **could** be a world with no collisions and no foreign conflicts, if only the United States would pursue an intelligent policy, is the **very opposite** of realism.

**Strikingly absent** from all these critiques of the liberal world order, too, is any suggestion of an **alternative** approach. The critiques end with lists of questions that need to be answered. Allison calls for a “surge of strategic thinking.” Others call for “new thinking” about “difficult trade-offs.” Some critics even complain that so long as people continue to talk about a U.S.-dominated liberal order, it will be “impossible for us to construct a reasonable alternative for the future.”

The most the critiques will offer are suggestions that sound more like attitudes than policies. They throw around words like “realism,” “restraint” and “retrenchment.” Allison proposes that the **U**nited **S**tates “limit its efforts to ensuring **sufficient order** abroad.” Beinart comes closest to offering an alternative, but he clearly has not yet thought it through fully. He wants to grant other powers their spheres of interest, for instance, but he mentions only Russia and China. Does this mean Russia should be granted full sway in, say, **Ukraine**, the **Balkans**, the **Baltics** and the **Caucuses**? Should China be able to impose its will on the **Philippines** and **Vietnam**?

And what of the other great powers? Does **Japan** get its own sphere of interest? Does **India**? Do **Germany**, **France** and **Britain**? They **all had their spheres** a century ago, and of course **it was the clashes over those inevitably overlapping spheres that led to all the great wars**. Is Beinart suggesting we should return to **that past**?

Of course, we **may** be moving toward that world, anyway. That is the implication of Trump’s “America First” foreign policy philosophy, his attacks on “globalism” and his recent suggestion that all nations look out strictly for themselves. Trump’s speech at the U.N. was an invitation to **global anarchy**, a **struggle of all against all**. His boasting about American power put the world on notice that the United States was turning from supporter of a liberal order to rogue superpower. This breakdown may be our future, but it seems odd to **choose** that course as a **deliberate strategy**, as Allison and others seem to do. Little wonder that they don’t wish to spell out the details of their alternative but prefer to carp at the inevitable failures and imperfections of the liberal world we have. As John Hay once remarked, “Our good friends are wiser when they abuse us for what we do, than when they try to say what ought to be done.”

No honest person would deny that the liberal world order has been flawed and will continue to be flawed in the future. The **League of Nations** was also flawed, as was Woodrow Wilson’s vision of collective security. Yet **the world would have been better had the United States joined in upholding it**, given the **genuine alternative**. The **enduring truth** about the liberal world order is that, like Churchill’s comment about democracy, it is the worst system—**except for all the others.**

### Case

**The aff fails---it cannot change minds and crackdown.**

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Growth imperatives are active at **multiple levels**, making the **pursuit** of economic growth (net investment, i.e. investment above depreciation) a **necessity** for **different** actors and leading to **social** and **economic** instability in the absence of it7,52,60. Following a Marxian perspective as put forward by Pirgmaier and Steinberger61, growth imperatives can be attributed to capitalism as the currently dominant socio-economic system in affluent countries7,51,62, although this is debated by other scholars52. To structure this topic, we will discuss different affected actors separately, namely corporations, states and individuals, following Richters and Siemoneit60. Most importantly, we address the role of the super-affluent consumers within a society, which overlap with **powerful fractions** of the capitalist class. From a Marxian perspective, this social class is **structurally** defined by its position in the capitalist production process, as **financially tied with the function of capital**63. In capitalism, workers are separated from the means of production, implying that they must compete in labour markets to sell their labour power to capitalists in order to earn a living.

Even though some small- and medium-sized businesses manage to refrain from pursuing growth, e.g. due to a low competition intensity in niche markets, or lack of financial debt imperatives, this cannot be said for most firms64. In capitalism, firms need to **compete** in the market, leading to a **necessity to reinvest profits** into more efficient production processes to minimise costs (e.g. through replacing human labour power with machines and positive returns to scale), **innovation** of new products and/or **advertising** to convince consumers to buy more7,61,62. As a result, the average energy intensity of labour is now twice as high as in 195060. As long as a firm has a competitive **advantage**, there is a strong incentive to sell as much as possible. Financial markets are **crucial to enable this constant expansion** by providing (interest-bearing) capital and channelling it where it is most profitable58,61,63. If a firm fails to stay competitive, it either goes bankrupt or is taken over by a more successful business. Under normal economic conditions, this capitalist competition is expected to lead to aggregate growth dynamics7,62,63,65.

However, two factors exist that further **strengthen** this growth dynamic60. Firstly, if labour productivity continuously rises, then **aggregate economic growth** becomes **necessary** to keep employment constant, otherwise technological unemployment results. This creates one of the imperatives for capitalist states to **foster** aggregate growth, since with **worsening** economic conditions and high unemployment, tax revenues shrink, e.g. from labour and value-added taxes, while **social security** expenditures rise60,62. Adding to this, states compete with other states **geopolitically** and in providing **favourable** conditions for capital, while capitalists have the resources to influence political decisions in their favour. If economic conditions are expected to deteriorate, e.g. due to unplanned recession or progressive political change, firms can threaten capital **flight**, financial markets **react** and investor as well as consumer confidence shrink51,58,60. Secondly, consumers usually **increase** their consumption in tune with increasing production60. This process can be at least in part explained by substantial advertising efforts by firms47,52,66. However, further mechanisms are at play as explained further below.

Following this analysis, it is not surprising that the growth paradigm is **hegemonic**, i.e. the perception that economic growth solves **all kinds of societal problems**, that it equals **progress**, **power** and **welfare** and that it can be made practically endless through some form of supposedly **green or sustainable** growth59. Taken together, the described dynamics create **multiple** dependencies of workers, firms and states on a well-functioning capital accumulation and thus wield more **material**, **institutional** and **discursive** power (e.g. for political lobbying) to capitalists who are usually the most affluent consumers61,67. Even if different fractions of the capitalist class have manifold and competing interests which need to be constantly renegotiated, there is a **common interest in maintaining** the capitalist system and favourable conditions for capital accumulation, e.g. through aggregate growth and high consumption51,62. How this **political corruption** by the super-affluent plays out in practice is **well documented**, e.g. for the meat industry in Denmark6.

Super-affluent consumers drive consumption norms

Growth imperatives and drivers (with the latter describing less coercive mechanisms to increase consumption) can also be active at the **individual level**. In this case, the level of consumption can **serve** as a proxy47,60,68. To start with, individual consumption decisions are not **made in a vacuum**, but are shaped by **surrounding** (physical and social) structures and provisioning systems47,61,69. Sanne66 and Alexander47 discuss several **structural barriers to sufficiency-oriented lifestyles**, locking in **high** consumption. These include lack of **suitable housing**, insufficient options for **socialising**, **employment**, **transport** and **information**, as well as high exposure to **consumer temptations**. Often, these conditions are **deliberately** fostered by states and also capitalists (the latter overlapping with super-affluent consumers and having disproportionate influence on states) to increase consumption61,66.

Further active mechanisms to spur growth include positional and efficiency consumption, which contribute to an increase in consumption overall52,60,68,70. After basic material needs are satisfied, an increasing proportion of consumption is directed at positional goods52,70. The defining feature of these goods is that they are expensive and signify social status. Access to them depends on the income relative to others. **Status matters**, since **empirical** studies show that currently relative income is one of the strongest determinants of individual happiness52. In the aggregate however, the pursuit of positional consumption, driven by super-affluent consumers and high inequalities, likely resembles a zero-sum game with respect to societal wellbeing70,71. With every actor striving to increase their position relative to their peers, the average consumption level rises and thus even **more expensive positional goods** become necessary, while the societal wellbeing level stagnates42,71. This is supported by a large body of **empirical research**, showing that an individual’s happiness correlates positively with their own income but negatively with the peer group’s income71 and that **unequal** access to positional goods fosters rising consumption52. This endless process is a core part of capitalism as it keeps **social momentum** and **consumption** high with affluent consumers driving aspirations and hopes of social ascent in low-affluence segments70,72. The positional consumption behaviour of the super-affluent thus drives consumption norms across the population, for instance through their excessive air travel, as documented by Gössling73.

Lastly, in capitalism, workers must **compete** against each other in the labour market in order to earn a living from capitalists7,63. Following Siemoneit68, this can lead to a similar **imperative to net invest** (increase the level of consumption/investment) as is observed with capitalists. In order to stay competitive, individuals are pushed to increase **time** and **cost efficiency** by investing in cars, kitchen appliances, computers and smartphones, by using social media and online trade etc. This efficiency consumption—effectively another facet of the rebound effect38,47,68—helps to manage high workloads, thus **securing an income**, while maintaining private life. This is often accompanied by trends of **commodification**61, understood as the marketisation of products and services which used to be provisioned through more time-intensive commons or reciprocal social arrangements, e.g. convenience food vs. cooking together. As in the food example74, this replacement of human labour with energy- and material-intensive industrial production typically increases environmental pressures47,75. Through these economic pressures, positive feedback loops and lock-ins are expected to emerge, since other consumers need to keep up with these investments or face disadvantages, e.g. when car or smartphone ownership become presupposed. Taken together with **positional consumption**, structural barriers to **sufficiency** and the substantial **advertising efforts** by capitalists, these mechanisms explain to a large extent why consumers seem so willing to increase their consumption in accordance with increasing production60.

**Competition in the private sector is key to drive down costs in space exploration – spurs innovation**

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Harvard Business Review, 2-12-2021, "The Commercial Space Age Is Here," <https://hbr.org/2021/02/the-commercial-space-age-is-here>

There’s no shortage of hype surrounding the commercial space industry. But while tech leaders promise us moon bases and settlements on Mars, the space economy has thus far remained distinctly local — at least in a cosmic sense. Last year, however, we crossed an **important threshold**: For the first time in human history, humans accessed space via a vehicle built and owned not by any government, but by a private corporation with its sights set on affordable space settlement. It was the first **significant step towards building an economy both in space and for space**. The **implications** — for **business**, **policy**, and **society at large** — **are hard to overstate.**

In 2019, [95%](https://brycetech.com/reports) of the estimated $366 billion in revenue earned in the space sector was from the space-for-earth economy: that is, goods or services produced in space for use on earth. The **space-for-earth economy** includes **telecomm**unication**s** and **internet** infrastructure, earth observation capabilities, national security **satellites**, and more. This economy is booming, and though [research shows](https://hbsp.harvard.edu/product/716037-PDF-ENG) that it faces the challenges of overcrowding and monopolization that tend to arise whenever companies compete for a scarce natural resource, [projections for its future](https://hbsp.harvard.edu/product/720027-PDF-ENG) are optimistic. **Decreasing costs** for launch and space hardware in general have **enticed new entrants** into this market, and companies in a variety of industries have already begun leveraging satellite technology and access to space to drive innovation and efficiency in their earthbound products and services.

In contrast, **the space-for-space economy** — that is, goods and services produced in space for use in space, such as mining the Moon or asteroids for material with which to construct in-space habitats or supply refueling depots — has struggled to get off the ground. As far back as the 1970s, [research](https://ntrs.nasa.gov/citations/19780004167) commissioned by NASA predicted the rise of a space-based economy that would supply the demands of hundreds, thousands, even **millions of humans living in space**, dwarfing the space-for-earth economy (and, eventually, the entire terrestrial economy as well). The realization of such a vision would change how all of us do business, live our lives, and govern our societies — but to date, we’ve never even had more than [13 people](https://www.space.com/6503-population-space-historic-high-13.html) in space at one time, leaving that dream as little more than science fiction.

**Today**, however**, there is reason to think that we may finally be reaching the first stages** of a true space-for-space economy. SpaceX’s [recent achievements](https://www.nasa.gov/press-release/nasa-s-spacex-crew-1-astronauts-headed-to-international-space-station/) (in cooperation with NASA), as well as upcoming efforts by [Boeing](https://www.nasa.gov/feature/boeing-s-starliner-makes-progress-ahead-of-flight-test-with-astronauts), [Blue Origin](https://www.blueorigin.com/news/nasa-selects-blue-origin-national-team-to-return-humans-to-the-moon), and [Virgin Galactic](https://spacenews.com/virgin-galactic-prepares-to-transition-to-operations) to put people in space sustainably and at scale, mark the opening of a **new chapter of spaceflight led by private firms.** These firms have both the intention and capability to bring private citizens to space as passengers, tourists, and — eventually — settlers, opening the door for businesses to start meeting the demand those people create over the next several decades with an array of space-for-space goods and services.

Welcome to the (Commercial) Space Age

In our [recent research](https://www.hbs.edu/faculty/Publication%20Files/jep.32.2.173_Space,%20the%20Final%20Economic%20Frontier_413bf24d-42e6-4cea-8cc5-a0d2f6fc6a70.pdf), we examined how the model of centralized, government-directed human space activity born in the 1960s has, over the last two decades, made way for a new model, in which public initiatives in space increasingly share the stage with private priorities. Centralized, government-led space programs will inevitably focus on space-for-earth activities that are in the public interest, such as national security, basic science, and national pride. This is only natural, as expenditures for these programs must be justified by demonstrating benefits for citizens — and the citizens these governments represent are (nearly) all on earth.

**In contrast to governments, the private sector is eager to put people in space to pursue their own personal interests**, not the state’s — and then supply the demand they create. This is the vision driving SpaceX, which in its first twenty years has entirely upended the rocket launch industry, securing 60% of the global commercial launch market and building ever-larger spacecraft designed to ferry passengers not just to the International Space Station (ISS), but also to its own promised [settlement on Mars](https://www.spacex.com/media/making_life_multiplanetary_transcript_2017.pdf).

Today, the space-for-space market is limited to supplying the people who are already in space: that is, the handful of astronauts employed by NASA and other government programs. While SpaceX has grand visions of supporting large numbers of private space travelers, their current space-for-space activities have all been in response to demand from government customers (i.e., NASA). But as **decreasing launch costs** enable companies like SpaceX to **leverage economies of scale** and put more people into space, growing private sector demand (that is, tourists and settlers, rather than government employees) **could turn these proof-of-concept initiatives into a sustainable, large-scale industry.**

This model — of selling to NASA with the hopes of eventually creating and expanding into a larger private market — is exemplified by SpaceX, but the company is by no means the only player taking this approach. For instance, while SpaceX is focused on **space-for-space transportation**, another key component of this burgeoning industry will be manufacturing.

[Made In Space, Inc.](https://madeinspace.us/capabilities-and-technology/archinaut/) has been at the forefront of manufacturing “in space, for space” since 2014, when it 3D-printed a wrench onboard the ISS. Today, the company is exploring other products, such as high-quality fiber-optic cable, that terrestrial customers may be willing to pay to have manufactured in zero-gravity. But the company also recently received a [$74 million contract](https://www.nasa.gov/press-release/nasa-funds-demo-of-3d-printed-spacecraft-parts-made-assembled-in-orbit) to 3D-print large metal beams in space for use on NASA spacecraft, and future private sector spacecraft will certainly have similar manufacturing needs which Made In Space hopes to be well-positioned to fulfill. Just as SpaceX has begun by supplying NASA but hopes to eventually serve a much larger, private-sector market, Made In Space’s current work with NASA could be the first step along a path towards supporting a variety of private-sector manufacturing applications for which the costs of manufacturing on earth and transporting into space would be prohibitive.

Another major area of **space-for-space investment is in building and operating space infrastructure** such as habitats, laboratories, and factories. Axiom Space, a current leader in this field, recently [announced](https://www.theverge.com/2021/1/26/22250327/space-tourists-axiom-private-crew-iss-price) that it would be flying the “first fully private commercial mission to space” in 2022 onboard SpaceX’s Crew Dragon Capsule. Axiom was also [awarded](https://spacenews.com/nasa-selects-axiom-space-to-build-commercial-space-station-module/) a contract for exclusive access to a module of the ISS, facilitating its plans to develop modules for commercial activity on the station (and eventually, beyond it).

This infrastructure is likely to spur investment in a wide array of complementary services to supply the demand of the people living and working within it. For example, in February 2020, Maxar Technologies was awarded a [$142 million contract](https://www.builtincolorado.com/2020/02/03/maxar-technologies-142m-nasa-contract) from NASA to develop a robotic construction tool that would be assembled in space for use on low-Earth orbit spacecraft. Private sector spacecraft or settlements will no doubt have need for a variety of similar construction and repair tools.

**Reversal of commercial space growth causes extinction from resource wars, environmental collapse, and nuclear war**

**Collins 10** – professor of economics at Azabu University in Japan and adviser to a number of companies and organizations

Patrick, with Adriana Autino, June. “What the growth of a space tourism industry could contribute to employment, economic growth, environmental protection, education, culture and world peace.” *Acta Astronautica* 66 (2010) 1553–1562. ScienceDirect.

Investment in low-cost orbital access and other space infrastructure will facilitate the establishment of settle- ments on the Moon, Mars, asteroids and in man-made space structures. In the first phase, development of new regulatory infrastructure in various Earth orbits, including property/usufruct rights, real estate, mortgage financing and insurance, traffic management, pilotage, policing and other services will enable the population living in Earth orbits to grow very large. Such activities aimed at making near-Earth space habitable are the logical extension of humans’ historical spread over the surface of the Earth. As trade spreads through near-Earth space, settlements are likely to follow, of which the inhabitants will add to the wealth of different cultures which humans have created in the many different environments in which they live.

Success of such extra-terrestrial settlements will have the additional benefit of **reducing the danger of human extinction** due to planet-wide or cosmic accidents [27]. These horrors include both man-made disasters such as nuclear war, plagues or growing pollution, and natural disasters such as super-volcanoes or asteroid impact.It is hard to think of any objective that is more important than preserving peace. Weapons developed in recent decades are so destructive, and have such horrific, long-term side- effects that their use should be discouraged as strongly as possible by the international community. Hence, reducing the incentive to use these weapons by rapidly developing the ability to use space-based resources on a large scale is surely equally important [11,16]. The achievement of this depends on low space travel costs which, at the present time, appear to be achievable only through the develop- ment of a vigorous space tourism industry.

8. Summary

As discussed above, if space travel services had started during the 1950s, the space industry would be enor- mously more developed than it is today. Hence the failure to develop passenger space travel has seriously distorted the path taken by humans’ technological and economic development since WW2, away from the path which would have been followed if capitalism and democracy operated as intended. Technological know-how which could have been used to supply services which are known to be very popular with a large proportion of the population has not been used for that purpose, while waste and suffering due to the unemployment and environmental damage caused by the resulting lack of new industrial opportunities have increased.

In response, policies should be implemented urgently to correct this error, and to catch up with the possibilities for industrial and economic growth that have been ignored for so long. This policy renewal is urgent because of the growing dangers of unemployment, economic stagnation, environmental pollution, educational and cultural decline, resource wars and loss of civil liberties which face civilisation today. In order to achieve the necessary progress there is a particular need for colla- boration between those working in the two fields of civil aviation and civil space. Although the word ‘‘aerospace’’ is widely used, it is largely a misnomer since these two fields are in practice quite separate. True ‘‘aerospace’’ collabora- tion to realise passenger space travel will develop the wonderful profusion of possibilities outlined above.

8.1. Heaven or hell on Earth?

As discussed above, the claim that the Earth’s resources are running out is used to justify wars which may never end: present-day rhetoric about ‘‘the long war’’ or ‘‘100 years war’’ in Iraq and Afghanistan are current examples. If political leaders do not change their viewpoint, the recent aggression by the rich ‘‘Anglo-Saxon’’ countries, and their cutting back of traditional civil liberties, are ominous for the future. However, this ‘‘hellish’’ vision of endless war is based on an assumption about a single number—the future cost of travel to orbit—about which a different assumption leads to a ‘‘heavenly’’ vision of peace and ever-rising living standards for everyone. If this cost stays above 10,000 Euros/kg, where it has been unchanged for nearly 50 years, **the prospects for humanity are bleak**. But if humans make the necessary effort, and use the tiny amount of resources needed to develop vehicles for passenger space travel, then this cost will fall to 100 Euros/kg, the use of extra-terrestrial resources will become economic, and arguments for resource wars will evaporate entirely.The main reason why this has not yet happened seems to be lack of understanding of the myriad opportunities by investors and policy-makers. Now that the potential to catch up half a century of delay in the growth of space travel is becoming understood, continu- ing to spend 20 billion Euro-equivalents/year on govern- ment space activities, while continuing to invest nothing in developing passenger space travel, would be a gross failure of economic policy, and strongly contrary to the economic and social interests of the public. Correcting this error, even after such a costly delay, will ameliorate many problems in the world today.

As this policy error is corrected, and investment in profitable space projects grows rapidly in coming years, we can look forward to a growing world-wide boom. Viewed as a whole, humans’ industrial activities have been seriously underperforming for decades, due to the failure to exploit these immensely promising fields of activity. The tens of thousands of unemployed space engineers in Russia, America and Europe alone are a huge waste. The potential manpower in rapidly developing India and China is clearly vast. The hundreds of millions of disappointed young people who have been taught that they cannot travel in space are another enormous wasted resource.

**Globalization solves war – expectations of future gains from trade disincentivize conflict escalation, *not* current flows**

**Fay 17**

Matthew Fay, Director of Defense and Foreign Policy Studies—Niskanen Center, Fellow—GMU Center for Security Policy Studies, PhD—GMU Schar School of Policy and Government, bachelor’s degree in political science from Saint Xavier University and has two master’s degrees, one in international relations from American Military University and one in diplomatic history from Temple University, TRUMP, TRADE, AND GREAT POWER WAR, MARCH 20, 2017, <https://niskanencenter.org/blog/trump-trade-great-power-war/>

It is not surprising therefore, that U.S. Treasury Secretary Steve Mnuchin nixed attempts to include language supporting free trade in a statement from a G-20 meeting in Baden-Baden, Germany. As CNN reported, while the statement included some positive words on trade, “conspicuous by its absence was the phrase ‘we will resist all forms of protectionism’ that was contained in the communiqué from the last meeting of the group in China, July 2016.” Mnuchin rejected the idea that the omission was meaningful, but the unwillingness to reaffirm American opposition to protectionism ignores that trade provides benefits beyond the global economy. Specifically, **the expectation of future trade affects the likelihood of war and peace.**

The connection between trade and conflict has never been as simple as early liberal theorists suggested. The idea, wrongly attributed to the nineteenth century French economist Frederic Bastiat, that “when goods don’t cross borders, soldiers will” still offers a good summation of the longstanding position that trade has pacifying effects on international politics. The logic behind the argument is compelling: the greater the extent of commercial relations between states, the less likely there will be conflict because the economic cost of war (and the lost benefits of trade) will be too high. **However, history has shown that states still sometimes go to war despite high levels of economic interdependence at the time of the conflict.**

In his book Economic Interdependence and War, political scientist Dale Copeland explained that **it is not the current level of trade that is important to the likelihood of conflict**. **Rather**, Copeland argues, it is the **expectation of future trade** that **determines a state’s willingness to go to war**. He writes,

In a very real way, it **does not matter** in the least whether past and current levels of trade and investment have been **low**, as long as leaders have **strongly positive expectations for the future**. It is their **future orientation** and expectations of a future stream of benefits that will likely make the leaders incline to peace. Likewise, it does not matter whether past and current levels of commerce have been **high** if leaders **believe they are going to be cut off** tomorrow or in the near future. It is their **pessimism about the future** that will probably drive these leaders to consider hard-line measures and **even war to safeguard the long-term security of the state**.

Multilateral trade has been a feature of the liberal international order developed after World War II for a reason. Postwar policymakers feared a return to the closed economic blocs of the 1930s that helped **drive the world to war**. It is entirely possible that the norms in favor of free trade are robust enough to withstand the absence of routine language from a statement by a meeting of the world’s finance ministers. But groups like the G-20 help set expectations about the future. Given the connection between those expectations and conflict, failing to reaffirm America’s opposition to protectionism could put the world on a dangerous path.

**The alternative is fragmentation of the global trade order—Extinction**

**Drezner 16**

Daniel W. Drezner, nonresident senior fellow at the Brookings Institution, professor of international politics at the Fletcher School of Law and Diplomacy at Tufts University, Five Known Unknowns about the Next Generation Global Political Economy, May 2016, <https://www.brookings.edu/wp-content/uploads/2016/07/IOS-Drezner-web-1.pdf>

All else equal, this **increases the likelihood of great power conflict going forward**. There have been other drivers of the decades-long reduction in militarized interstate disputes. Nuclear deterrence has helped curb violent conflict among the great powers. Multilateral peacekeeping missions mitigate small country conflicts. Even if there is a decline in interdependence, it is possible that the “Long Peace” will endure. Furthermore, it is impossible to predict the degree to which either innovations or geopolitics will lessen the need for international trade. Even technological optimists acknowledge that the future diffusion of 3D printing is unclear. Advocates of networked manufacturing insist that economic openness is a prerequisite for the process to continue.122 And the degree of geopolitical revisionism among great powers might be endogenous—that is to say, preexisting levels of globalization might constrain revisionist impulses, rather than such impulses weakening the globalized economy. If great powers resort to revisionist foreign policies, however, then the global economy will start to **resemble the Cold War era** of economic blocs and strategic embargoes—one in which trade and investment follow the flag rather than follow the rate of return. The increased American use of targeted financial sanctions, for example, has already generated grumblings from peer competitors about finding ways to diversify away from reliance upon the dollar.123 In 2015, China introduced its own international payment and settlements system, in part, to diversify away from reliance upon the dollar.124 The **correlation of economic flows with geopolitical alliances** would not just have a profound effect on cross-border flows; it would likely lead to the **fragmentation of global** economic **governance.** Just as significantly, great power governments would reverse post-Cold War trends and choose to **allocate more scarce resources towards their militaries**.

#### Capitalism’s broadly sustainable

Wade, Professor of Global Political Economy at the Department of International Development, London School of Economics, ‘21

(Robert H., “What is the Harm in Forecasting Catastrophe due to Man-Made Global Warming?” July 22, <https://www.globalpolicyjournal.com/blog/22/07/2021/what-harm-forecasting-catastrophe-due-man-made-global-warming>)

When parts of western Germany, Belgium and Netherlands have just experienced catastrophic floods and the Pacific northwest has recently broken heat records, it is counter-intuitive to challenge the prevailing pessimism about global warming – captured for example by the Financial Times columnist Martin Wolf who says, “Given this signal failure [to vaccinate against Covid in line with the global interest], it is impossible to imagine we will do much more than fiddle while the planet burns.”

The danger of this mindset is that it encourages inflation of the threat-language far beyond the credible science, so that the future cannot be discussed except in terms of a choice between “disaster”, “catastrophe”, “planetary extinction” on the one hand or impossibly fast reforms to how humanity lives, works and governs, on the other.

Every sensible person agrees that (1) global warming has been happening over most of the second half of the twentieth century and on into the twenty first, and (2) most of it to date is due to greenhouse gas emissions. What could be called the “mainstream view” of climate change goes much further, onto uncertain epistemological ground: (3) man-made global warming is the main cause of all kinds of disagreeable events – including extreme weather, rising seas, and much more; (4) humanity faces impending catastrophe unless we undertake far-reaching changes to how we live, work and govern in order to cut CO2 emissions and dematerialize economies (“net zero by 2050”).

This essay identifies some of the weaknesses in the evidence presented in support of the mainstream view, including weaknesses in the claim that 97% of climate scientists believe in anthropogenic global warming, in the claim that global temperatures will rise much faster than they have been rising, and in the (implicit) claim that the horrifying worst-case scenario presented by the Intergovernmental Panel on Climate Change represents the likely scenario to 2100 in the absence of radical actions starting now. It identifies the incentive mechanisms that produce the exaggerations and sustain wide credence in them. At the end it considers the question: does highlighting the doomsday exaggerations serve to reduce the political and public pressures for necessary ameliorative action, in a world where powerful fossil lobbies seek to block or delay such action for reasons independent of “evidence”? To what extent must mass publics be “panicked” in order to induce enough collective political, business and family action to substantially slow the growth of greenhouse gas emissions?

Policy Recommendations

Every sensible person agrees that (1) global warming has been happening over most of the second half of the twentieth century and on into the twenty first, and (2) most of it to date is due to greenhouse gas emissions.

But too much policy discussion about global warming is polarized and locked into a “syndrome of exaggeration”. The mainstream view talks of coming disaster, catastrophe, even extinction, short of urgent and massive action on a global scale. But it is easy to question the empirical basis of this forecast – not least the long history of repeated wild exaggerations of disaster relative to what later transpired. In response an active but small “sceptical” community exaggerates its scepticism. The two sides make a syndrome in that the behaviour of each confirms the negative expectations of the other.

What is now strangely urgent is to calm down the present climate hysteria so that safety-first resource allocation and consumption decisions can be made without “climate” being the touchstone of the very future of humanity, the current idol of the ancient human longing for Salvation in anxious times, the pathway for all the ingredients of a better world.

The essay suggests changes in the budget and mandate of the Intergovernmental Panel on Climate Change; more action by learned societies in calling to account the wild exaggerators; beefing up the Loss and Damage pillar of the Paris Agreement; boosting investment in “clean coal” technologies as well as renewables, and linking coal-power retirement to the coming on stream of attractive alternatives; creating central planning capacity at national and international levels (eg in multilateral development banks) to integrate investment decisions in energy, transport, buildings, industry and agriculture; and last but not least, respecting the principle of free speech while maintaining the standards of civil discourse.

Every sensible person agrees that (1) global warming has been happening over most of the second half of the twentieth century and on into the twenty first, and (2) most of it to date is due to greenhouse gas emissions. Many go on to say that (3) global warming is the cause of all kinds of disagreeable events – including extreme weather, rising seas, and much more; and that (4) humanity faces impending catastrophe short of far-reaching changes to how we live, work and govern in order to cut CO2 emissions and dematerialize economies. This could now be described – with only a little exaggeration – as the mainstream view.

The Impending Catastrophe

Here are examples of people and organizations claiming that catastrophe for humanity and the biosphere lies ahead if the people of developed and developing countries alike do not make radical changes soon.

The New York Times reported after the G7 Summit in June 2021 that “Mr Biden was once again part of a unanimous consensus that the world needs to take drastic action to prevent a climate disaster”. The report explains that “… the world needs to urgently cut emissions if it has any chance of keeping average global temperatures from rising above 1.5C compared with preindustrial levels. That’s the threshold beyond which experts say the planet will experience catastrophic, irreversible damage.”

US climate envoy John Kerry delivered a dire warning on 12 May 2021 on “the mounting costs … of global warming and of a more volatile climate”. 2020’s tally of “22 hurricanes, floods, droughts and wildfires shattered the previous annual record of 16 such events, and that was set only 4 years ago…. You don’t have to be a scientist to begin to feel that we’re looking at a trend line.”

Christiana Figueres, former executive secretary of the UN Framework Convention on Climate Change and pivotal figure in the Paris Agreement, declared in 2020, “It is only over the next 10 years from here to 2030 that we can influence what is going to happen. The scary thing is that after 2030 it basically doesn’t really matter what humans do. We will be in danger of those tipping points having a domino effect on each other and we will lose total control.” (1)

Some more examples:

Kevin Drun, 2019: “[The Green New Deal] would only change the dates for planetary suicide by a decade or so. It’s nowhere near enough even if we do it ”.

Professor Frank Fenner, microbiologist, ANU, 2010: “We’re going to become extinct. Whatever we do now is too late”

John Davies, geophysicist, senior researcher at the Cold Climate Housing Research Center, 2014: “With business as usual life on earth is largely doomed”.

James Hansen, former Director, NASA Goddard Institute for Space Studies, testifying at a Congressional hearing on global warming in 2008: “We’re toast if we don’t get on to a very different path. This is the last chance” to avoid mass extinctions, ecosystem collapse and dramatic sea level rises. “We [scientists] see a tipping point occurring right before our eyes. The Arctic is the first tipping point and it’s occurring exactly the way we said it would.” In five to 10 years [by 2013-2018], the Arctic will be free of ice in the summer.

James Hansen, testimony at Congressional hearing, 1988: “world's leading climate expert [Hansen] predicts lower Manhattan underwater by 2018”

Dr Michael Mann, Penn State: “We’re talking about literally giving up on our coastal cities of the world and moving inland”

United Nations Environment Programme, 2005: “Fifty million climate refugees by 2010.” (2)

United Nations Environment Programme, 2011: “60 million environmental refugees by 2020”

The Guardian carried a front-page story in 2004 headlined, “Now the Pentagon tells Bush: climate change will destroy us”. The by-line reads: “Secret report warns of rioting and nuclear war. Britain will be ‘Siberian’ in less than 20 years. Threat to the world is greater than terrorism”. The text continues, “A secret report, suppressed by US defence chiefs…, warns that major European cities will be sunk beneath rising seas as Britain is plunged into a ‘Siberian’ climate by 2020. Nuclear conflict, mega-droughts, famine and widespread rioting will erupt across the world.” (Emphases added).

Remember that in the 1960s and 1970s many experts forecast an immanent Ice Age. For example, 1970: “Ice age by 2000”. 1971: “New Ice Age coming by 2020 or 2030.” 1976: “Scientific consensus planet cooling famines imminent”. 1978: “No end in sight to 30 year cooling trend”.

The Climate Change Consensus

The diagnoses and prescriptions in the above statements express an underlying consensus.

Human actions (mainly burning fossil fuels and changing land use) are causing rising concentration of atmospheric CO2 (and other greenhouse gases, GHG),

Rises in man-made GHG are causing rising global temperatures in atmosphere and seas, and

This temperature rise poses not just a serious threat to humanity and the whole biosphere, but an existential threat.

In other words, the existence of humans and many other species is at stake if we do not succeed in drastically cutting CO2 emissions as the way to reduce the atmospheric concentration of GHG and thereby slow or reverse the rise in global temperature. In the oft used phrase, humanity faces an “existential crisis” induced by climate change caused by human actions. Implied but not normally stated, there are no benefits from higher concentrations of CO2 or higher temperature to be weighed against costs. Also implied but not normally stated, we must act to stop climate change regardless of cost, because the costs might include deep disruption of human civilization or even extinction.

We have to think of avoiding climate change as the global equivalent of avoiding explosions at nuclear power plants (Chernobyl, Fukushima). We invest heavily in safety-first measures in order to reduce the probability of a nuclear explosion to a very low level because the costs of a nuclear explosion are so huge. The same logic applies at the level of climate, in terms of the costs of average temperature rising by more than ~ 1.5 C from “pre-industrial”.

This is the Anthropogenic Global Warming Consensus, or Climate Change Consensus (CCC) for short. I use “consensus” in the same sense as “the Washington Consensus” about best policy for developing countries, the phrase coined by John Williamson in 1990.

The CCC is now well anchored into international agreements (such as the Paris Declaration), national policy, and increasingly corporate strategy too. The periodic Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC) reaffirm it, particularly in the Summary for Policymakers. Financial Times journalist Pilita Clark observed, “The world has rarely seen any environmental idea take off like the push to cut greenhouse gas emissions to net zero. A fringe concept six years ago, it has gone mainstream so quickly that more than 60 percent of countries now have some sort of net zero goal, along with investors managing nearly $37tn and at least 20 percent of the 2,000 largest publicly listed companies. The International Energy Agency [IEA] warns in a striking net zero report today that all new oil, gas and coal projects and exploration must stop if global warming is to stay below 1.5C.”

Scientific support comes from the fact that 97% of climate scientists agree that man-made greenhouse gases have been responsible for “most” of the warming of the Earth’s average temperature over the second half of the twentieth century. The 3% who are sceptical are not highly regarded scientists and some are in the pay of fossil fuel interests.

In the face of this scientific, interstate, and corporate agreement about the necessity of a global Big Push to cut CO2 emissions fast, developing countries and China carry a heavy responsibility, because they are the major source of global CO2 emissions, mainly from their consumption of fossil fuels. They must quickly follow the developed countries in investing on a massive scale in sources of renewable energy, whose prices are falling fast. Developed countries will offer large-scale financing and technical assistance for them to make the switch – in the developed countries’ self-interest.

It is true that developed countries put up most of the stock of greenhouse gases now in the atmosphere as they used fossil fuels to power their ascent to the top of the global hierarchy of income and wealth over the past two centuries. But that gives developing countries, even though they remain well down the income hierarchy, no justification for saying that they therefore have the right to carbon space for powering their economic development – because continuing to use relatively accessible, cheap and reliable fossil-fuel energy to power their growth pushes all humanity and the biosphere towards ruin.

Do Virtually all Climate Scientists Agree with the CCC?

It is widely cited that “97% of climate scientists agree warming is man-made”; or more exactly, “97% of science papers taking a position on climate change say it is man-made”. The conclusion is frequently amped up to “a 97% consensus that ‘humans are causing a global warming crisis’”.

Note that this last statement – with “crisis” – is not the same as the previous two, but all three statements tend to be conflated, so that people agreeing with “most recent warming is man-made” tend to be scored as agreeing that global warming is a crisis, which commonly gets inflated into agreeing that it is an existential crisis or the existential crisis.

Note that these statements of “consensus” do not specify the time period.

Note also that “high consensus” in science is only a weak criterion of “truth” in science – but the 97% figure is often deployed as evidence of the “truth” that warming is man-made. Of course, it is worth knowing to what extent there are “widely accepted truths” in any field. But problems come when the “fact” of consensus is established in a clearly tendentious way.

A standard source of the claim that 97% of climate scientists agree that global warming is man-made is the study by John Cook et al. (2013). The study rated about 12,000 abstracts of peer-reviewed papers published between 1991 and 2011. The rating was done by 12 volunteers, each abstract was rated by two people, making 24,000 ratings. The ratings were in three categories: (1) implicit or explicit endorsement of human-caused global warming; (2) no opinion; (3) implicit or explicit rejection or minimization of the human influence. About 4,000 abstracts took a position on the cause of global warming, 97.1% of which endorsed human-caused global warming.

Notice that this should not be, but commonly is translated as “97% of climate scientists endorse …”. Notice too that the abstracts were not rated as to whether they stressed greenhouse gases or man-made changes in land use and land cover; the implicit assumption is, man-made greenhouse gases are the cause of warming. Finally, notice that the abstracts were not rated as to whether they endorsed the idea of a global warming crisis or catastrophe; only as to whether they endorsed the idea of human causes of global warming.

A Wikipedia essay describes the study as “a landmark climate research paper [which] found that 97.1% of climate scientists supported the hypothesis of anthropogenic global warming (AGW). As of March 2021, the paper has received at least 1,270,076 downloads.”

There is an obvious question. Does “endorsement of human-caused global warming” mean warming caused 100% by human actions, or 75%, or 50%, or 25%? Any of these may be consistent with “climate change is man-made”. By leaving the degree of causation by humans open, thumbs can be put on the scales to yield the conclusion that virtually all well-qualified scientists believe that global warming of the past several decades is caused almost entirely by human action (would not be occurring in the absence of that action).

Professor Mike Hulme, professor of Human Geography at the University of Cambridge, concludes: “The ‘97% consensus’ article is poorly conceived, poorly designed and poorly executed.” Analysis by David Legates et al (2015) found that only 0.3% of the sampled papers “endorsed the standard definition of consensus: that most warming since 1950 is anthropogenic”. Research physicist Nicola Scafetta: “Cook et al (2013) is based on a straw man argument because it does not correctly define the IPCC AGW [anthropogenic global warming ] theory, which is NOT that human emissions have contributed 50%+ of the global warming since 1900 but that almost 90-100% of the observed global warming was induced by human emission”. (3)

It is testimony to the apocalyptic emotion behind people’s response to “climate change” and “global warming” that the Cook et al. paper, and others with similar methods, have commanded such credence in the face of evident flaws – notably (1) in fudging the distinction between agreeing that human actions have some role in global warming and agreeing that human actions explain most global warming; (2) in not asking whether – extent to which -- the scientists’ papers identified global warming as a problem, a crisis, an existential crisis, over what time period. (4)

By keeping it vague what the “consensus” agrees on, authors and users of the studies have given the impression that endorsement of “humans are causing global warming” means endorsement that “humans’ enhancement of the greenhouse effect will be dangerous enough to be ‘catastrophic’”, and therefore also means endorsement of the imperative for urgent, radical action on a global scale by governments, firms and families.

It is testimony to the pervasive anxiety of the zeitgeist that such surveys are routinely cited as demonstrating a near-unanimous scientific consensus in favor of radical, far-reaching climate policy (including for energy, food and materials), when the surveys do not even ask the question as to whether the respondent considers that (a) the anthropogenic component of recent warming is dangerous, and (b) dangerous enough to require a global climate policy. The surveys are almost valueless scientifically, but valuable politically.

Upward Bias in Temperature Forecasting Models

The prospect of a coming catastrophe for humanity and the biosphere rests heavily on outputs of climate forecasting models. But as David Legates and co-authors argue, these models “exhibit a strong exaggeration in their results even when narrowly adopting atmospheric carbon dioxide as the sole driver of climate responses…. [General circulation models, such as those of the IPCC, the Intergovernmental Panel on Climate Change] have consistently overestimated the climate sensitivity to rising atmospheric carbon dioxide.”

Ross McKitrick (2020) begins his assessment, “Two new peer-reviewed papers from independent teams confirm that climate models overstate atmospheric warming, and the problem [of overstatement] has gotten worse over time, not better”. One of the papers (by McKitrick and John Christy) examined 38 models, the other, 48 models, used by the Intergovernmental Panel on Climate Change (IPCC), the various US “National Assessments”, the EPA’s “Endangerment Finding”, and more.

McKitrick continues, “Both papers looked at ‘hindcasts’, which are reconstructions of recent historical temperatures in response to observed greenhouse gas emissions and other changes (eg aerosols and solar forcing). Across the two papers it emerges that the models overshoot historical warming from the near-surface through the upper troposphere, in the tropics and globally.” The study based on 48 models for 1998 to 2014 found that they warm on average 4 to 5 times faster than the observations.

McKitrick concludes, “modelling the climate is incredibly difficult, and no one faults the scientific community for finding it a tough problem to solve. But we are all living with the consequences of climate modelers stubbornly using generation after generation of models that exhibit too much surface and tropospheric warming, in addition to running grossly exaggerated forcing scenarios (eg RCP8.5).

“[W]hen the models get the tropical troposphere wrong, it drives potential errors in many other features of the model atmosphere. Even if the original problem was confined to excess warming in the tropical mid-troposphere, it has now expanded into a more pervasive warm bias throughout the global troposphere.

“If the discrepancies in the troposphere were evenly split across models between excess warming and cooling we could chalk it up to noise and uncertainty. But that is not the case: it’s all excess warming…. That’s bias, not uncertainty, and until the modelling community finds a way to fix it, the economics and policy making community are justified in assuming future warming projects are overstated, potentially by a great deal….”

The strong upward bias in temperature forecasts relative to observations compromise the models’ forecasting impacts on ecosystems, including agriculture, by exaggerating the probability of catastrophic effects.

The IPCC makes projections of future global temperatures to the end of century based on various models. They range from a low of 1.4 C to a high of 5.6 C over pre-industrial temperature (roughly 1900). The wide range makes them almost meaningless. The IPCC explains that the wide range results from uncertainty about the magnitude of the feedback between warming and increased rates of evaporation – and David Seckler adds, also about the effects of evaporation on clouds and precipitation. (5)

It is astonishing to learn that the climate models miss a critical component of the climate system -- the hydrological cycle, and specifically clouds, which the IPCC calls the “wild card” in the climate system.

The IPCC’s Worst Case Scenario is commonly used as the Business as Usual without a Radical Policy Action’ Scenario

The IPCC’s Assessment Report 5 (AR5), published in 2014, presented a range of forecasts of global climate out to 2050 and 2100, based on different assumptions about radiative forcing (a measure of how much of the sun’s energy the atmosphere traps). The most extreme – the worst case – was called Representative Concentration Pathway (RCP) 8.5. It assumes ominous reversals in several basic, long-standing trends, all heading in the extremely wrong direction to 2100:

high population growth to reach more than 12 billion people

slow technology development

coal consumption increases by 500 % between 2005 and 2100 (no account taken of supply constraints)

slow GDP growth

fast rise in world poverty

high energy use

high GHG emissions.

temperature forecast: 5 C rise between 2005 and 2100.

RCP 8.5’s vision is horrifying, as worst-case scenarios should be.

A whole wave of literature, in peer-reviewed journals as well as in media, even by IPCC authors, has since presented this worst-case as either “the most likely case” or “the baseline case – business as usual without policy action”. This misleading assumption provoked a recent paper in Nature subtitled: “Stop using the worst-case scenario for climate warming as the most likely outcome” (see also, Chrobak, 2020).

The Politics: How has the CCC become so Dominant

How can we understand the present dominance of the CCC in public and political opinion around the world, despite repeated evidence -- over decades -- of wildly exaggerated forecasts of doom when compared against measured outcomes, and despite the real uncertainties (“known unknowns”) in knowledge about basic mechanisms?

We can identify several mutually reinforcing reasons.

1. The public demand for negatively-inflected news, especially on climate

News that fits the CCC plays into a more general logic of “If it bleeds, it leads”, meaning that the media tend to deliver negativity – about climate, health, almost anything – because readers and viewers want negatively-inflected stories. Recent research finds that across all types of articles the most popular stories have high negative content. Surprisingly, politics matters little: there is no difference between conservative and liberal outlets in propensity to deliver negativity. Rather, the difference is between media outlets by size and influence: the bigger and more influential the media brand, the stronger the bias towards the negative – showing how good they are at delivering what people want. According to Matthew Yglesias, several recent research studies find that “the kind of stories people like to consume are compulsive rather than satisfying …. You’re clicking and sharing stories about terrible things and raising alarms and listening to the alarms that are being raised by others, and it all feels very compelling precisely because it’s gloomy and alarming …. People like to get mad, then share the content so that peers can share their outrage.”

Climate lends itself well to this negativity bias. Richard Betts, then the head of climate impacts at the Met Office, explained the demand for negative climate stories (BBC News Channel, 11 January 2010, emphasis added ):

“The focus on climate change is now so huge that everybody seems to need to have some link to climate change if they are to attract attention and funding. Hence the increasing tendency to link everything to climate change – whether scientifically proven or not …. I have quite literally had journalists phone me up during an unusually warm spell of weather and ask ‘is this a result of global warming?’ When I say ‘no, not really, it is just weather’, they’ve thanked me very much and then phoned somebody else, and kept trying until they got someone to say yes it was. Talking up of the problem then gives easy ammunition to those who wish to discredit the science.”

Holman Jenkins, in The Wall St Journal (2018), describes the other side of the exaggeration incentive: “Over the past 15 or 20 years the climate beat has been handed over to reporter-activists who’ve decided that climate science is impenetrable but at least nobody ever got fired for exaggerating the risks of climate change.”

Climate scientist Judith Curry identifies a similar logic in the frequent conflation of extreme weather events and “global warming”. “In 2005 [following Hurricane Katrina] the public found it very hard to care about 1 degree or even 4 degrees of warming – heck, the temperatures varied by that much on a day-to-day basis.… However, arguments that a relatively small amount of global warming (order 1 C) could result in more intense hurricanes, well that got their attention…. The activists now had a new weapon in their arsenal – attributing extreme weather events to manmade climate change. The ‘will to act’ seemed tied to alarmism about extreme weather events. Which provides a key political role for unsupported ‘storylines’ about extreme weather events.” The “heat dome” over the Pacific northwest of the US and Canada in June 2021 was generally treated as yet more evidence of “climate change. You would not know it from the coverage, but in Washington and Oregon, the number of days per decade with temperature above 99 F shows no upward trend from 1911-20 to 2011-20. For example, the number of days above 99 F in 1971-80 was more than in 2011-20. Across the US the 1930s was arguably the hottest decade on record; the time of the deadly “Dust Bowl”, summer 1936, was the hottest summer on record between 1895 and 2020.

An attempt to push the distinction between “weather” and “climate” is unwelcome in this context, because it weakens the motivating, mobilising force of “climate” as the boundless enemy that could destroy humanity, like the Biblical Flood. The Climate Apocalypse is imminent, is the motivational message (also see Adler, 2019).

This is the deeper story behind the wild exaggerations of the forecasts and the continued high credibility of those who make them. The exaggerations express the apocalyptic thinking about climate now sweeping the world, including the financial and corporate world. They express a story of humans damaging Nature, and Nature destroying humans in return. These stories themselves express ancient de-creation stories of humans misbehaving in the eyes of God, and God punishing them. The Biblical flood occurred because God decided the people had become wicked, had stopped respecting God and Nature, so He resolved to wipe life off the face of the earth, saving only a breeding pair of each species in order to recreate the world in His image. Much the same story appeared in Sumerian culture long before the Bible, and later in the Quran, expressing a desperate human wish for Salvation.

In our more secular age, apocalyptic theology can rely on Nature in place of God -- Nature invested with God-like powers of punishment and reward.

2. The “political” science of the IPCC

The IPCC was established to provide a properly scientific center of gravity for discussions about climate, and issue regular balanced assessments of the state of scientific climate knowledge. But there are at least two basic problems with the IPCC process. One is that the mandate of the IPCC says that it is “to assess … the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts and options for adaptation and mitigation” (emphasis added). (6) The mandate does not mention to assess the interaction between human and natural causes. It is as though natural causes do not exist. The IPCC’s whole body of work consequently is slanted towards exaggerating human causes of given climate changes, marginalizing the role of natural causes interacting with human causes. Which among other effects leads it to give undue weight to “mitigating” climate change (by changing human actions) relative to “adapting” to climate changes partly induced by natural forces.

The common justification given by IPCC defenders is: natural causes operate only very slowly; the climate is changing fast; therefore the climate changes must be driven by humans, and humans can change their behaviour fast – when forced and sufficiently motivated to do so ( using all the techniques of Machiavelli). This justification underplays the point that some natural causes – eg the Atlantic Multidecadal Oscillation – do change fairly quickly, over decades, with far reaching effects (eg Atlantic Multidecadal Oscillation and its impacts on the Greenland ice sheet).

The second IPCC problem is that this bias to doomsday forecasts – therefore to urgent and far-reaching action -- is intensified in the process of translating from the technical reports to the summaries for policy makers. The translation – done mostly by non-scientists -- tends to downplay uncertainties and up-play certainties in an alarming, even catastrophizing direction. Hence the tendency to treat worst-case scenarios as likely scenarios. Recall the subtitle to the Nature paper, “Stop using the worst-case scenario for climate warming as the most likely outcome” (2020).

3. Logic of decision-making and logic of mobilization

The tendency to treat worst-case scenarios as likely scenarios “in the absence of radical changes to how we live, work and govern” can be understood in terms of the distinction between the logic of decision-making and the logic of mobilization or action. To make the best decision about what to do, one needs to explore a range of possible alternative courses of action, weigh up the pros and cons of each, then decide which is best. But having exposed many people to a range of options, there may be action-sapping disagreement as to which is best. To get a great mass of people to move all in one direction one needs to present them with only two alternatives, one of which is crazy, and pretend to be entirely confident of the two outcomes. (7) If they can be convinced that there are only two alternatives and one is crazy, they will follow.

The Climate Change Consensus expresses the logic of mobilization. It presents two alternatives. “Do nothing (or little)”, which leads to catastrophe, extinction, the planet becomes ungovernable, coastal cities must be abandoned, lower Manhattan will be underwater by 2018. Or else, quickly decarbonize the world economy and push towards a broader dematerialization of lifeways. No prizes for guessing which wins. This is how you mobilize people on a vast scale to do what you think must be done. Or as a US senator from the West once put it, “Managing politicians is like herding wild horses. To get them running in the same direction you have to stampede them.” (8)

4. Left and right politics

While the demand for negatively-inflected news cuts across the political spectrum, political ideology certainly shapes people’s beliefs about climate. Climate change “scepticism” is almost a talisman of the center-right and right, and is strongly promoted by fossil fuel interests. Climate “alarmism” is more pronounced on the center-left and left of the ideological spectrum. It is promoted as a sacred unifying mission by a great global phalanx of left-green civic action organizations (Extinction Rebellion is prominent).

A Guardian article describes the right-wing “sceptical” tactic. “Vested interests have long realized [that people-at-large trust climate scientists on the subject of global warming] and have engaged in a campaign to misinform the public about the scientific consensus. For example, a memo from communications strategist Frank Luntz leaked in 2002 advised Republicans, ‘Should the public come to believe that the scientific issues are settled, their views about global warming will change accordingly. Therefore, you need to continue to make the lack of scientific certainty a primary issue in the debate’. This campaign has been successful… The media has assisted in this public misconception, with most climate stories ‘balanced’ with a ‘sceptic’ perspective. However, this results in making the 2-3% seem like 50%... As a result, people believe scientists are still split about what’s causing global warming, and therefore there is not nearly enough public support or motivation to solve the problem.”

Both sides accuse the other of abusing “the science”. Both sides generate expansive pressures to describe more and more trends, issue more and more prescriptions, without ambiguity and shading, and judge more and more of the other’s claims pre-emptively. Individual issues (eg extreme weather) are not discussed in terms of their own evidence but are packaged together in ideological visions, the better to establish clear moral battle lines, disagreement being moral heresy.

This is the playing out of a larger process of polarization common when scientific disagreements become public. As described by sociologist of science Robert K. Merton, each group then responds to stereotyped versions of the other. “They see in the other’s work primarily what the hostile stereotype has alerted them to see, and then promptly mistake the part for the whole. In this process, each group … becomes less and less motivated to study the work of the other, since there is manifestly little point in doing so. They scan the out-group’s writings just enough to find ammunition for new fusillades.” (9)

The result is a “syndrome of exaggeration”: each side exaggerates evidence in its favour and downplays evidence against, which justifies the other in exaggerating evidence in its favour and downplaying evidence against; and back again. It is a syndrome in that the behaviour of each side confirms the negative expectations of the other. They often go at each other ad hominem, like adolescent school boys, including people who regard themselves as serious scientists. In the digital era members of both sides are able to quickly find one another and the enemy. (10)

Yet to talk of “two sides” is misleading, because the side championing the CCC is by far the dominant. Recall the Financial Times journalist Pilita Clark: “The world has rarely seen any environmental idea take off like the push to cut greenhouse gas emissions to net zero.” For political leaders and increasingly business leaders, being seen to give high value to protecting the public against all the ills attributed to “climate change” – including by pledging big changes to be made long after they leave office -- is a way to show foresight, statesmanship, leading on the front foot. Many right-wing politicians and business leaders now wish to present themselves as fighters against climate change, even as they continue to support fossil-fuel industries.

5. Finance and business interests

There are now powerful industrial interest groups promoting climate alarmism for profit-seeking reasons, including those invested in the switch from fossil fuels to renewables and those invested in the switch from combustion to electrical engines. The CEO of the electric vehicle car company Lucid (a former Tesla engineer) said recently that the transition to an EV world will happen faster than anyone expects, driven by the environmental imperative. He said, “The environment is in crisis. The world needs millions of electric cars tomorrow”. He did not suggest where all the electricity will come from.

Many big players in finance see opportunities for speculative profits by playing up climate dangers. Goldman-Sachs in 2005 authored the firm’s environmental policy, which said “voluntary action alone cannot solve the climate change problem”, from a firm that has consistently opposed government regulation. It and other financial firms supported what Matt Taibbi called “a new commodities bubble disguised as an ‘environmental plan’” – a carbon credit market in the form of cap-and-trade. Coal plants, utilities, natural gas distributors and some other industries are assigned carbon emission limits. To exceed the limits they must buy credits from those who emit less than their limit. As of 2010, the volume of the market in the US was estimated as $1 trillion annually. Goldman and the others were making themselves central actors in the market. The best thing about it is that the emission limits keep being lowered, implying that the price is guaranteed to keep rising, to the benefit of the intermediaries.

On top of all this, the whole “sustainable investing” movement provides opportunities for big profits at the intersection of the already thick alphabet soup of sustainability disclosure regulations (TCFD, SASB, GRI, CDSB among others, in the case of the EU) and the lack of meaningful, reliable data. “At the moment, the risk is that it is ‘garbage in, garbage out’”, says the head of sustainable finance at S&P Global Ratings.

So the fact that the financial sector is “worried” about climate change could be taken to be part of the problem, underlining the need for public authorities to take charge and frame parameters within which private operations produce public benefits. (11)

Conclusion

I have argued that the “plausible” risks of climate change are commonly exaggerated within the climate community. Recall for example, Christiana Figueres, 2020, “The scary thing is that after 2030 it basically doesn’t really matter what humans do”; Kevin Drum, 2019, “[The Green New Deal] would only change the dates for planetary suicide by a decade or so”; Frank Fenner, 2010, “We’re going to become extinct. Whatever we do now is too late.” Many more in the same doomsday vein.

We have seen that the standard global warming models have a powerful built-in bias to exaggerate the rate of future temperature rise, as seen in (most of) them “hindcasting” temperature rises several times faster than actually observed. We have seen that forecasters commonly take “worst-case scenarios” as “likely scenarios in the absence of radical action” (eg reaching net zero carbon emissions by 2050), to the point where Nature recently published a paper sub-titled, “Stop using the worst-case scenario for climate warming as the most likely outcome”.

The dismaying thing is that scientists and advocates have been making catastrophising global warming forecasts of this kind for decades past, normally dated some 10 to 30 years into the future. The due date comes without catastrophe, but never a retrospective holding to account. Rather, on to the next catastrophising forecast another 10 to 30 years ahead. Scientists-writers-activists know the catastrophe forecasts get the attention, the clicks, the research funding. We saw the exaggeration mechanism spelled out by Richard Betts of the BBC, Holman Jenkins of the Wall St Journal, and climate scientist Judith Curry.

The built-in exaggeration of the costs of climate change blunts the parallel with nuclear power plants. We know with high certainty the costs of nuclear explosions. We know the costs of global temperature going above 1.5 C above “pre-industrial” much less certainly, and we can see the mechanisms by which the likely costs are being systematically exaggerated.

On the other hand, there is abundant evidence that even without the doomsday exaggerations the plausible risks of climate change could be very serious, in particular because of the inherent political economy difficulty of getting needed global or regional cooperation when political action is mostly at the level of sovereign nation states (see the G20).

Coal power generation is the single biggest source of GHG emissions, and emissions from coal consumption will probably not fall fast, whatever the promises. First, coal is cheap, accessible and generates reliable power for many developing countries; in Asia, coal alone generates 40 percent of energy consumption, much higher than the world average of 29 percent. (12) Second, developing countries, including China, assert a strong claim on carbon space to power their economic development. They see it partly as a matter of fundamental justice, since developed countries emitted most of the CO2 that is already in the atmosphere and seas as the necessary condition for them becoming developed. Developed countries promise finance and technical assistance on a massive scale to accelerate the energy transition in developing countries – and have a long track record of leaving promises as promises. (See the global distribution of Covid vaccines. See the results of vaunted “voting reform” in the World Bank, leaving the US with 17% and China with 6%.) What is more, the Japanese government plans up to 22 new coal power plants, as it closes nuclear plants in the wake of Fukushima.

Then comes a question: does drawing attention to the doomsday exaggerations of the CCC – “disaster”, “catastrophe”, “extinction”, “fiddling while the planet burns” - serve to reduce the political and public pressures for necessary ameliorative action, in a world where powerful fossil lobbies seek to block or delay such action for reasons independent of “evidence”? Should “Third Way” essays like this one not be published, because “give them (deniers, sceptics) an inch and they will take a mile”? To what extent must mass publics be “panicked” in order to induce enough collective political and business action – national, international – to substantially slow the growth of GHG emissions? If we can sustain emission- and temperature-curbing action only by holding up the certainty of disaster, catastrophe, extinction, then better to let the doomsday exaggerations continue as the necessary condition for that ameliorative action. What is the harm, when the alternative is ruin for humanity and the biosphere?

The danger is that the repeated wild exaggerations produce a public backlash, a discrediting, and a strengthening of the many “deniers” who see “leftists, governments, and the United Nations” as the source of malevolence in the world. A more accurate accounting of the evidence would (hopefully) produce a more calibrated and sustained public and business response.

What to do? (13)

The IPCC should allocate some 10% of its budget to a Red Team, dedicated to independent scrutiny of its evidence and conclusions (especially the Summary for Policymakers). (14) The IPCC should revise its mandate to require it explicitly to focus on interactions between natural forces and human actions, as it is now almost required not to, biassing its assessment of the state of scientific knowledge towards “man-made global warming” as an almost separate system.

Learned societies should more actively seek to understand and publicize the reasons for repeated large-scale discrepancies between “hindcasts” and “forecasts” on the one hand and actual observations on the other, discrepancies strongly biased towards “disaster”.

It is particularly important that the knee-jerk attribution of extreme weather events to global warming be challenged with reference to evidence. Judith Curry explained – quoted earlier -- why CCC advocates have a powerful incentive to attribute cases of extreme weather to global warming, tout court. She has recently written, “Apart from the reduced frequency of the coldest temperatures, the signal of global warming in the statistics of extreme weather events remains much smaller than that from natural climate variability, and is expected to remain so at least until the second half of the 21rst century.” She goes on to amplify a point made earlier about the limits of the climate models used for the IPCC assessment reports: they are driven mainly by predictions of future GHG emissions. They do not include predictions of natural climate variability arising from solar output, volcanic eruptions or evolution of large-scale multi-decadal ocean circulations. They do a particularly poor job of simulating regional and decadal-scale climate variability. (15)

Participants on both sides have to learn the art of respecting the principle of free speech while maintaining the standards of civil discourse.

While I have stressed the CCC’s support for urgent and radical changes to the way we live, work and govern, some CCC champions argue that the world economy could continue on a largely unchanged growth trajectory provided that we switch fast from fossil fuels to renewables. Indeed, this switch is beginning to happen fast, with coal and nuclear energy production unable to compete without subsidies in areas where natural gas, wind and solar resources are readily available.

But to say that life can continue as before provided we substitute renewables for fossil fuels obscures the huge difficulties for many developing countries of getting out of fossil fuels while growing fast enough to reduce the income gap with developed countries.

We must give high priority to investments in “clean coal” technologies, such as carbon capture, storage and use, to make the dirtier coal cleaner in existing and new coal-power plants; and link coal-power retirement to the coming on-stream of attractive alternatives. The multilateral development banks have recently or will soon announce bans on coal power. The G7 leaders meeting in mid 2021 promised to stop using government funds to finance new international coal power plants by the end of 2021. China’s Belt and Road Initiative should increase its pressure on host countries to cut back on dirty coal and boost clean coal and renewables.

A high and immediate priority is to build a robust financing and technical assistance mechanism for help from developed to developing countries. The Paris Agreement instituted a Mitigation pillar and an Adaptation pillar. Intense debate took place around the third, Loss and Damage, the name of a mechanism to compensate for the destruction that Mitigation and Adaptation cannot prevent. Developed countries by and large have sought to marginalize the Loss and Damage pillar, as they have long sought to marginalize Special and Differential Treatment for developing countries in trade and investment agreements. “Finance is something that really rich countries, particularly the US, have made sure that there is no progress and not even discussion on”, remarked Harjeet Singh, senior advisor at Climate Action Network International. (16)

My “forecast” is that in the next two to three decades to midcentury we will make rapid progress in scientific knowledge about weather and climate, helped by longer and more accurate satellite and ocean records and by a new generation of climate models that operate at one to ten kilometers scale (as distinct from the current models’ 50 kilometer scale). We will probably continue to make rapid progress in decoupling GHG from GDP growth, with a combination of state direction-setting and private innovation focused on transformations in energy, transport, buildings, industry and agriculture, using incentives like research and development subsidies and tax credits for technology investment, and penalties for carbon-intensive activities. (17) In transport, this entails coordination across urban planning decisions, public transport investment, future of remote working, infrastructures for electric charging and hydrogen loading. (18) Transformations in these systems are already underway, and the prospect of vast new green investments, supported and under-written by the state, will intensify them. These green investments will open productive investment opportunities previously limited by stagnant wages and rising debt, which have driven investment into increasingly speculative ventures. If by two or three decades ahead it looks as though the second half of this century could well experience globally extreme climate and ocean events, we will be much more knowledgeable about what to do than we are today. (19)

**Tech prevents every scenario for collapse**

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Ronald. February 16. “Is Degrowth the Only Way to Save the World?” <https://reason.com/blog/2018/02/16/is-degrowth-the-only-way-to-save-the-wor>

Unless us folks in rich countries drastically reduce our material living standards and distribute most of what we have to people living in poor countries, the world will come to an end. Or at least that's the stark conclusion of a study published earlier this month in the journal Nature Sustainability. The researchers who wrote it, led by the Leeds University ecological economist Dan O'Neill, think the way to prevent the apocalypse is "degrowth."

Vice, pestilence, war, and "gigantic inevitable famine" were the planetary boundaries set on human population by the 18th-century economist Robert Thomas Malthus. The new study gussies up old-fashioned Malthusianism by devising a set of seven biophysical indicators of national environmental pressure, which they then link to 11 indicators of social outcomes. The aim of the exercise is to concoct a "safe and just space" for humanity.

Using data from 2011, the researchers calculate that the annual per capita boundaries for the world's 7 billion people consist of the emission of 1.6 tons of carbon dioxide per year and the annual consumption of 0.9 kilograms of phosphorus, 8.9 kilograms of nitrogen, 574 cubic meters of water, 2.6 tons of biomass (crops and wood), plus the ecological services of 1.7 hectares of land and 7.2 tons of material per person.

On the social side, meanwhile, the researchers say that life satisfaction in each country should exceed 6.5 on the 10-point Cantril scale, that healthy life expectancy should average at least 65 years, and that nutrition should be over 2,700 calories per day. At least 95 percent of each country's citizens must have access to good sanitation, earn more than $1.90 per day, and pass through secondary school. Ninety percent of citizens must have friends and family they can depend on. The threshold for democratic quality must exceed 0.8 on an index scale stretching from -1 to +1, while the threshold for equality is set at no higher than 70 on a Gini Index where 0 represents perfect equality and 100 implies perfect inequality. They set the threshold for percent of labor force employed at 94 percent.

So how does the U.S. do with regard to their biophysical boundaries and social outcomes measures? We Americans transgress all seven of the biophysical boundaries. Carbon dioxide emissions stand at 21.2 tons per person; we each use an average of 7 kilograms of phosphorus, 59.1 kilograms of nitrogen, 611 cubic meters of water, and 3.7 tons of biomass; we rely on the ecological services of 6.8 hectares of land and 27.2 tons of material. Although the researchers urge us to move "beyond the pursuit of GDP growth to embrace new measures of progress," it is worth noting that U.S. GDP is $59,609 per capita.

On the other hand, those **transgressions have provided a pretty good life for Americans**. For example, life satisfaction is 7.1; healthy life expectancy is 69.7 years; and democratic quality stands at 0.8 points. The only two social indicators we just missed on were employment (91 percent) and secondary education (94.7 percent).

On the other hand, our hemisphere is home to one paragon of sustainability—Haiti. Haitians breach none of the researchers' biophysical boundaries. But the Caribbean country performs abysmally on all 11 social indicators. Life satisfaction scores at 4.8; healthy life expectancy is 52.3 years; and Haitians average 2,105 calories per day. The country tallies -0.9 on the democratic quality index. Haiti's GDP is $719 per capita.

Other near-sustainability champions include Malawi, Nepal, Myanmar, and Nicaragua. All of them score dismally on the social indicators, and their GDPs per capita are $322, $799, $1,375, and $2,208, respectively.

The country that currently comes closest to the researchers' ideal of remaining within its biophysical boundaries while sufficient social indicators is...Vietnam. For the record, Vietnam's per capita GDP is $2,306.

"Countries with **higher levels of life satisfaction and healthy life expectancy also tend to transgress more biophysical boundaries**," the researchers note. A better way to put this relationship is that more wealth and technology tend to make people happier, healthier, and freer.

O'Neill and his unhappy team fail drastically to understand how **human ingenuity** unleashed in markets is already well on **the way toward making** their supposed **planetary boundaries irrelevan**t. Take carbon dioxide emissions: Supporters of renewable energy technologies say that their costs are already or will soon be lower than those of fossil fuels. Boosters of advanced nuclear reactors similarly argue that they can supply all of the carbon-free energy the world will need. There's a good chance that fleets of battery-powered self-driving vehicles will largely replace private cars and mass transit later in this century.

Are we about to run out of phosphorous to fertilize our crops? **Peak phosphorus is not at hand**. The U.S. Geological Survey (USGS) reports that at current rates of mining, the world's known **reserves will last 266 years**. The estimated total resources of phosphate rock would last over 1,140 years. "**There are no imminent shortages of phosphate rock**," notes the USGS. With respect to the deleterious effects that using phosphorus to fertilize crops might have outside of farm fields, researchers are working on ways to endow crops with traits that enable them to use less while maintaining yields.

O'Neill and his colleagues are also concerned that farmers are using too much nitrogen fertilizer, which runs off fields into the natural environment and contributes to deoxygenated dead zones in the oceans, among other ill effects. This is a problem, but one that **plant breeders are already working to solve**. For example, researchers at Arcadia Biosciences have used biotechnology to create nitrogen-efficient varieties of staples like rice and wheat that enable farmers to increase yields while significantly reducing fertilizer use. Meanwhile, other researchers are moving on projects to engineer the nitrogen fixation trait from legumes into cereal crops. In other words, the crops would make their own fertilizer from air.

Water? Most water is devoted to the irrigation of crops; the ongoing development of drought-resistant and saline-tolerant crops will help with that. Hectares per capita? Humanity has probably already reached peak farmland, and nearly 400 million hectares will be restored to nature by 2060—an area almost double the size of the United States east of the Mississippi River. In fact, it is entirely possible that most animal farming will be replaced by resource-sparing lab-grown steaks, chops, and milk. Such developments in food production undermine the researchers' worries about overconsumption of biomass.

And humanity's **material footprint is likely to get smaller too as** trends toward further **dematerialization take hold**. The price system is a superb mechanism for encouraging innovators to find ways to wring ever more value out less and less stuff. Rockefeller University researcher Jesse Ausubel has shown that this process of absolute dematerialization has already taken off for many commodities.

After cranking their way through their models of doom, O'Neill and his colleagues lugubriously conclude: "If all people are to lead a good life within planetary boundaries, then the level of resource use associated with meeting basic needs must be dramatically reduced." They are right, but they are entirely backward with regard to how to achieve those goals. Economic growth provides the wealth and technologies needed to lift people from poverty while simultaneously lightening humanity's footprint on the natural world. **Rather than degrowth, the** **planet**—and especially its poor people—**need more and faster economic growth**.

**The impacts to warming are linear - CCS is the only method of preventing catastrophic tipping points – all other options require impossible global societal transformation – try or die for green tech to solve.**

**Wells 19**

(David Wallace-Wells is a National Fellow with the New America Foundation and is a deputy editor of New York Magazine, “The Cautious Case for Climate Optimism Believing in a comfortable future for our planet probably means some giant carbon-sucking machines,” New York Magazine, February 4, 2019, http://nymag.com/intelligencer/2019/02/book-excerpt-the-uninhabitable-earth-david-wallace-wells.html)

**It’s not too late**. In fact, **it never will be**. Whatever you may have read over the past year — as extreme weather brought a global heat wave and unprecedented wildfires burned through 1.6 million California acres and newspaper headlines declared, “Climate Change Is Here” — global warming is not binary. It is not a matter of “yes” or “no,” **not a question of “fucked” or “not.”** Instead, it is a problem that **gets worse over time the longer we produce greenhouse gas**, and can be made better if we choose to stop. Which means that no matter how hot it gets, no matter how fully climate change transforms the planet and the way we live on it, it will always be the case that the **next decade could contain more warming**, and **more suffering,** **or less warming and less suffering**. Just how much is up to us, and always will be.

A century and a half after the greenhouse effect was first identified, and a few decades since climate denial and misinformation began muddying our sense of what scientists do know, we are left with a set of predictions that can appear falsifiable — about global temperatures and sea-level rise and even hurricane frequency and wildfire volume. And there are, it is true, feedback loops in the climate system that we do not yet perfectly understand and dynamic processes that remain mysterious. But to the extent that we live today under clouds of uncertainty about the future of climate change, those clouds are, overwhelmingly, not projections of collective ignorance about the natural world but of blindness about the human one, and they can be dispersed by human action. The question of how bad things will get is not, actually, a test of the science; it is a bet on human activity. How much will we do to forestall disaster and how quickly?

These are the disconcerting, contradictory lessons of global warming, which counsels both human humility and human grandiosity, each drawn from the same perception of peril. There’s a name for those who hold the fate of the world in their hands, as we do — gods. But for the moment, at least, many of us seem inclined to run from that responsibility rather than embrace it. Or even admit we see it, though it sits in front of us as plainly as a steering wheel. That climate change is all-enveloping means that it targets us all and that we must all share in the responsibility so we do not all share in the suffering — at least not share in so suffocatingly much of it.

Since I first began writing about climate a few years ago, I’ve been asked often whether I see any reason for optimism. The thing is, **I am optimistic**. But optimism is always a matter of perspective, and mine is this: No one wants to believe disaster is coming, but those who look, do. At about two degrees Celsius of warming, just one degree north of where we are today, some of the planet’s ice sheets are expected to begin their collapse, eventually bringing, over centuries, perhaps as much as 50 feet of sea-level rise. In the meantime, major cities in the equatorial band of the planet will become unlivable. There will be, it has been estimated, 32 times as many extreme heat waves in India, and even in the northern latitudes, heat waves will kill thousands each summer. **Given** only **conventional methods of decarbonization** (rep

lacing dirty-energy sources like coal and oil with clean ones like wind and solar), **this is probably our best-case scenario**. It is also what is called — so often nowadays the phrase numbs the lips — “**catastrophic warming**.” A representative from the Marshall Islands spoke for many of the world’s island nations when he used another word to describe **the meaning of two degrees**: **genocide**.

You do not need to contemplate worst-case scenarios to be alarmed; this best-case scenario is alarming enough. Two degrees would be terrible, but it’s better than three, at which point **Southern Europe would be in permanent drought**, **African droughts would last five years** on average, and the areas burned annually by wildfires in the United States could quadruple, or worse, from last year’s million-plus acres. And three degrees is much better than four, at which point six natural disasters could strike a single community simultaneously; the number of climate refugees, already in the millions, could grow tenfold, or 20-fold, or more; and, globally, damages from warming could reach **$600 trillion** — about **double all the wealth** that **exists in the world today**. We are on track for more warming still — just above **four degrees by 2100**, the U.N. estimates. So if optimism is always a matter of perspective, the possibility of four degrees shapes mine.

It is unlikely, I think, that we reach four degrees this century. But this is what it would take to stay under two: a comprehensively decarbonized economy, a **perfectly renewable energy system**, a **reimagined** system of **agriculture**, perhaps even **a planet without meat-eaters**. We also need overhauls of the world’s transportation systems and infrastructure. Every year the average American emits enough carbon to melt 10,000 tons of ice in the Antarctic ice sheets — enough to add 10,000 cubic meters of water to the ocean. Every minute, we each add five gallons.

If the task of reversing all that seems incomprehensibly big, it is. The **scale of the technological transformation** required ~~dwarfs~~**[surpasses] every technological revolution ever engineered in human history**, including electricity and telecommunications and even the **invention of agriculture** 10,000 years ago. By definition, it dwarfs them, because it contains all of them — **every single sector needs to be rebuilt** from the foundation, since every single one breathes on carbon like it’s a ventilator. In October, the U.N.’s Intergovernmental Panel on Climate Change warned that the world has only a dozen years to halve its carbon emissions to safely avoid two degrees of warming and all those “catastrophic” impacts.

Is it possible? The short answer is, technically speaking, maybe — though just maybe. But **speaking practically, and politically, is another matter**.

Let’s consider the tools at hand. First: a carbon tax. The very same day the IPCC released its “Doomsday” report, the Nobel Prize in economics was awarded to William Nordhaus, who pioneered the economic study of climate change and is known today primarily for having championed the idea of carbon pricing. The premise is simple: Legislate a high enough cost on the stuff and the market will respond by producing less, then eventually none, of it. It is also an appealing proposition to those who don’t want to see the economy truly upended; to those who trust that market forces will deliver the outcomes they are predicted to; to those who believe that the world would trust action on climate only if it came for free or, better yet, with economic benefits; and to those who believe that action would otherwise involve, invariably, a trade-off — that climate action of any meaningful scale would be expensive, probably too expensive for any growth-minded country to countenance.

Over the past several years, there has been a raft of papers showing that the intuitive terms of that bargain are backward: Faster action on climate will save or gain the world enormous amounts of money ($26 trillion in potential growth by just 2030, according to one estimate; those $600 trillion in damages avoided by the end of the century, according to another). But the labor involved in such a transformation makes it seem burdensome anyway, and so the hope of the market solving the problem on its own — with the help of just a little incentive-setting — has prevailed, at least among a certain set.

In January, 45 economists described by Bloomberg as both “an all-star lineup” and the world’s “economic brain trust” united behind the cause of a gradually increasing carbon tax, though they did not name their starting price, which is a crucial variable. For his part, Nordhaus has identified pricing for an “optimal” scenario: between $35 and $229 per ton of CO2, a tax that, by his own estimate, could result in 3.5 degrees Celsius of warming by 2100. That is 1.5 degrees warmer than that island-nation “genocide.”

A carbon tax is hypothetical for Americans, which may be one reason they tend to be optimistic about it. But there are already, today, many places with existing carbon pricing — South Korea, Japan, the E.U. None of their emissions are declining fast enough to meet a goal of two degrees, according to the carbon-watchdog site Climate Action Tracker. It is conceivable, even probable, that at much higher levels of taxation, the impact would be clearer. But as Jay Inslee, the governor of bright-green Washington State, which tried and failed to enact such a tax in 2018, recently put it, “To actually get carbon savings, you have to jack up the price so high that it becomes politically untenable.”

The longer we wait, the steeper the declines will have to be. If the world as a whole had begun decarbonization in the year 2000, when Al Gore collected half a million more votes in the presidential election than George W. Bush, emissions would have had to fall by 3 percent per year to achieve climate stability at two degrees; if we begin now, we will have to cut them by 10 percent each year; if we wait another decade, the cuts will be enormous, 30 percent per year, to even hope for warming levels below “genocide.” Last year, Nordhaus’s own nephew Ted wrote in Foreign Affairs that the dream of keeping the world under two degrees of warming, under any approach, was simply naïve.

The carbon tax is the solution favored by business. On the left, another possible approach has emerged: massive public investment and public works, both directed toward replacing dirty energy sources with clean ones and producing, along the way, an entirely renewable economy. In other words, the Green New Deal.

The term may seem like a response to our very present tense of climate panic, but it has bounced around for a while. It was used by Van Jones, Obama’s green-jobs adviser, in 2008 and formed the centerpiece of Jill Stein’s 2012 and 2016 campaigns, not that too many people took note. This year, under that same banner, Alexandria Ocasio-Cortez has rallied an astonishing level of political and policy energy around it — Cory Booker and Kamala Harris and Elizabeth Warren have already endorsed the plan, and many of their fellow aspiring nominees will surely follow. Their endorsements were for only a set of goals, as the proposal was still being hammered into legislation when they attached their support. The initial concept offered only one extremely ambitious goal — decarbonizing the American economy entirely by 2030 — and a number of other commitments that have excited many on the left whose political priorities may not be so climate-focused. That is: to use the economic stimulus of green-energy investment “to virtually eliminate poverty in the United States and to make prosperity, wealth, and economic security available to everyone participating in the transformation.”

These proposals are worthy, invigorating, and — believe it or not — popular. I’m all for them. Unfortunately, they are also, on their own, **not enough**. As a strategy of avoiding that same threshold of two degrees of warming, the investments of a Green New Deal are what logicians call “necessary but insufficient.”

This is not a reflection of the modesty of the legislation, which is not at all modest — in fact, it is perhaps the most ambitious bill put forward in congress in three quarters of a century. It is simply a reflection of the scale of the challenge. In its report, the IPCC compared the transformation required to stay safely below two degrees **to the mobilization of World War II**. That mobilization was unprecedented in human history and has **never been matched since**. That time, there was a draft, a nationalization of industry, widespread rationing: The entire American nation turned single-mindedly toward the relevant threat, as did the entire Russian nation — and the two of them, almost inconceivably, in retrospect, allied. **That is the kind of mobilization** the sober-minded scientists of the world believe is **necessary today** — to get to half of our current emissions by 2030. Is it possible? Well, just about anything is possible, as the total mobilization of the nation in World War II shows you. But it recently took New York City 45 years to build three new stops on a single subway line.

And if such a Green New Deal transformation within the U.S. were possible, it would **affect only one country in the world**, a country producing only 15 percent of global emissions. This is the second reason the Green New Deal is, on its own, insufficient. Last year, China was responsible for more than a quarter of emissions — and that figure does not account for any of the massive infrastructure projects the country is undertaking across Asia and Africa as part of its “Belt and Road” initiative to remake highways and ports and airports throughout those continents. If the cement industry were a country, it would be the world’s third-largest emitter, and China is now pouring more concrete in a span of three years than the United States poured during the entire 20th century.

Climate action does not just take place within nations but between them. Here too the hurdles are monumental. We have not yet really begun to consider the ways in which climate change will shape and distort our global politics — bringing carbon budgets into the architecture of trade agreements and peace treaties, reshaping rivalries between nations by literally reshaping their geographies, introducing in the face of drowning nations and uninhabitable cities in the poorest parts of the world the matter of climate reparations and the question of just who will pay. But the way our present politics is shaping our climate policy is already clear enough.

The Paris climate accords, signed nearly a decade after the Great Recession, seemed to mark the end of the long era of technocratic, neoliberal globalism. And yet, as a multilateral treaty negotiated on the principle of positive-sum cooperation, it reflects those values in almost every way. Distressingly, it also reflects the failures of those values. Just two years in, no major industrial nation in the world but India is on track to keep warming below two degrees.

In some places, government action is being lapped by market forces. In America, for instance, coal production is projected to fall faster than was predicted if Obama’s Clean Power Plan were enacted (which it wasn’t). Over the past 25 years, the cost per unit of renewable energy has fallen so far that you can hardly measure today’s price using the same scales (since just 2009, for instance, solar-energy costs have fallen more than 80 percent). But over that same 25 years, the proportion of global energy use derived from renewables has not grown at all, which means that, billions of dollars and thousands of dramatic breakthroughs later, the planet is in some ways no further in its “green-energy revolution” than it was when hippies were affixing solar panels to their geodesic domes. In fact, less far along, because the market has not responded to these developments by retiring dirty-energy sources and replacing them with clean ones. It has responded by simply adding the new capacity to the same system. To the market, this is growth; to human civilization, it is suicide. In 2003, Kan Caldeira of the Carnegie Institution found that the world would need to add clean-power sources equivalent to the full capacity of a nuclear plant every single day between 2000 and 2050 to avoid catastrophic climate change. In 2018, James Temple of MIT’s Technology Review surveyed our progress; he found that the world was on track to complete the necessary energy revolution in 400 years.

That gap yawns so wide it could swallow whole civilizations, and indeed threatens to. Into it has crawled the dreams of those extraordinary technological fixes: If we can’t rebuild the entire infrastructure of the modern world soon enough to save it from self-destruction, perhaps we can at least buy ourselves some time by artificially cooling off the planet or maybe sucking some of its toxic fumes out of the air. If that seems too sci-fi for you, you are not alone; in 2018, Nature dismissed all such scenarios as “magical thinking.”

But if, today, you want to believe in climate hope — want to believe the planet can stay below two degrees of warming — it means believing in something more fanciful than decarbonization and clean energy. **No matter how quickly we take action**, and no matter how aggressively, the goal of a stable climate **is functionally out of reach by any conventional method**. We can implement the most aggressive climate policy yet conceived, doubling or even tripling the most ambitious decarbonization proposals being put forward today by the world’s greenest leaders, and we **will still need some “magic.”** Probably a whole lot of it.

The most promising variety of this magic is “**negative emissions**”: **taking carbon out of the atmosphere.** Once a last-ditch, if-all-else-fails strategy, negative emissions has recently been **built into nearly all climate-action goals**. This is a chilling fact, **which almost nobody outside the climate world appreciates**: Just about every plausible scenario for avoiding catastrophic change is built on these technologies, which we are only now beginning to test. Of 400 IPCC emissions models that land us below two degrees Celsius, 344 feature negative emissions, most of them significantly. The ones that don’t rely on negative emissions all require such sharp and immediate emissions drops it is hard to believe they could be produced by any policy on the table today. On your chalkboard, you can draw whatever carbon-emissions curve you’d like, but keeping the world safely under two degrees by conventional decarbonization alone probably means policies like an **immediate ban** on all new internal-combustion engines and much of the world’s heavy **industry being suddenly shuttered** or redirected **by fiat**.

What is more of a fantasy — that scenario or the “magical thinking” of negative emissions? Because it promises a sort of global extension on the project of decarbonization, that magical thinking has also been described as the ultimate moral hazard. It is. But the math tells us **negative emissions is also a last, best, hope.**

**Socialist systems fail to achieve results---market systems are necessary to resolving our impacts**

**Posner and Weyl 18** – Eric A. Posner is Kirkland and Ellis Distinguished Service Professor of Law and Arthur and Esther Kane Research Chair at the University of Chicago. E. Glen Weyl is an economist and researcher at Microsoft Research New England.

Eric A. Posner and E. Glen Weyl, “Epilogue: After Markets?” *Radical Markets: Uprooting Capitalism and Democracy for a Just Society*, Princeton University Press 2018, Epub (email [arg5180@gmail.com](mailto:arg5180@gmail.com) for relevant text).

Markets as Miracles

As we saw in chapter 1, many economists who were committed to the market economy also considered themselves “socialists.” Yet in the early twentieth century, socialism became identified with central planning, thanks to the role of Marxism and the French Revolution in inspiring and justifying the economic policies of the Soviet Union. Central planning also received a boost from World War I, where national control of the economy for the purpose of war production was more successful than advocates of laissez-faire could ever have imagined. This led to a heated debate about whether central planning should be used in peacetime as well.

In the popular imagination, central planning could not succeed because it provided individuals with no incentives to work. People needed the prospect of riches, or at least wages, to get them out of bed in the morning. Yet incentives were quite strong in the Soviet Union, stronger, in many ways, than they are in capitalist countries. While there was less chance under Communism to grow rich, any prisoner of the Gulag knew the fate of those who “malingered.”

Another popular argument against central planning was advanced by Nobel Laureate Friedrich Hayek in 1945. Hayek argued that no central planner could obtain information about people’s tastes and productivity necessary to allocate resources efficiently.1 The genius of the market was the way that the price system could, in disaggregated fashion, collect this information from everyone and supply it to those who needed to know it, without the involvement of a government planning board.

A related version of this argument, less well-known than Hayek’s but actually more compelling, was made a few decades earlier. The brilliant economist Ludwig von Mises argued that **the fundamental problem facing socialism was not incentives or knowledge** in the abstract **but communication and computation**.2 To see what Mises meant, consider an illustrative parable proposed by Leonard Read in his 1958 essay, “I, Pencil.” 3

Read **tells the “life story” of a pencil**. Such a simple thing, one would at first think. And yet as **you begin to reflect, you realize the enormously complex layers of thought and planning it would require to make a pencil from scratch**. The wood must be chopped, cut, shaped, polished, and honed. The graphite must be mined, chiseled, and shaped. The ferrule—the collar that connects the wood shaft and the eraser—is an alloy of dozens of metals, each of which must be mined, melted, combined, and reformed. And so forth.

Yet **what is most remarkable about the pencil is not its complexity but the complete lack of understanding that anyone involved in the manufacture of the** eventual **pencil has about any of these steps in the process. The lumberjack knows only that there is a market for his wood** and some price that induces her to buy the needed tools, cut down trees, and sell lumber down the line of production. The lumberjack may never even know that the wood is used for a pencil. **The pencil factory owner knows only where to purchase the needed intermediate materials** and how to run a line assembling them. **The knowledge and planning of the pencil’s creation emerge organically from the process of market relations.**

Now **suppose** that **we were to try to replicate the market relationships with a central planning board**. The board would determine how much wood to chop and when, the number of workers to employ at each stage of production, the correct places and times to produce, ship, and build. Yet, to do this effectively **the board** would have to understand a great many things. It **would have to learn from each of these specialized producers the unique knowledge of her domain of expertise that allows her to earn a living**—for example, whether the lumber would have a more valuable use elsewhere in the economy (to build houses or ships or children’s toys) than as an input for pencils. **Absorbing all this information and constantly receiving and processing the necessary updates to keep abreast of evolving conditions in each of these steps of the process, would overwhelm the capacity of even the most skilled managers.**

And **even if the board** somehow **had an unlimited capacity to absorb this information, it would still have the unmanageable problem of trying to act on this sea of data**. Prices, supply and demand, and production relations in markets arise through a complex interplay of individuals each helping to optimize a tiny part of a broad social process. If, instead, a single board had to plan this entire dance, **it would force a small number of individuals to contemplate an endless sequence of choices and plans. Such elaborate calculations are beyond the capacity of even the most brilliant group of engineers.**

Mises wrote decades before the rise of the fields of computer science and information theory and lacked any way to formalize these intuitive ideas. Many of Mises’s arguments were dismissed by mainstream economists, whose increasingly narrow mathematical approach to the field Mises disdained. Mises’s critics, including Oskar Lange, Fred Taylor, and Abba Lerner, argued that the market mechanism was but one of many ways (and far from the most efficient way) to organize an economy. They viewed the economy purely mathematically, rather than computationally, and saw no difficulty in principle with solving a (very large) system of equations relating the supply and demand of various goods, resources, and services.

In a simplified picture of the economy, ordinary people perform dual functions as producers (workers, suppliers of capital, etc.) and consumers. As consumers, people have preferences regarding different goods and services. Some people like chocolate, others like vanilla. As producers, they have different talents and capacities. Some people are good at doing math, others at mollifying angry customers. In principle, all we need to do is figure out people’s preferences and their talents, and assign jobs to people who do them best, while distributing the value created by production in the form of goods and services that people really want. Rewards and penalties need to be determined to give people incentives to reveal their preferences and talents, and to ensure that they actually do what they are supposed to do. All of this can be represented mathematically and solved. That’s why **socialist economists viewed the economy as a math problem the solution of which only required a computer**.

Yet the later development of the theory of computational and communication complexity vindicated Mises’s insights. What computational scientists later realized is that **even if managing the economy were “merely” a problem of solving a large system of equations, finding such solutions is far from the easy task that socialist economists believed**. In an incisive computational analysis of central planning, statistician and computer scientist Cosma Shalizi illustrates how utterly impossible “solving” a modern economy would be for a central planning board. As Shalizi notes in his essay, “In the Soviet Union, Optimization Problem Solves You,” **the computer power it takes to solve an economic allocation problem increases more than proportionately in the number of commodities in the economy**.4 In practical terms, this means that in any large economy, central planning by a single computer is impossible.

To make these abstract mathematical relationships concrete, Shalizi considers an estimate by Soviet planners that, **at the height of Soviet economic power in the 1950s, there were about 12 million commodities** tracked in Soviet economic plans. To make matters worse, this figure does not even account for the fact that a ripe banana in Moscow is not the same as a ripe banana in Leningrad, and moving it from one place to the other must also be part of the plan. But even were there “merely” 12 million commodities, **the most efficient known algorithms for optimization, running on the most efficient computers available today, would take roughly a thousand years to solve such a problem exactly once**. It can even be proven that **a modern computer could not achieve even a reasonably “approximate” solution**—and, of course, today there are far more goods, services, transport choices, and other factors that would go into the problem than there were in the Soviet Union in the 1950s. Yet somehow **the market miraculously cuts through this computational nightmare**.

Markets as Parallel Processors

But all of this raises a question. If the problem is so hard to solve, how is it possible for the market to solve it? Consider Lange’s quote from our epigraph.5 The market is just a set of rules enforced by the government—not much different from a computer algorithm, although a very complex one. It’s true that no single person invented the market. Yet the rules of the market are well understood, and economists are constantly telling people to implement them. Imagine that a new country is created, and its leaders ask a western economist how best to create an economy. The economist will tell them how to set up a market—the rules of contract and property law, for example. (Indeed, economists have been running around the halls of government of developing countries and the floors of start-ups for decades doing just this.) Aren’t the economists just supplying a kind of computer program to the leaders, who by implementing it are engaging in a style of centralized planning?

To understand how the market solves the “very large system of equations,” you need to know the key ideas of distributed computing and parallel processing. In these systems, complicated calculations that no one computer could perform are divided into small parts that can be performed in parallel by a large number of computers distributed across different geographic locations. Distributed computing and parallel processing are best known for their role in the development of “cloud computing,” but their greatest application has gone unnoticed: the market economy itself.

While the human brain is wired differently from a computer, computational scientists estimate that a single human mind has a computational capacity roughly ten times greater than the most powerful single supercomputer at the time of this writing.6 The combined capacity of all human minds is therefore tens of billions of times greater than this most powerful present-day computer. **The “market” is** then in some sense **a giant computer composed of these smaller but still very powerful computers. If it allocates resources efficiently**, it does so **by harnessing and combining their separate capacities**.

Adopting this perspective, we must ask how the market is “programmed” to achieve this outcome. The economy consists of a variety of resources and human capacities at a range of locations, along with a system for transmitting data about these resources among individual human beings. A standard approach in parallel processing is to take information local to one location in, say, a picture or puzzle and assign this to one processor, integrating these inputs on still other processors in a hierarchical fashion. Now apply this image to the economy. In every place, we take one of the computers (humans) available to us and assign it to collect information about that location’s needs and resources and report some parsimonious “compressed” summary of all that data to other computers. For example, there might be a hierarchical arrangement of computers, with those responsible for particular locations on the ground reporting to a higher “layer” that integrates local areas and then upward from there.

Consider the following example. A person works on a farm and is in charge of ensuring that the farm is productive and that her family is happy. This person sends information about the farm and her family, not in its full richness and complexity, but in broad strokes, to district managers. One manager specializes in understanding the resources that farms need to operate—seeds, fertilizer— while another understands the resources that people living on farms need in order to be happy, including food and clothing. These managers would then aggregate these data and convey them to the next layer, perhaps a national wheat distributor or a regional supplier of products for use on farms. At every level of this chain, some information would need to be lost for the parallel processing to remain parallel and tractable: the farm manager could not detail every way in which a slightly better paved road would help in conveying goods to market or how slightly cleaner water would protect her crops. But at least she could report the largest and most important needs and hope that the loss of information only slightly reduces the efficiency of the resulting solution.

**This arrangement has a flavor of central planning but also resembles a market economy. People specialize in different parts of the production chain and operate under limited information, yet are able to coordinate their behavior** because the information takes a certain form. While people are experts on local conditions, they know little about economic conditions elsewhere. They know that grain prices are high and tractor prices are low, but not why this is the case. When they buy a tractor or sell grain, they don’t tell the vendor or purchaser their life story, all the conditions on their farm, and so forth. They just place an order or offer so much grain at the going price.

This “price system” thus greatly simplifies communication between different parts of the economy. In fact, economists have shown that prices are the minimum information that a farmer needs to plan her operations effectively. So long as every important way that the farm could benefit or draw down resources from the outside world has a price attached to it, this is all the information the farmer needs to make economic decisions. Any greater information would be a waste, from a purely economic efficiency perspective, though it might be interesting from time to time to develop personal relationships. Conversely, **if** these **prices were not available, there would be no way for a farmer to know whether it pays to use new tractors or rely instead on more labor**, nor would she know how many seeds to plant for next season. The farmer without such prices could easily produce too little or waste resources on a tractor that could be better used for more labor, seed, or even consumption.

In this sense, **prices are the “minimum” information necessary for rational economic decision-making**.7 **No other system of distributed computing can be equally productive and yet require less communication.**

**Markets elegantly exploit distributed human computational capacity**. In doing so **they allocate resources in ways that no present computer could match**. Von Mises was right that **central planning by a group of experts cannot replace the market system**. But his argument was mistakenly taken as implying that the market is “natural” rather than a human-created program for managing economic resources. In fact, there is nothing natural about market institutions. Human beings create markets—in their capacity as judges, legislators, administrators, and even private business people who frequently set up organizations that create and manage markets.

**Markets are powerful computers, but whether they produce the greatest good or not depends on how they are programmed**. We advocate “Radical Markets” because we believe that in the present stage of technological and economic development, when cooperation has grown too large to be managed by moral economies, the market is the appropriate computer to achieve the greatest good for the greatest number. If we see it as such, **we can fix the bugs in the market’s code and enable it to generate more wealth that is distributed more fairly**.

By sharpening our understanding of the role and value of markets, the computational analogy clarifies our claim that the solutions we propose are based on extending the reach of markets. The COST on wealth radicalizes markets as it puts greater responsibility on individuals to articulate their values and gives them greater ability to claim things they value highly. QV does the same in the political sphere. Our ideas on migration give individuals more scope for determining the best path for where they live and work. Our proposals on antitrust and data valuation break up centralized power and place greater responsibility on individuals and small firms to compete, innovate, and make rational economic choices to allow for the distributed computation of optimal economic allocations. But all these proposals raise the question: if the market is just a computer program that harnesses the power of individual human intellects, will it still be necessary as computer power increases?

# 2NC

## C/A

**Innovation is the key internal link**

Robert **Marcus**, CEO of ALPHA10X, leader in the development and application of AI for impact investment, AI-powered search and discovery platform for life sciences and investment, in partnership with Irina, the French national research institute for the digital sciences, July 7 20**21**, https://www.alpha10x.com/blog/ai-and-the-global-economic-pivot-to-sustainability

What this means is that **it is not enough to pivot to sustainable solutions**. What is needed is **a set** of **radically new sustainable solutions**. Unfortunately, almost all investments today are based on current technology and are **of a “remedial” nature**. The state of California, for instance, is making about $2 billion in climate-related investments annually on such things as cap-and-trade plans, insulation, and credits for energy-efficient equipment and vehicles.

Mitigation, offsets, and wide deployment of existing clean tech such as solar and wind: All of these are important. But by themselves, they do not come anywhere close to solving the carbon problem. These are tentative, incremental steps when we require entirely new strategies to deal with existential dangers.

‍Bill Gates, who has morphed from a computer guru to a climate guru, has criticized President Biden’s climate investments for not being bold enough. The U.S. needs to find radical new approaches, he says, not just to deploy more of what we already have.

**‍Having run down the clock** on conventional solutions to our sustainability challenges, the world requires, as Gates insists, wholesale change — and now. We call such technology **exponential**: innovation that creates sudden, asymmetric positive change. The most obvious example, and likely one of the most difficult, would be a new fuel source such as hydrogen. Transportation alone produces 28 percent of all U.S. greenhouse emissions. A fix here would go a long way to solving the overall problem. And would no doubt generate huge public momentum and investments for other sustainable solutions.

Exponential innovations will not come easy. They will almost exclusively be based on deep technology (**deep tech**). **By definition**, **deep tech solutions** require substantial research and development by highly educated technologists tackling major scientific or engineering challenges. **They require major investments for commercialization**.

As discussed **specifically** last time **with healthcare**, the only deep tech likely to **address our existential threats** will incorporate Artificial Intelligence (AI), sophisticated software that is capable of analyzing much more data than humans and of making better, faster decisions. By searching for and discovering knowledge and by making accurate predictions solutions to the complex problems that affect our existence, AI will dramatically accelerate ideation and innovation for sustainable solutions.

‍What COVID-19 did to humanity is nothing compared to what climate change will do. I have the confidence that humanity, armed with AI tools and solutions, will have the will and the courage to act on our foresight and **deploy deep tech** applications **before the worst is upon us, rather than after.**

‍Believing that deep tech can **deal with our great perils** is only the first step. As noted, deep tech requires **significant investment**. We must find a way to connect the consumers of technology — investors, buyers, and end users — with the solutions themselves. With, that is, the people and companies producing the applications, who are scattered all over the world. Discovering these startups and connecting them with consumers is enormously complicated. Fortunately, AI itself will be a major contributor to the answer.

## Case

**Markets are societally ingrained**

Levi **Bryant 12**, Professor of Philosophy at Collin College, “We’ll Never Do Better Than a Politician: Climate Change and Purity,” <https://larvalsubjects.wordpress.com/2012/05/11/well-never-do-better-than-a-politician-climate-change-and-purity/>

It is quite true that it is the system of global capitalism or the market that has created our climate problems (though, as Jared Diamond shows in Collapse, other systems of production have also produced devastating climate problems). In its insistence on profit and expansion in each economic quarter, markets as currently structured provide no brakes for environmental destructive actions. The system is itself pathological. However, pointing this out and deriding market based solutions **doesn’t get us very far**. In fact, such a response to proposed market-based solutions is **downright dangerous** and **irresponsible**. The fact of the matter is that 1) we currently live in a market based world, 2) there is not, in the foreseeable future an alternative system on the horizon, and 3), above all, **we need to do something now**. We **can’t afford to reject interventions** simply because they **don’t meet our ideal conceptions** of how things should be. We have to **work with the world that is here**, not the one that we would like to be here. And here it’s crucial to note that pointing this out **does not entail** that we shouldn’t work for producing that other world. It just means that we have to grapple with the world that is **actually there before us**. It pains me to write this post because I remember, with great bitterness, the diatribes hardcore Obama supporters leveled against legitimate leftist criticisms on the grounds that these critics were completely unrealistic idealists who, in their demand for “purity”, were asking for “ponies and unicorns”. This rejoinder always seemed to ignore that words have power and that Obama, through his profound power of rhetoric, had, at least the power to shift public debates and frames, opening a path to making new forms of policy and new priorities possible. The tragedy was that he didn’t use that power, though he has gotten better. I do not wish to denounce others and dismiss their claims on these sorts of grounds. As a Marxist anarchists, I do believe that we should fight for the creation of an alternative hominid ecology or social world. I think that the call to commit and fight, to put alternatives on the table, has been one of the most powerful contributions of thinkers like Zizek and Badiou. If we don’t commit and fight for alternatives those alternatives will never appear in the world. Nonetheless, we still have to grapple with the world we find ourselves in. And it is here, in my encounters with some Militant Marxists, that I sometimes find it difficult to avoid the conclusion that they are **unintentionally aiding** and **abetting** the **very things they claim to be fighting**. In their **refusal to become impure**, to **work with situations** or **assemblages** as we find them, to **sully their hands**, they end up **reproducing the very system** they wish to **topple** and **change**. Narcissistically they get to sit there, smug in their superiority and purity, while **everything continues as it did before** because they’ve **refused to become politicians** or engage in the **difficult concrete work** of assembling human and nonhuman actors to **render another world possible**. As a consequence, they occupy the position of Hegel’s beautiful soul that denounces the horrors of the world, celebrate the beauty of their soul, while depending on those horrors of the world to sustain their own position. To engage in politics is to engage in networks or ecologies of relations between humans and nonhumans. To engage in ecologies is to descend into networks of causal relations and feedback loops that you cannot completely master and that will modify your own commitments and actions. But there’s **no other way**, there’s no way around this, and we **do need to act now**.

**And movements get cracked down on**

**Wainer and Bienenfeld 19** – Kit Wainer is a member of the United Federation of Teachers and is active in the opposition caucus, the Movement of Rank and File Educators. Mel Bienenfeld is a longtime socialist activist and recently retired president of a higher-education teachers local union.

(Kate Griffiths, 7-21-2019, "Problems with an Electoral Road to Socialism in the United States," New Politics, https://newpol.org/issue\_post/problems-with-an-electoral-road-to-socialism-in-the-united-states/)

Governors control the National Guard and state police. Local governments control local police forces, although the Constitution allows states full discretion to limit the autonomy of localities. While the president may federalize the guard for a period of time, **it is easy to imagine guard generals refusing to obey presidential authority when asked to enforce decisions the courts have ruled unconstitutional**. Of course a president can send the army into states, thus violating the Posse Comitatus Act of 1878, but it is similarly easy to envision generals refusing to execute orders on solid constitutional grounds, or the officer corps dividing amongst itself, in that scenario. In short **there would be no way** of overcoming state recalcitrance **to implement socialist legislation without destroying the legitimacy of the constitutional order.**

In fact, not only can **state authorities** resist**, they can also repress**. Partial socialist victories in the electoral arena would inevitably yield a **fractured state,** with critical parts still in the hands of pro-capitalist officials. The latter would be constitutionally authorized to arrest and terrorize mass movement activists who threaten their rule. They have, after all, done so numerous times in U.S. history. Even today, federal and state authorities are far more likely to arrest someone for the crime of being an immigrant or person of color than for marching with an armed fascist gang threatening the annihilation of the Jews. **Mass movements that are not prepared to physically confront and defeat armed authorities would stand little chance.**

Bureaucracy, the Regulatory Process, and Unelected Authority

While the legislative and executive branches make law and the judicial branch reviews laws, unelected regulatory bodies determine how they are actually interpreted and implemented. Currently, these bodies are staffed by skilled bureaucrats through a combination of patronage, political favoritism, and civil service promotion. Regulatory agencies are typically staffed by and managed by the industries they are designed to regulate. Even lower-level bureaucratic posts often enable employees to audition for far more lucrative private-sector employment. This creates enormous incentives to defer to corporate prerogative, even if the elected authorities have a different agenda. And these regulatory agencies decide what the law means in day-to-day situations that lawmakers can never predict when writing bills.

Bureaucratic and regulatory agencies govern at the local, state, and federal levels. They set zoning policies that largely determine whether housing is affordable and safe for working-class habitation. Their rules indirectly affect how much of their lives working people spend commuting to and from work because where tall buildings are built often determines which neighborhoods are clogged with traffic. As with regulatory agencies, building departments are typically instruments of real estate developers, even if they do protect occupants’ safety to some extent. Unelected bodies, such as public authorities in New York and New Jersey, typically control public transportation and critical infrastructure, and an army of bureaucrats runs the education systems all over the United States. All of these bureaucratic agencies are susceptible to intense pressure from highly paid lobbyists. Conditions of housing, transportation, public health, and education are some of the most powerful forces shaping workers’ daily lives, and it is difficult to imagine how working people would maintain confidence in and enthusiasm for a workers’ government that could not demonstrably improve those aspects of their lives. It is also difficult to see how a government could make significant headway in those areas without breaking apart the relevant bureaucracies and busting up the private-sector lobbying firms that influence them. In short, the very precondition for sustained radical electoral success would require the demolition of most regulatory organizations and their replacement with democratic and accountable bodies.

Unelected bureaucracy also reigns in the area of foreign policy. While major decisions such as going to or avoiding war, or negotiating trade agreements, are in the hands of elected officials, many of the day-to-day details of foreign relations are decided and implemented by career officials who are similarly subjected to substantial corporate lobbying and use foreign service careers as springboards into highly paid private-sector employment. The State Department routinely approves international trade licenses, contacts foreign bureaucrats on behalf of U.S. firms, and utilizes personal relationships with international counterparts to smooth those processes. In a world in which several major capitalist states still rule and the U.S. state is fractured, these bureaucrats could become key links between global and domestic counter-revolution.

While bureaucracy takes different forms in different countries, career civil servants staff the state apparatus in most capitalist states today. They tend to be ideologically committed to the survival of the state. Their career ambitions also depend on the patronage of higher ups in each department and alliances with private capitalists who hold the key to their promotion both inside and outside the public sector.

Can bureaucracy be subordinated to a workers’ government? Yes. In fact the soviet state had no choice but to rely on sectors of the tsarist bureaucracy both to win the civil war and for government administration in the 1920s. In a scenario in which the capitalist class has been fully defeated, disempowered bureaucrats might well decide, one by one, that cooperation with the new workers’ regime represents the only hope for maintaining their careers. However, the “democratic,” or, more accurately, the electoral, road to socialism leads inevitably along a different path. It does not deliver a sudden, decisive defeat to the state or to the ruling class. Quite the contrary, it leads to what might be termed “dual power,” in which socialists rule over substantial sectors of the government but capitalist politicians dominate others and much of the capitalist state bureaucracy remains intact. The police, fearing that their careers are in jeopardy, would likely continue to repress mass movements and fight at all costs to preserve their positions. These institutions of the capitalist state would also have powerful allies in the judiciary, not to mention support from capitalists around the world. Under that scenario it is highly unlikely that the administrative bureaucracies would place themselves at the service of workers’ regimes who have far less to offer them and from whom they have far less to fear.

Throughout U.S. history the labor movement and other **radical reform movements have had to contend with ferocious and violent counterattacks**. After World War I, socialists, anarchists, and labor activists of various stripes faced intense state repression. The **survival o**f U.S. **capitalism was not in question** at this time. **Yet, the federal government responded with mass arrests**, deportations, frame-ups, **and violence.** After World War II, federal and state governments effectively repressed the radical wings of the labor movement with witch hunts and blacklists, while tolerating rampant racist violence. It is important to note that **the Communist Party** **not only**, at this point, **could not have threatened revolution, its orientation was heavily electoral**. But the mere prospect of a more militant labor movement and a radical electoral alternative was something both Democrats and Republicans were determined to repress. In the 1960s the FBI’s Cointelpro program targeted movement activists and even murdered Black Panther leader Fred Hampton.

A workers movement in the United States must prepare for severe state repression or it will succumb to it. At times this may involve operating clandestinely. It may also require active self-defense against legal authorities or fascist paramilitaries. Most importantly, preparation means educating a generation of socialist and labor activists about how and why the state protects capitalist profitability both through its own constitutional mechanisms and often with repressive measures that violate its own legality.

**ONLY markets, NOT states can correctly calibrate calibration of resources.**

**Karlson et al. 20** --- Ratio Institute, Linköping University, Stockholm, Sweden.

Nils, Christian Sandström, & Karl Wennberg, 2020, “Bureaucrats or Markets in Innovation Policy? – a critique of the entrepreneurial state,” The Review of Austrian Economics, vol. 34, pg. 81–95.

**Information problems** concern the difficulty a public actor face in collecting the information and acquiring the knowledge enabling correct decision-making regarding, for example, the **allocation of resources**. As Hayek (1945) showed, it is **practically impossible** to aggregate information and knowledge about production conditions, business opportunities, customer preferences, etc. to **any central unit** in society. Such information is dispersed, local, and time-bound in character, even in today’s modern digital economy. With regard to innovation policy and the results reviewed above, there are numerous implications of Hayek’s argument.

First, the existence of a market failure is **empirically difficult** to prove, or measure. The original argument by Arrow (1962) was of a theoretical nature and has not been validated. One could expect the potential size of such a market failure to vary greatly depending upon institutional characteristics, industrial context, regional and national setting. Such differences along with the fact that it is a very methodologically challenging task to locate and compute the size of a market failure means that policymakers are put in the **awkward position** of trying to solve a problem **that is unknown** both in terms of its existence, **size and location**. Needless to say, such a situation is almost bound to result in **malinvestments**.

The second implication concerns that a market economy is more compatible with the notion of dispersed knowledge than a public policy intervention. Industrial development in a market economy characterized by innovations is often described as a complex **evolutionary process** (Nelson and Winter 1982). Through **experimental search** characterized by failures and **unpredictable breakthroughs**, the economy **develops over time** (Aldrich 1999). Individual market actors make mistakes and invest in the wrong technical solution or the wrong business model for a new technology (Delmar et al. 2011). If the actors themselves who operate in a market are unable to know which technology or business model is optimal, there is reason to question how a public actor in the form of a government agency or a policymaker can perform this task satisfactorily. Government involvement in the form of “picking winners,” that is, attempts to generate growth through government selection of technologies or firms, risks becoming expensive for taxpayers (Lerner 2009). Previous research has shown that venture capital investments tend to be **highly spatial** and build on social networks (Hochberg et al. 2007). The price mechanism provides aggregate information about customers’ demand, and the firms’ profits and losses. Information and knowledge are thus **conveyed and generated** among market actors in **competitive markets** who are nested together through social, economic and technological interdependencies, and this information is **hard to extract** from its origin and **locate in a central policy unit.**

**Interdependence is a conflict deterrent**

Erik **Gartzke** is Associate Professor of Political Science at the University of California, San Diego, **and** Alex **Weisiger** is Assistant Professor of Political Science at the University of Pennsylvania, **’14**

(“Under Construction: Development, Democracy, and Difference as Determinants of Systemic Liberal Peace,” International Studies Quarterly, Volume 58, Issue 1, pages 130–145, March 2014)

In the atomistic world of pure (idealized) anarchy, the use of force significantly impacts only the targets of force, and possibly also their allies and enemies. Interdependence (economic and otherwise) **alters anarchical systems by spreading these costs more widely**. Disruptions to trade, flows of refugees, and the possibility that conflict will spill over to regions currently at peace all impose costs **even on those not directly at war.**19 Third parties thus acquire an **incentive to encourage peace,** whether through inducements such as American foreign aid to Israel and Egypt or through the imposition of more negative sanctions. Socially inefficient conflict may continue, but its prevalence will drop, with the most capable countries focusing on preventing the most disruptive conflicts involving the most malleable states. Increases in either the negative externalities of warfare or the ability of outside actors to influence participants should lead to relative ecological peace.

What factors then increase the incentives and ability of non-participants to encourage the maintenance or reestablishment of peace? While several possibilities exist, we argue that economic development has particularly **potent implications** for both the **incentive and the ability** of states to enforce peace around the world. Economics constitutes perhaps the **most significant dimension** along which territory and politics fail to coincide. Developed countries increasingly have economies that are much more dependent on interacting with the larger global economic system than nations with more traditional economic systems (Rosecrance 1996; Brooks 2005). Integration into the global economy creates efficiencies that make nations more prosperous, but developed countries are also more vulnerable to the destabilizing effects of external conflict. Developed nations are bound to care more about the conflict behavior of other nations, since conflict in turn affects prosperity.

Yet, economic integration is only part of the story. Development also provides the means to **discourage destabilizing violence**, either **through reward or through punishment**. The economically developed countries of the world are among the most heavily armed, even when they face few immediate threats. This capability to inflict harm can be used to deter conflict among third parties. It is common for the advanced countries of the Northern Hemisphere to threaten or act aggressively to discourage or terminate conflict in the developing world. Economic development increases the incentives for key actors in the international system to promote peace, at least among third parties.20 Indeed, much of the international system appears designed to assist developed nations in managing the affairs of weaker nations. Tacit spheres of influence, from US preeminence in the Americas to the continued interest of the former colonial powers in their old colonies, help the developed world coordinate on who bears responsibility for enforcing peace. Likewise, developed nations are dramatically overrepresented in the international organizations that actively manage ongoing conflict, with the composition of the UN Security Council an obvious example.21 In many cases, these resources allow developed states to prevent conflict through the second face of power (Bachrach and Baratz 1962), with potential disputants deterred from even preliminary uses of force.

**Markets solve global war**

**Griswold 07**

Daniel Griswold directs the Center for Trade Policy Studies at the Cato Institute, Cato Institute, April 20, 2007, “Trade, Democracy and Peace: The Virtuous Cycle”, http://www.cato.org/publications/speeches/trade-democracy-peace-virtuous-cycle

The Peace Dividend of Globalization

The good news does not stop there. Buried beneath the daily stories about suicide bombings and insurgency movements is an underappreciated but encouraging fact: **The world has** somehow **become** a **more peaceful** place.

A little-noticed headline on an Associated Press story a while back reported, “War declining worldwide, studies say.” In 2006, a survey by the Stockholm International Peace Research Institute found that **the number of** armed **conflicts around the world has been in decline for the past half-century**. Since the early 1990s, ongoing conflicts have dropped from 33 to 17, with all of them now civil conflicts within countries. The Institute’s latest report found that 2005 marked the second year in a row that no two nations were at war with one another. What a remarkable and wonderful fact.

**The death toll** from war **has also been falling**. According to the Associated Press report, “The number killed in battle has fallen to its lowest point in the post-World War II period, dipping below 20,000 a year by one measure. Peacemaking missions, meanwhile, are growing in number.” Current estimates of people killed by war are down sharply from annual tolls ranging from 40,000 to 100,000 in the 1990s, and from a peak of 700,000 in 1951 during the Korean War.

Many causes lie behind the good news—the end of the Cold War and the spread of democracy, among them—but **expanding trade** and globalization **appear to be playing a major role in promoting world peace.** Far from stoking a “World on Fire,” as one misguided American author argued in a forgettable book, growing commercial ties between nations have had **a dampening effect on armed conflict and war**. I would argue that free trade and globalization have promoted peace in **three main ways**.

First, as I argued a moment ago, **trade** and globalization have **reinforced the trend toward democracy**, and **democracies tend not to pick fights with each other**. Thanks in part to globalization, almost two thirds of the world’s countries today are democracies—a record high. Some studies have cast doubt on the idea that democracies are less likely to fight wars. While it’s true that democracies rarely if ever war with each other, it is not such a rare occurrence for democracies to engage in wars with non-democracies. We can still hope that **has more countries turn to democracy, there will be fewer provocations for war** by non-democracies.

A second and even more potent way that trade has promoted peace is by **promoting** more **economic integration**. **As national economies become** **more intertwined** with each other, those **nations have more to lose should war break out.** War in a globalized world not only means human casualties and bigger government, but also **ruptured trade and investment ties that impose lasting damage** on the economy. In short, **globalization** has **dramatically raised the economic cost of war.**

The 2005 Economic Freedom of the World Report contains an insightful chapter on “Economic Freedom and Peace” by Dr. Erik Gartzke, a professor of political science at Columbia University. Dr. Gartzke compares the propensity of countries to engage in wars and their level of economic freedom and concludes that **economic freedom**, including the freedom to trade, **significantly decreases the probability** that **a country will experience a military dispute with another** country. Through econometric analysis, he found that, “Making economies freer translates into making countries more peaceful. At the extremes, **the least free states are about 14 times as conflict prone as the most free.**”

By the way, Dr. Gartzke’s analysis found that economic freedom was a far more important variable in determining a countries propensity to go to war than democracy.

A third reason why **free trade** promotes peace is because it **allows nations to acquire wealth through production and exchange rather than conquest** of territory and resources. As economies develop, wealth is increasingly measured in terms of **i**ntellectual **p**roperty, financial assets, and human capital. Such **assets cannot be easily seized by armies**. In contrast, hard assets such as minerals and farmland are becoming relatively less important in a high-tech, service economy. **If people need resources outside their national borders, say oil or timber or farm products, they** can **acquire them peacefully by trading away what they** can **produce** best **at home**. In short, globalization and the development it has spurred have **rendered** the **spoils of war less valuable.**

Of course, free trade and globalization do not guarantee peace. Hot-blooded nationalism and ideological fervor can overwhelm cold economic calculations. Any relationship involving human beings will be messy and non-linier. There will always be exceptions and outliers in such complex relationships involving economies and governments. But **deep trade** and investment **ties among nations make war less attractive.**

A Virtuous Cycle of Democracy, Peace and Trade

The global trends we’ve witnessed in the spread of trade, democracy and peace tend to **reinforce each** other in a grand and virtuous cycle. As trade and development encourage more representative government, those governments provide more predictability and incremental reform, creating a better climate for trade and investment to flourish. And as the spread of trade and democracy foster peace, the decline of war creates a more hospitable environment for trade and economic growth and political stability.

We can see this virtuous cycle at work in the world today. The European Union just celebrated its 50th birthday. For many of the same non-economic reasons that motivated the founders of the GATT, the original members of the European community hoped to build a more sturdy foundation for peace. Out of the ashes of World War II, the United States urged Germany, France and other Western European nations to form a common market that has become the European Union. In large part because of their intertwined economies, a general **war in Europe is now unthinkable.**

**In East Asia**, the **extensive** and growing **economic ties among** Mainland **China, Japan, South Korea, and Taiwan is helping** to **keep the peace**. China’s communist rulers may yet decide to go to war over its “renegade province,” but **the economic cost** to their economy **would be staggering and** could **provoke** a **backlash among its citizens**. In contrast, poor and isolated North Korea is all the more dangerous because it has nothing to lose economically should it provoke a war.

In Central America, countries that were racked by guerrilla wars and death squads two decades ago have turned not only to democracy but to expanding trade, culminating in the Central American Free Trade Agreement with the United States. As the Stockholm Institute reported in its 2005 Yearbook, “Since the 1980s, **the introduction of a more open economic model in** most states of the **Latin American** and Caribbean region **has been accompanied by** the **growth of** new **regional structures, the dying out of interstate conflicts and** a **reduction in intra-state conflicts.”**

**Growth is sustainable and self-correcting – only tech innovation can fix current challenges**

**Bailey 15**

Ronald Bailey, former economist at the Federal Energy Regulatory Commission, adjunct fellow at the Competitive Enterprise Institute, Scientific American, November 30, 2015, “Fast Growth Can Solve Climate Change”, http://www.scientificamerican.com/article/fast-growth-can-solve-climate-change/

\*modified language

As representatives from 196 countries gather in Paris this December to negotiate a universal climate treaty, they should keep in mind 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 ag**ricultural **productivity**, **freeing up land for forests to grow** as well as **speedier progress toward** developing and **deploying cheaper non–fossil fuel energy tech**nologies. **These trends** can **act synergistically to ameliorate** ~~man-made~~ [**anthropogenic**] **climate change.**

As economic growth increases incomes, **fertility tends to fall** toward, and even below, the replacement rate of 2.1 children per woman. Some demographers argue that world population could peak at around nine billion by the middle of this century and then begin declining. **Lower population growth means less demand for energy and other resources** than there would otherwise have been. According to the latest World Bank data on 212 national jurisdictions, 85 countries are currently at or below the replacement rate, including Japan, China, Russia, Brazil the U.S. and all of Europe. Total fertility rates in large developing countries like India, Bangladesh and Mexico are also near the replacement rate.

Economic development initially worsens environmental externalities such as deforestation and pollution, including the accumulation of climate-damaging greenhouse gases in the atmosphere and oceans. But **long term**, **pollution and deforestation** can start to **improve as economic growth boosts the incomes of once poor people.** The **wealthier people** become the more they **demand and get improved environmental quality via regulation and market mechanisms that promote cleaner and less resource-intensive processes and tech**nologies.

For example, since 1980 carbon monoxide, sulfur dioxide and nitrogen dioxide air pollution is down 85, 80 and 60 percent, respectively, even as real U.S. GDP more than doubled. Data from the Food and Agriculture Organization of the United Nations’ latest global forest trends report shows that **deforestation halts and reverses when per capita incomes reach a threshold** of around $4,200. Economies increasingly grow by squeezing more value out of less stuff. The Worldwatch Institute reports that U.S. carbon intensity (the amount of CO2 emitted to produce a dollar of GDP) has fallen 60 percent since 1990.

**Boosting ag**ricultural **productivity in poor countries will mean more land for forests. Expanding forests soak up carbon dioxide**, thus **slowing warming**. Right now cereal yields in India and Nigeria average 2,962 and 1,537 kilograms per hectare, respectively. This contrasts with the U.S. average of 7,340 kilograms per hectare. Agronomist Paul Waggoner of the Connecticut Agricultural Experiment Station has calculated that “if during the next 60 to 70 years the world farmer reaches the average yield of today’s U.S. corn grower, the 10 billion [people] will need only half of today’s cropland while they eat today’s American calories.”

Jesse Ausubel, head of the Human Environment Program at The Rockefeller University, now finds that **humanity is already near peak farmland**. If bioethanol subsidies that encourage the conversion of food into fuel could be eliminated, then up to 160 million hectares of land could be restored to nature by 2060. That’s an area about double the size of the U.S. east of the Mississippi River. And as farming efficiency improves, more people can move to cities, freeing up land for nature.

Finally, **faster** economic **growth provides the wherewithal to spur innovation and create cheaper and more efficient tech**nologies. Swanson’s Law is an example of increasing economies of scale: Every time global solar panel production capacity doubles, the price drops 20 percent. **At the current rate** of growth, electricity from **solar panels will be cheaper than** that produced by burning **natural gas** in less than a decade. Similarly, climate scientist James Hansen and his colleagues have urgently argued that there is “no credible path to climate stabilization that does not include a substantial role for nuclear power.” A recent study published in PLoS ONE by Swedish and Australian researchers estimates that replacing all fossil fuel energy generation with nuclear power could be done in 25 to 34 years. Economic **growth supplies the capital needed to fund the global no-carbon energy transformation**, not mandates to deploy current, expensive, clunky versions of renewable energy and nuclear technologies.

Just as cell phones enabled poor countries to skip over landline telephone infrastructure, economic development coupled with increasingly cheap solar panels attached to inexpensive, high-efficiency energy-storage systems, including batteries, **could** help them **bypass centralized fossil fuel plants** and power grids. **To truly address climate change**, responsible **policy makers should select** courses of **action that move humanity from slow- to high-growth** trajectories, especially for the poorest developing countries. This includes honest bureaucracies, the rule of law, free markets, strong property rights and democratic governance. **Whatever slows down economic growth will also slow down environmental cleanup and renewal.**

**Sustainable – reject alarmism**

Matt **Ridley**, visiting professor at Cold Spring Harbor Laboratory, former science editor of *The Economist*, and award-winning science writer, **’14**

(“The World's Resources Aren't Running Out,” April 25, 2014, <http://online.wsj.com/news/articles/SB10001424052702304279904579517862612287156?mg=reno64-wsj&url=http%3A%2F%2Fonline.wsj.com%2Farticle%2FSB10001424052702304279904579517862612287156.html>)

"We are using 50% more resources than the Earth can sustainably produce, and unless we change course, that number will grow fast—by 2030, even two planets will not be enough," says Jim Leape, director general of the World Wide Fund for Nature International (formerly the World Wildlife Fund).

But here's a peculiar feature of human history: **We burst through such limits again and again**. After all, as a Saudi oil minister once said, **the Stone Age didn't end for lack of stone.** Ecologists call **this "niche construction"**—that people (and indeed some other animals) can create new opportunities for themselves by making their habitats more productive in some way. Agriculture is the classic example of niche construction: We stopped relying on nature's bounty and substituted an artificial and much larger bounty.

Economists call the same phenomenon **innovation**. What frustrates them about ecologists is the latter's tendency to think in terms of **static limits**. Ecologists can't seem to see that when whale oil starts to run out, petroleum is discovered, or that when farm yields flatten, **fertilizer comes along**, or that when glass fiber is invented, demand for copper falls.

**That frustration is heartily reciprocated**. Ecologists think that economists espouse a sort of **superstitious magic** called "markets" or "prices" to avoid confronting the reality of limits to growth. The easiest way to raise a cheer in a conference of ecologists is to make a rude joke about economists.

**I have lived among both tribes**. I studied various forms of ecology in an academic setting for seven years and then worked at the Economist magazine for eight years. When I was an ecologist (in the academic sense of the word, not the political one, though I also had antinuclear stickers on my car), I very much espoused the carrying-capacity viewpoint—that there were limits to growth. I nowadays lean to the view that there are no limits because we can invent new ways of doing more with less.

This disagreement goes to the heart of many current political issues and explains much about why people disagree about environmental policy. In the climate debate, for example, pessimists see a limit to the atmosphere's capacity to cope with extra carbon dioxide without rapid warming. So a continuing increase in emissions if economic growth continues will eventually accelerate warming to dangerous rates. But optimists see economic growth leading to **technological change that would result in the use of lower-carbon energy**. That would allow warming to level off **long before it does much harm.**

It is striking, for example, that the Intergovernmental Panel on Climate Change's recent forecast that temperatures would rise by 3.7 to 4.8 degrees Celsius compared with preindustrial levels by 2100 was based on several assumptions: little technological change, an end to the 50-year fall in population growth rates, a tripling (only) of per capita income and not much improvement in the energy efficiency of the economy. Basically, that would mean a world much like today's but with lots more people burning lots more coal and oil, leading to an increase in emissions. Most economists expect a five- or tenfold increase in income, huge changes in technology and an end to population growth by 2100: not so many more people needing much less carbon.

In 1679, Antonie van Leeuwenhoek, the great Dutch microscopist, estimated that the planet could hold **13.4 billion people**, a number that most demographers think we may never reach. Since then, estimates have bounced around between 1 billion and 100 billion, with no sign of converging on an agreed figure.

Economists point out that **we keep improving the productivity of each acre of land by applying fertilizer,** **mechanization, pesticides and irrigation.** Further innovation is bound to shift the ceiling upward. Jesse Ausubel at Rockefeller University calculates that the amount of land required to grow a given quantity of food has fallen by 65% over the past 50 years, world-wide.

Ecologists object that these innovations rely on nonrenewable resources, such as oil and gas, or renewable ones that are being used up **faster than they are replenished**, such as aquifers. So current yields cannot be maintained, let alone improved.

In his recent book "The View from Lazy Point," the ecologist Carl Safina estimates that if everybody had the living standards of Americans, we would need 2.5 Earths because the world's agricultural land just couldn't grow enough food for more than 2.5 billion people at that level of consumption. Harvard emeritus professor E.O. Wilson, one of ecology's patriarchs, reckoned that only if we all turned vegetarian could the world's farms grow enough food to support 10 billion people.

Economists respond by saying that since large parts of the world, especially in Africa, have yet to gain access to fertilizer and modern farming techniques, there is no reason to think that the global land requirements for a given amount of food will cease shrinking any time soon. Indeed, Mr. Ausubel, together with his colleagues Iddo Wernick and Paul Waggoner, came to the startling conclusion that, even with generous assumptions about population growth and growing affluence leading to greater demand for meat and other luxuries, and with ungenerous assumptions about future global yield improvements, we will need less farmland in 2050 than we needed in 2000. (So long, that is, as we don't grow more biofuels on land that could be growing food.)

But surely intensification of yields depends on inputs that may run out? Take water, a commodity that limits the production of food in many places. Estimates made in the 1960s and 1970s of water demand by the year 2000 proved grossly overestimated: The world used half as much water as experts had projected 30 years before.

The reason was greater economy in the use of water by **new irrigation techniques**. Some countries, such as Israel and Cyprus, have cut water use for irrigation through the use of drip irrigation. Combine these improvements with solar-driven desalination of seawater world-wide, and it is **highly unlikely that fresh water will limit human population.**

The best-selling book "Limits to Growth," published in 1972 by the Club of Rome (an influential global think tank), argued that we would have **bumped our heads against all sorts of ceilings by now, running short of various metals, fuels, minerals and space.** **Why did it not happen? In a word, technology: better mining techniques, more frugal use of materials**, and if scarcity causes price increases, substitution by cheaper material. We use 100 times thinner gold plating on computer connectors than we did 40 years ago. The steel content of cars and buildings keeps on falling.

Until about 10 years ago, it was reasonable to expect that natural gas might run out in a few short decades and oil soon thereafter. If that were to happen, agricultural yields would plummet, and the world would be faced with a stark dilemma: Plow up all the remaining rain forest to grow food, or starve.

But thanks to fracking and the shale revolution, **peak oil and gas have been postponed**. They will run out one day, **but only in the sense that you will run out of Atlantic Ocean one day if you take a rowboat west out of a harbor in Ireland**. Just as you are likely to stop rowing long **before you bump into Newfoundland**, so **we may well find cheap substitutes for fossil fuels long before they run out**.

**Financialization’s self-sustaining**

**Konings, 18**

Martijn Konings, Associate Professor of Political Economy at the University of Sydney, author of *The Emotional Logic of Capitalism* and *Capital and Time: For a New Critique of Neoliberal Reason*, series editor for the Stanford University Press book series, Currencies. 02-07-18. “A Critique of the Critique of Finance.” Stanford University Press Blog. https://stanfordpress.typepad.com/blog/2018/02/a-critique-of-the-critique-of-finance.html

Critics of neoliberal capitalism rarely recognize the **productive power of speculation**. If there is one theme that unites the various critiques of contemporary finance, it is the emphasis on its speculative character. Financial growth is said to be driven not by the logic of efficient markets, but rather by irrational sentiment, “animal spirits” that do not respect fundamental values. Emphasizing the role of volatility in contemporary capitalism (evident at the time of writing, as the stock market is experiencing a downturn) is important as an antidote to notions of market efficiency and equilibrium. But it is a mistake to think that it provides a sufficient basis for effective critique. **Predictions** regarding the **limits or collapse** of **neoliberal finance** have simply **not enjoyed a good track record**. **Over and over**, the contemporary financial system has **proven capable of sustaining higher levels of speculative activity than anticipated**. This has certainly been true of the past decade. Capital and Time: For a New Critique of Neoliberal Reason is my attempt to make sense of this—that is, to understand what might be wrong or missing in the existing heterodox critique of speculation, and to advance a more accurate understanding of the role of uncertainty, risk, and speculation in contemporary capitalism. At the heart of the critique of speculation we find a **distinction between real and fictitious forms of value**. Although “**essentialist**” (or “foundationalist”) modes of explanation have been under fire across the social sciences for several decades now, when it comes to the critique of finance they have had considerable staying-power: without a notion of real value, it often seems, we lose any objective standard against which to assess the speculative gyrations of capitalist markets. Capital and Time asks what kind of critical theory we might develop if we bracket the anxious attachment to a notion of fundamental value. To that end, it turns to the work of economist Hyman Minsky. Although Minsky has been popularized precisely as a critic of speculation, he in fact insisted that almost all value judgments and investments were to some degree speculative—their success or failure would be determined in an unknown future. For him, the key economic question is how order emerges in a world that offers no guarantees, how more or less stable standards and norms arise amidst uncertainty. Of course, the “endogenous” origin of financial standards is a well-rehearsed theme in heterodox economics—indeed, it is a staple of the “post-Keynesian” literature that claims Minsky’s legacy. But such perspectives have never been able to break with the idea that **financial stability** is at its core dependent on external interventions that suppress speculative impulses. For Minsky, however, this is to **miss the point** about **endogeneity**. To his mind, there was no clear dividing line between financial practices and their governance: central banks and other public authorities are no more able to see into the future and to transcend uncertainty than private investors are. Minsky was therefore highly skeptical about official claims of discretionary precision management: financial governance is always embroiled in the very risk logic that it is charged with managing. That also means that financial policy can appear quite ordinary, even banal: at the heart of capitalist financial management is a logic of **backstopping** and **bailout** that responds to the possibility that the failure of an institution may take down wider financial structures. The stability of the post-New Deal financial system is often attributed to the Glass-Steagall separation of the stock market and commercial banking. But Minsky tended to view Glass-Steagall as one of several measures to direct bank credit away from the stock market towards other, no less speculative ends, notably consumer and mortgage financing. To his mind, the stability of the post-war period derived rather from the creation of an extensive **financial safety net** (which included, for instance, deposit insurance, which removed the rationale behind bank runs) that served to **socialize risk**. This institutional arrangement turned out to have a significant drawback: a pattern of chronic inflation emerged that, by the late 1970s, was widely perceived as a major problem. Minsky’s lack of faith in the possibility of cleanly staged external interventions led him to feel that that there was no real way out of this predicament. Monetarist doctrines, ascendant during the 1970s under the influence of Milton Friedman, relied on exactly the belief in an arbitrarily defined monetary standard that Minsky rejected as naïve. Muddling through, it seemed, was the price of avoiding another financial crash and depression. The Volcker shock of 1979 changed this dynamic in a way that Minsky had not foreseen but that is comprehensible when seen through the lens he provided us with. Paul Volcker looked to monetarism not as a means to enforce an external limit or standard on the financial system, but as a politically expedient way to break with accommodating policies and to proactively engage the endogenous dynamics of finance. The consequences of the Volcker shock were predictable (which is exactly why the Federal Reserve had been reluctant to pursue similar policies in previous years): inflation gave way to instability and crisis. Inflation was conquered as jobs were lost and wages stagnated. And, far from money being returned to its neutral exchange function, opportunities for speculation multiplied. The American state was never going to sit idly by as the financial system returned to dynamics of boom and bust: when instability took the form of systemic threats, authorities would bail out the institutions that had overextended themselves. Of course, Volcker would not have been able to predict the specific features of the too-big-to-fail regime as it emerged during the 1980s and evolved subsequently; but the very point of the neoliberal turn in financial management that he had overseen was to create a context where risk could be socialized in ways that were more selective and therefore did not entail generalized inflation. The inflation of asset values that has been such a marked feature of the past four decades has always been premised centrally on the willingness of authorities to view the “moral hazard” of the too-big-to-fail logic as a policy instrument—even if they may have decried it officially as a regrettable corruption of market principles. Spectacular bailouts, mundane policies to protect the key nodes of the payment systems, the “Greenspan put”, the different iterations of quantitative easing—these are all variations on that basic too-important-to-fail logic. Existing critical perspectives tend to view crisis and the need for bank bailouts as manifesting the essential incoherence of neoliberal finance, its lack of solid foundations and the irrationality of speculation. Capital and Time breaks with such moralistic assessments. The way deepening inequality and the speculative growth of asset values continue to feed off each other is troubling for any number of reasons, but **there is nothing inherently “unsustainable” about it—the process does not have a natural or objective limit**. At this point in time, the **critique** of speculation **does little more than lend credibility to official discourses** that present crises as preventable and bailouts as one-off, never-to-be-repeated interventions. In that way, it prevents us from critically relating to a neoliberal reality that has been shaped to its core by the speculative exploitation of risk and uncertainty, and in which regressive risk socialization serves as the everyday logic of financial governance.

**Cap isn’t the root cause of war---answers their warrant in Caliconnes**

Dr. Bryan **Mabee 11**. Senior Lecturer in the School of Politics and International Relations at Queen Mary, University of London, BA, MA (Manitoba), PhD (Aberystwyth), “LIBERAL MILITARISM IN INTERNATIONAL RELATIONS: REVISITING THE US ‘NATIONAL SECURITY STATE’”, p. 11-13.

Explaining Militarism in International Relations Militarism – conceptualised broadly as preparations for and ideology of war – is often seen as endemic to the international system. Political realists have long expressed a ‘tragic’ account of international politics that sees state-based preparation for war as a consequence of the competitive nature of international relations (e.g. Mearsheimer, 2001; Waltz, 1988; c.f. Leffler, 1992). Historical sociologists such as Michael Mann (1993) have also insisted on the importance of this logic, while stressing the different institutional manifestations of militarism (and other sources of social power) over time. However, even with the structural imperative of geopolitical competition as a base, it still does not help explain variations in state militarism either across time or for individual states: i.e. the specific forms of war preparation that individual states pursue, and how these reflect a particular historical logic. Indeed the explanation that is necessary for the national security state is not why a state such as the US might prepare for war, but why it prepares in a particular fashion. Another prominent explanation for the development of increased militarism in the postwar American state has been through the theory of the ‘military industrial complex’ (MIC) (Roland, 2007; c.f. Koistinen, 1980; Rosen, 1973; Sarkesian, 1972). The theory itself exists in a variety of forms, from the original focus on the undue pressures of defence lobbyists in the case of President Eisenhower’s original warning (Eisenhower, 1961); through concerns about the excessive influence of elites focused on security and war (Lasswell, 1941; Mills, 1956); to a **Marxian focus** on the **economic productivity** of defence firms (Coulomb and Bellais, 2008; Mackenzie, 1983). Though the overall postulation of burgeoning ‘military establishment’ (Yarmolinksy, 1971) with ties to business has been highly accurate in describing an institutional form, there are **issues with causation** that make the account **problematic** for understanding the national security state. The MIC theory mainly **suffers** from the opposite problem of the international-structural perspective: that it is based **entirely** on an **internal** economic logic, where the dynamics of **i**nternational **r**elations play **no part** (Buzan and Herring, 1998). All states are militarized in various degrees through war preparations, which are **not easily explained just by domestic political economy** (Mackenzie, 1983). The avoidance of the international dimension of militarization results in a **limited account** of militarism, even as applied directly to the US state. The MIC also does little to explain the **peculiarities** of the American system; as Koistinen (1980) has noted, the MIC should really just be part of a broader political economy of American warfare, not just explaining the postwar period. Or, as E. P. Thomson more polemically stated, modern societies ‘do not have military industrial complexes – they are military-industrial complexes’ (quoted in Shaw, 1988: 41). The **key problem** with these accounts of militarism is that they are both **too general** in terms of **causation** (i.e. the structural accounts relying too much on the permissive nature of the international system; the domestic MIC argument relying too much on the capriciousness of the arms industry) while also being **reductionist**. While it is clear that both the character of international relations and geopolitics are crucial for understanding military competition between states (and hence state militarism), the internal political economy of militarism is crucial for understanding specific manifestations of militarisms. As Smith (1983: 24) argues, ‘Militarism cannot be explained in terms of the objectives of the state alone because these are constrained by the nature of the environment in which the state operates. In particular the nature of the prevailing class relations, the nature of each conflict, and the nature of the instrument itself, military force, all influence the process. Each of these has dynamics of their own which in interaction lead to the development of the various distinct aspects of militarism’.

**No impact**

**People’s Daily 11**

(China Press – “Experts: No need to worry about falling space debris” September 28, 2011, http://english.peopledaily.com.cn/202936/7606918.html

Space debris will not pose a threat to humans, he said. However, the real reason why scientists are concerned about space debris is because of its potential to harm or hinder spacecraft. Since 1957, when the first artificial satellite was launched into space, the amount of space debris has increased year by year. As of this week, there are more than 16,000 pieces of debris with a diameter of more than 10 centimeters in space, according to observation data from the United States. This debris is distributed in different earth orbits: low orbit, hundreds of kilometers away from the earth; moderate-altitude orbit, thousands of kilometers away, and high orbit, tens of thousands of kilometers away. Because of this, the debris is not concentrated in a dense region of space. Generally speaking, space debris is divided in three categories: large space debris, with a diameter of more than 10 centimeters; small space debris, with a diameter of less than 1 millimeter, and dangerous debris, with a diameter between large and small debris. "If the debris falls to the earth, most of it will be burned away by the high temperature of thousands of degrees produced by the high-speed friction with the atmosphere. Even if a large chunk of space debris penetrated the atmosphere and posed a threat to the earth, [hu]mankind should be capable of defending against it," Gong said. First, we can roughly estimate its orbit. With the estimation of its orbit, **we can intercept it**. Gong said that the U.S. has successfully intercepted a failed satellite using a missile. That satellite contained highly toxic substances. In order to prevent it from falling into the sea, the U.S. destroyed the satellite by a missile launched from a warship. China also has similar technologies and can disintegrate it in the space before it causes harm." "Scientists also have come up with many other methods to clear the space debris. For example, we can leave some fuel in satellites and control the satellite to fly out of the original track," Gong said. "Some countries have developed passive technologies, such as launching a spacecraft to catch space debris and take it away. Other countries are developing satellites with mechanical arms, which not only can repair satellites but also can pull the failed satellites out of the orbit."

**No space war**

**Pavur** **19**—DPhil Researcher Cybersecurity Centre for Doctoral Training at Oxford University [James Pavur and Ivan Martinovic (Professor of Computer Science Department of Computer Science at Oxford University), 2019, “The Cyber-ASAT: On the Impact of Cyber Weapons in Outer Space”, 2019 11th International Conference on Cyber Conflict: Silent Battle T. Minárik, S. Alatalu, S. Biondi, M. Signoretti, I. Tolga, G. Visky (Eds.), https://ccdcoe.org/uploads/2019/06/Art\_12\_The-Cyber-ASAT.pdf] AMarb

1. Limited Accessibility Space is difficult. Over 60 years have passed since the first Sputnik launch and only nine countries (ten including the EU) have orbital launch capabilities. Moreover, a launch programme alone does not guarantee the **resources** and **precision required** to **operate a meaningful ASAT capability**. Given this, one possible reason why **space wars have not broken out** is simply because only the US has ever had the ability to fight one [21, p. 402], [22, pp. 419–420]. Although launch technology may become cheaper and easier, it is unclear to what extent these advances will be distributed among presently non-spacefaring nations. **Limited access to orbit** necessarily reduces the scenarios which could plausibly escalate to ASAT usage. Only major conflicts between the handful of states with ‘space club’ membership could be considered possible flashpoints. Even then, the **fragility of an attacker’s own** **space** **assets** creates **de-escalatory pressures** due to the **deterrent effect of retaliation**. Since the earliest days of the space race, dominant powers have recognized this dynamic and demonstrated an inclination **towards de-escalatory space strategies** [23]. B. Attributable Norms There also exists a **long-standing normative framework** favouring the **peaceful use of space**. The effectiveness of this regime, centred around the Outer Space Treaty (**OST**), is highly contentious and many have pointed out its serious legal and political shortcomings [24]–[26]. Nevertheless, this status quo framework has somehow supported over **six decades of** **relative** **peace** in orbit. Over these six decades, **norms have become deeply ingrained** into the way states describe and perceive space weaponization. This de facto codification was dramatically demonstrated in 2005 when the US found itself on the short end of a 160-1 UN vote after opposing a non-binding resolution on space weaponization. Although states have occasionally pushed the boundaries of these norms, this has typically occurred through incremental legal re-interpretation rather than outright opposition [27]. Even the most notable incidents, such as the 2007-2008 US and Chinese ASAT demonstrations, were couched in rhetoric from both the norm violators and defenders, depicting space as a peaceful global commons [27, p. 56]. Altogether, this suggests that **states perceive** **real** **costs** to breaking this normative tradition and may even **moderate their** **behaviours** accordingly. One further factor supporting this norms regime is the **high degree of attributability** surrounding ASAT weapons. For kinetic ASAT technology, **plausible deniability** and **stealth** are essentially **impossible**.
2. The literally explosive act of launching a rocket cannot evade detection and, if used offensively, retaliation. This imposes **high diplomatic costs** on ASAT usage and testing, particularly during peacetime. C. Environmental Interdependence A third stabilizing force relates to the **orbital** **debris consequences** of ASATs. China’s 2007 ASAT demonstration was the largest debris-generating event in history, as the targeted satellite dissipated into thousands of dangerous debris particles [28, p. 4]. Since debris particles are indiscriminate and unpredictable, they often threaten the attacker’s own space assets [22, p. 420]. This is compounded by Kessler syndrome, a phenomenon whereby orbital debris ‘breeds’ as large pieces of debris collide and disintegrate. As space debris remains in orbit for hundreds of years, the **cascade effect** of an ASAT attack can constrain the attacker’s long-term use of space [29, pp. 295– 296]. Any state with kinetic ASAT capabilities will likely also operate satellites of its own, and they are necessarily exposed to this collateral damage threat. Space debris thus acts as a strong strategic deterrent to ASAT usage.

**Quarantine and robotic missions solve**

**Carr et al ‘12**

The MEPAG-SBAG Precursor Science Analysis Group (Carr, Michael1 ; Abell, Paul2 ; Baker, John3 ; Barnes, Jeff4 ; Bass, Deborah3 ; Beaty, David3 ; Boston, Penny5 ; Brinkerhoff, Will6 ; Budney, Charles3 ; Charles, John7 ; 8 Delory, Greg8 ; Desai, Prasun9 ; Drake, Bret7 ; Hamilton, Vicky15; Head, Jim14; Heldmann, Jen10; Hoffman, Steve7 ; Kass, David3 ; Lim, Darlene10; Meyer, Michael9 ; Munk, Michelle11; Murchie, Scott12; Rivkin, Andy12; Sanders, Gerry7 ; Steele, Andrew16; Wargo, Mike9 ; Zurek, Rich3 ), the MEPAG Executive Committee (Des Marais, David10; Mustard, John14; Johnson, Jeff12; Beaty, David3 ; Hamilton, Victoria; Zurek, Richard3 ; Hinners, Noel13; Meyer, Michael9 ), and the Mars Program Office science team (Allwood, Abigail3 ; Beaty, David3 ; Bass, Deborah3 ) 1 US Geological Survey, USA 2 NASA Johnson Space Center, USA, 3 Jet Propulsion Laboratory, NASA/California Institute of Technology, USA, 5 New Mexico Tech, USA, 6 NASA Goddard Space Flight Center, USA, 7 NASA Johnson Space Center, USA, 8 University of California, Berkeley, USA, 9 NASA Headquarters, 11NASA Langley Research Center, USA, 12Johns Hopkins University, Applied Physics Laboratory, USA, 10NASA Ames Research Center, 13Lockheed Martin, USA, 14Brown University, USA, 15Southwest Research Institute, USA, 16Carnegie Institution of Washington, USA, “IS MARS SAMPLE RETURN REQUIRED PRIOR TO SENDING HUMANS TO MARS?,” http://trs-new.jpl.nasa.gov/dspace/bitstream/2014/42596/1/12-1785.pdf

Although forward contamination is primarily a science issue, back contamination of Earth is a safety issue. The 1997 Panel on Mars Sample Return (8) concluded that “contamination of Earth by putative martian microorganisms **is unlikely to pose a risk of significant impact**” but “the risk is not zero” and recommended that any samples returned from Mars by spacecraft should be contained and treated as though potentially hazardous until proven otherwise. **Numerous** subsequent **panels** since that time have agreed with these statements and investigated methods for handling returned Mars samples (e.g., 9). For robotic missions the protocols recommended by (9) involve **sealing the samples at Mars**, **breaking the chain of contact with Mars** upon leaving the planet, unsealing the samples in a Biosafety Level-4 (**BSL-4**) **facility**, performing a wide array of life-detection and biohazard testing on the contained samples, and gradually moving along a de-containment path if the biohazard and life detection tests are all negative. For any human mission at Mars, such procedures could be followed for the samples intentionally gathered and sealed at Mars. However, for Earth return, the primary concern would be the inadvertent introduction of martian materials, mainly dust and regolith, into the crew living space. These martian materials might come into contact with or be inhaled or ingested by the crew, and it might not be possible to guarantee that the materials make no contact with elements of the terrestrial environment upon Earth return before they are proven to be safe. The most straightforward way to assess whether martian materials present a risk to a crew or the Earth is **to robotically return contained** **samples** of dust and regolith to Earth prior to any human missions, treat the samples as though they were hazardous until proven otherwise and follow procedures for sample handling, life detection and biohazard assessment similar to those outlined in (9). The results of such a mission or missions would then be used to assess how best to handle how any human missions address back contamination issues. In the event that the returned martian samples present no hazard, then back contamination procedures could be relaxed, as was the case with Apollo once lunar samples had been closely examined. If martian life would be detected in the returned samples and it proves to be hazardous, or the martian materials were found to have other adverse effects, then the rationale and architecture of any human missions would have to be re-assessed.

**Quarantine solves**

**Hollingham ‘13**

Richard, science journalist and presenter of the Space Boffins podcast. He edits Space:UK magazine for the UK Space Agency, commentates on launches for the European Space Agency and is a science presenter for BBC radio, “Mars Sample Return: Bringing the Red Planet to Earth,” <http://www.bbc.com/future/story/20130104-bringing-back-a-bit-of-mars/2>

The technology being looked at for this laboratory is based **on existing secure biological or nuclear facilities**, incorporating the **lessons learnt** from Apollo. The aim of quarantine is not only to prevent any risk from Mars germs – and some horrible Andromeda Strain scenario – but the contamination of Mars samples by Earth microbes. Although **the chances of the sample containing a deadly bug are almost certainly miniscule**, the consequences of any release are potentially serious. What if there really was a deadly bug on Mars? However remote the possibility, we would be foolhardy to rule it out. It is therefore essential that, unlike the Stardust mission, the container survives its return.

**Sample return solves**

**Carr et al ‘12**

The MEPAG-SBAG Precursor Science Analysis Group (Carr, Michael1 ; Abell, Paul2 ; Baker, John3 ; Barnes, Jeff4 ; Bass, Deborah3 ; Beaty, David3 ; Boston, Penny5 ; Brinkerhoff, Will6 ; Budney, Charles3 ; Charles, John7 ; 8 Delory, Greg8 ; Desai, Prasun9 ; Drake, Bret7 ; Hamilton, Vicky15; Head, Jim14; Heldmann, Jen10; Hoffman, Steve7 ; Kass, David3 ; Lim, Darlene10; Meyer, Michael9 ; Munk, Michelle11; Murchie, Scott12; Rivkin, Andy12; Sanders, Gerry7 ; Steele, Andrew16; Wargo, Mike9 ; Zurek, Rich3 ), the MEPAG Executive Committee (Des Marais, David10; Mustard, John14; Johnson, Jeff12; Beaty, David3 ; Hamilton, Victoria; Zurek, Richard3 ; Hinners, Noel13; Meyer, Michael9 ), and the Mars Program Office science team (Allwood, Abigail3 ; Beaty, David3 ; Bass, Deborah3 ) 1 US Geological Survey, USA 2 NASA Johnson Space Center, USA, 3 Jet Propulsion Laboratory, NASA/California Institute of Technology, USA, 5 New Mexico Tech, USA, 6 NASA Goddard Space Flight Center, USA, 7 NASA Johnson Space Center, USA, 8 University of California, Berkeley, USA, 9 NASA Headquarters, 11NASA Langley Research Center, USA, 12Johns Hopkins University, Applied Physics Laboratory, USA, 10NASA Ames Research Center, 13Lockheed Martin, USA, 14Brown University, USA, 15Southwest Research Institute, USA, 16Carnegie Institution of Washington, USA, “IS MARS SAMPLE RETURN REQUIRED PRIOR TO SENDING HUMANS TO MARS?,” http://trs-new.jpl.nasa.gov/dspace/bitstream/2014/42596/1/12-1785.pdf

Concerns over forward and back contamination have led to numerous workshops and international agreements on how Mars exploration should be conducted. The work has usually focused on robotic exploration but human missions have also been considered (e.g. 10). The participants in these workshops generally agree that despite stringent controls, human missions would inevitably result in some forward contamination. In addition, any human exploration of Mars would likely result in contamination of the astronauts’ living space and upon the their return, some uncontained martian materials might be introduced to Earth. Countermeasures that have been proposed to mitigate forward and/or back contamination include landing in zones having minimum biologic risk and assessing potential biologic hazards with precursor missions (including **sample return).** The strategy to land at sites with minimum biologic risk might reduce some of the planetary protection concerns but it would conflict with other high priority mission objectives. For example, one of the highest priority science objectives for potential human exploration would be to study areas of water activity (liquid water and ice) on Mars to understand climate, geology and the potential for martian life (3). However, these most compelling science sites are deemed offlimits by planetary protection policies (7). Another example of incompatibility between current planetary protection policy and human exploration relates to ISRU. Water ice potentially could enable human exploration, yet the presence of ice would invalidate a site for human exploration since ice is not a zone of minimal biologic risk. These issues highlight the importance of Mars sample return prior to any human exploration. Sample return would allow us to conduct the most thorough investigation for martian life possible prior to any human exploration

in order to develop and implement the most robust and practical planetary protection protocols.

# 1NR

## Case

**Market forces will transform CCS into a widely used multi-billion dollar industry**

**Scott ’18 –** Associate Professor of Ethics; Director of the Center for Ethics at Franke College of Forestry and Conservation, University of Montana

Dane. “Ethics of Climate Engineering: Chemical Capture of Carbon Dioxide from Air” International Journal for Philosophy of Chemistry Vol 24. Page 55-77. <http://hyle.org/journal/issues/24-1/scott.pdf>

DAC of carbon and storage (DACCS) seemed to many a tantalizing technological fix for climate change, but it proved to be far too expensive. **Prior to the publication of Carbon Engineering’s 2018 result**s, the definitive study of the costs of industrial-scale DAC estimated the price to be $1000 US dollars per metric ton of CO2 (House et al. 2011). To put this number in perspective, it would cost approximately $1.2 trillion to capture the CO2 emitted by coal-fired power plants in the United States during 2017, approximately 1.2 billion metric tons (US Energy Information Administration 2018). A central problem DAC must overcome is the ‘net carbon problem’ (ibid.). The concentration of CO2 in ambient air is extremely small, approximately 400 parts per million (Burrows 2018). Consequently, large industrial machines must move massive amounts of air through the process to capture enough CO2 for the technique to work. These industrial machines, and other parts of the operation, require much energy. Energy, of course costs money, and depending on the source of energy, the operation will add more or less CO2 to the atmosphere. An accurate assessment of this technique for climate engineering would require a full accounting of the CO2 added to the atmosphere during the operation and for the full lifecycle of the plant. These numbers will not be available until experiments are run at larger scales for longer times.

Carbon Engineering estimates that **their technique would lower costs from** the 2011 study from **$1000** **to** the range of **$94** to $232 **per metric ton of CO2** (Keith et al. 2018). They were able to accomplish this by developing a new chemical process and by repurposing existing industrial technologies to run it. Their approach uses arrays of large fans to move massive amounts of air over a chemical solution to capture CO2 . They describe the chemistry as involving two connected loops: “The first loop captures CO2 from the atmosphere using an aqueous solution with ionic concentrations of roughly 1.0 M OH− , 0.5 M CO3 2−, and 2.0 M K+ . In the second loop, CO3 2− is precipitated by reaction with Ca2+ to form CaCO3 while the Ca2+ is replenished by dissolution of Ca(OH)2 . The CaCO3 is calcined to liberate CO2 producing CaO, which is hydrated or ‘slaked’ to produce Ca(OH)2” (ibid.). They produce synthetic fuel by a conventional process commonly used in the oil industry, which reacts CO2 with H2 to produce fuel. Carbon Engineering is currently seeking funding to test their chemical processes and technologies at larger scales.

It is important to note that the company is not currently pursuing plans to capture carbon and store it, for example, in geologic formations. Their research focuses on producing ‘carbon-neutral’ synthetic fuels, which is only possible if the electricity used to drive the process is generated from a noncarbon producing source, such as a hydroelectric plant. Further, it should also be noted that the current process uses some natural gas, which researchers hope to replace with electricity and make the process carbon neutral. That said, David Keith notes that the company could adapt their technique for producing ‘carbon neutral’ fuels to be used as a negative emissions technology. However, Keith remarks that, “[carbon storage] wouldn’t give Carbon Engineering any product to sell, and there are no buyers stepping up to front the effort, for now” (Meyer 2018). For Climate Engineering’s technique to realize any potential for climate engineering, a market for removing carbon from the atmosphere and ‘permanently’ storing it would have to exist. However, this might be an instance where a **proof of concept technology could help create a market for the service it could someday provide**. **Once** negative emissions technologies are **seen as a possible way to make vast fortunes**, while also providing a vital social benefit, it is easy to imagine that **the political will to create a market for CCS will somehow emerge** – especially **with powerful advocates like Bill Gates leading the way.**

Carbon Engineering is pioneering a potentially multibillion-dollar industry that might someday serve as a **technological fix for the climate crisis**. One journalist notes that “[Carbon Engineering] could […] make Harvard superstar physicist David Keith, Microsoft co-founder Bill Gates, and oil sands magnate Norman Murray Edwards [another powerful financial backer] more money than they could ever dream of” (Vidal 2018). If Carbon Engineering continues to attract wealthy and politically influential backers like Bill Gates and Norman Murray Edwards, the **creation of a CCS industry could transform the landscape of climate change politics.** This could be a mixed blessing: the promise alone of cost-effective CCS could create a moral hazard, which, as will be explained, could lead to an ethical dilemma for scientists considering CCS research.

**Retrenchment DA**

**2] Fractures Europe---World War III.**

Ian **Kearns 18** --- Chief executive of the European Leadership Network and former deputy director of the Institute for Public Policy Research.

[Published: 2018. “Collapse: Europe After The European Union.” Chapter 9. An Unstable Continent. Google Books.]

Even that path will **bring its dangers**, because in many respects **Europe** after the European Union will be a **more dangerous place** than it was during **the Cold War**. Then, the continent was divided and had far more **nuclear weapons** on its territory than it does today, including many on a high state of alert. The situation was fraught and few would wish to go back to it. But a **military balance** of sorts was **preserved**, underpinned not only by nuclear deterrence but eventually by arms control agreements too. Spheres of influence existed and for the most part both sides recognized them and acted accordingly. Over time, and especially after the close encounter with Armageddon represented by the Cuban Missile Crisis in 1962, crisis prevention and crisis management procedures were put in place to limit the risks. Intense espionage, hot conflict by proxy in other parts of the world, and a variety of sub-military forms of competition continued, but the Cold War **stayed cold**. By its end, its protagonists had managed to transition it from unmanaged competition to managed stand-off.1"

In Europe after the EU the challenge will have to be faced all over again. **Even without** a fundamental **confrontation of political ideas** between the **major powers** it will be **hard to avoid conflict**. The challenge will not be to manage a status quo in the context of recognized spheres of influence and an agreed set of rules, but to manage an **unfolding process** of historical change on a continent whose **rules** have **just imploded**, where **no** recognized **spheres of influence** exist, and in a **landscape littered** with **potential points** of **great-power friction**. There is no reason to suppose that the political class and leadership elite that had failed to keep the EU together in the first place can find the wisdom and statecraft to rise to that challenge. And there is no reason either to suppose, where that elite has been **replaced** by **one more nationalist** in tone and policy content, that the outcome will be any better. If anything, it will be worse.

History seems to teach us that the successful **management** of a **balance of power** can be **achieved for a time** but **not indefinitely**.145 It is a feat sometimes achieved by earlier generations of Europeans and on occasion, even for a prolonged period, but it is also one that in the end, and quite spectacularly, they were unable to sustain. A post-EU Europe will be **inherently unstable**. We may see **wars in eastern Europe** that trigger **refugee flows** to the west on a **similar scale** to those recently experienced from the south. We may see **smaller wars** into which larger **European powers are pulled** or **miscalculations of interest** that **trigger conflict** between them. And we may once again see a Europe where smaller states have their interests **totally disregarded** by those with greater clout. What we are **unlikely to see**, for a very long time at least, is a Europe of **cooperative institutions** and behaviours underpinned by common values and some shared rules of the road. We would not necessarily experience the new Dark Age that Winston Churchill warned of in 1940, but if the EU collapses we will be much nearer to it than to the sunlit uplands for which he and so many other Europeans fought.146

**3] Domestic public backlash forces reintervene as crises erupt around the globe---makes miscalc uniquely likely.**

**Wright 20** – Director, Center on the US & Europe and Sr. Fellow, Project on Internat’l Order & Strategy at Brookings

Thomas Wright, director of the Center on the United States and Europe, senior fellow in the Project on International Order and Strategy at the Brookings Institution, contributing writer for The Atlantic, and nonresident fellow at the Lowy Institute for International Policy, The Folly of Retrenchment: Why America Can’t Withdraw From the World, March/April 2020, <https://www.foreignaffairs.com/articles/2020-02-10/folly-retrenchment>

A fifth problem with retrenchment is that it **lacks domestic support**. The American people may favor greater burden sharing, but there is **no** evidence that they are onboard with a **withdrawal** from Europe and Asia. As a survey conducted in 2019 by the Chicago Council on Global Affairs found, **seven out of ten** Americans believe that maintaining military superiority makes the United States safer, and almost **three-quarters** think that alliances contribute to U.S. security. A 2019 Eurasia Group Foundation poll found that over 60 percent of Americans want to maintain or **increase** defense spending. As it became **apparent** that **China and Russia would benefit** from this shift toward retrenchment, and as the United States’ democratic **allies objected** to its withdrawal, the **domestic political backlash would grow**. One result could be a **prolonged foreign policy debate** that would **cause the United States to oscillate** between retrenchment and **reengagement**, creating uncertainty about its commitments and thus **raising the risk of miscalculation** by **Washington, its allies, or its rivals**.

1. **Endlessly repeating “heg causes violence” is NOT a *substitute for impact calculus* --- some violence matters more, and war is conceptually distinct!**

**Barkawi 12** (Tarak Barkawi, PhD in Political Science, Reader in the Department of International Relations, London School of Economics, “Of Camps and Critiques: A Reply to ‘Security, War, Violence’,” Millennium - Journal of International Studies September 2012 vol. 41 no. 1 124-130)

A final totalising move in ‘Security, War, Violence’ is the idea that the **study of war should be subsumed under the category of ‘violence’**. The reasons offered for this are: violence does not entail a hierarchy in which war is privileged; a focus on violence encourages us to see war in relational terms and makes visible other kinds of violence besides that of war; and that the analysis of violence somehow enables the disentangling of politics from war and a proper critique of liberal violence.22 I have no particular objection to the study of violence, and I certainly think there should be more of it in the social sciences. However, **why and how this obviates or subsumes the study of war is obscure to me**. Is war not historically significant enough to justify inquiry into it? **War is a more specific category** relative to violence in general, referring to reciprocal organised violence between political entities. I make no claims that the study of war should be privileged over that of other forms of violence. Both the violence of war, and that of, say, patriarchy, demand scholarly attention, **but they are also distinct if related topics requiring different forms of theorisation and inquiry**. As for relationality, the category of war is already inherently relational; one does not need the concept of violence in general to see this. What precisely distinguishes war from many other kinds of violence, such as genocide or massacre, is that war is a relational form of violence in which the other side shoots back. This is ultimately the source of war’s generative social powers, for it is amidst the clash of arms that the truths which define social and political orders are brought into question. A **broader focus on violence in general risks losing this central, distinctive character of the violence of war**. Is it really more theoretically or politically adequate to start referring to the Second World War as an instance of ‘violence’? Equally, while I am all for the analysis of liberal violence, another broad category which would include issues of **‘structural violence’**, I also think we have far from exhausted the subject of liberalism and war, an important area of inquiry now dominated by the mostly self-serving nostrums of the liberal peace debates.

1. **Cannot possibly be worth the risk – stick with the devil you know.**

**Brooks and Wohlforth 16** – Professor of Government at Dartmouth College, PhD from Yale University

Stephen Brooks, and William C. Wohlforth, Daniel Webster Professor of Government in the Dartmouth College Department of Government, *America Abroad: Why the Sole Superpower Should Not Pull Back from the World*, Oxford, New York: Oxford UPress (2016), pp. 195-196

Ultimately, the United States’ globe-girdling grand strategy is the **devil we know**, and a **world with a disengaged United States** is the **devil we don’t know**. Retrenchment would in essence entail a **massive experiment**: **How would the world work without a globally engaged America?** That raises a **critical question**: What are the things that **proponents** of disengagement **must presume will go right** **in order for their recommended strategic posture to really be less costly and less risky** than deep engagement? Retrenchment proponents do not answer in any detail. This silence is telling, for **their most penetrating criticisms** of deep engagement are not about the cost/benefit ratio of sustaining the grand strategy **itself** but are instead about the temptations of moving beyond it or **responding to its challenges in a suboptimally escalatory manner**. Any effort to **pull back** from the world **would also present the United States** with **temptations** and potential **challenges of implementation**; it is just **harder to call them to mind** because **we have no relevant recent experience** with this kind of foreign policy stance.

Disengagement faces the same key potential pitfall as deep engagement: the temptation to overdo it. Just as deep engagement courts pressure from those who push for Washington to do too much, disengagement courts pressure from those who might want to do too little. And just as there are deep traditions and attitudes within the American body politic that periodically push policies that lie outside deep engagement’s logic, so too are there political forces and traditions that might push for policies outside the logic of the kind of strategic disengagement that retrenchment proponents advocate. Deep engagement’s critics in the academy are not isolationists. They favor decoupling the United States’ military commitments from Eurasia, but not pulling back from an embrace of economic globalization. But in the real world the political movement that might be attracted to retrenchment might not be so discriminating; the foreign policy pronouncements of Donald Trump on the campaign trail have made this evidently clear: on top of the same basic batch of new security policies that retrenchment proponents favor, he adds greatly augmented protectionism and immigration restrictions—which they have not advocated.

The bottom line is that there is ample evidence today of powerfully inward-looking attitudes and preferences in the American body politic, and it is not hard to imagine where they might want to push a United States that had opted to pull back from the world. And if the United States **did** dramatically pull back, **fixing the resulting mess** might get **very expensive indeed**. As we noted in chapter 7, once the **U**nited **S**tates **sheds** allies, access, and military infrastructure abroad and at home, the **costs of re-engaging** in some key region, should it become necessary, **escalate dramatically**. And should the United States **pull back** from **seeking to manage the world** economy, should it decide again as it **did in the 1930s** to try to wall itself off from the vicissitude of global commerce, the damage **might not be reparable**. If it could be repaired, it would likely take an extremely long time; consider that it was not until the 1970s that global trade flows exceeded the level that existed just prior to America’s imposition of the Smoot-Hawley Tariff in 1930.

**Even if our economic system is unsustainable, military primacy is sufficient.**

**Brands 17**

Hal Brands, a Henry A. Kissinger Distinguished Professor of Global Affairs at Johns Hopkins University’s School of Advanced International Studies, Eric Edelman, a counselor at the Center for Strategic and Budgetary Assessments and was formerly an undersecretary of defense for policy, “The Crisis of American Military Primacy and the Search for Strategic Solvency,” Parameters, Winter 2016-17

As the principal objections to increasing defense resources fall away, the advantages and logic become clearer. This approach recognizes, for instance, **how beneficial** **US military primacy** has been in shaping a relatively **stable**, **prosperous**, and congenial **international order,** and it makes the investments necessary to sustain as much of this order as possible. This approach provides the United States with greater ability to **meet aggression** from a **range of enemies** and rivals **without** resorting to **dangerously escalatory strategies** in the most operationally demanding scenarios. As a result, this approach is arguably best suited to avoid the use of force over the **long term**, by **averting situations** in which American **adversaries** from Iran and North Korea to Russia and China **think aggression might pay**. “**Peace through strength**” is not a meaningless catchphrase; it **is good strategy**. Closing the capabilities-commitments gap by dramatically increasing the former therefore represents the best available approach.

VIII

“Without superior aggregate military strength, in being and readily mobilizable, a policy of ‘containment’ . . . is no more than a policy of bluff.”55 This admonition, written by the authors of NSC-68 in 1950, reflected a dawning realization that **insufficient** military power **endangered America’s global commitments**. The United States faces another crisis of strategic solvency today as gathering international threats combine with dwindling military resources to leave the American superpower in an increasingly overextended and perilous state.

America thus confronts a stark choice about how to proceed. Of the options considered here, the best approach is to **find the resources** necessary to **bring American forces back into line** with the grand strateg y they are meant to support. Undertaking a sustained, major military buildup will not be cheap, but is **not unaffordable** for a wealthy superpower that has benefitted so much from military primacy and its geopolitical ben- efits. Indeed, the fundamental question regarding whether America can undertake this course is **not an economic one**. It is whether the country will politically prioritize the investments needed to **sustain its primacy** or allow itself to slip further into strategic insolvency with all the associated dangers for the United States and global order.

1. **The AFF fundamentally misreads China---the key to stability is convincing them that the US is willing to run the risk of escalation. Otherwise, they will be provocative to extract concessions. Accommodation only empowers hardliners because it convinces them the strategy is working.**

**Mastro 15** – Professor of IR & Security Studies at Georgetown University

Oriana Skylar Mastro, assistant professor at the Edmund A. Walsh School of Foreign Service, Georgetown University, Why Chinese Assertiveness is Here to Stay, The Washington Quarterly 37:4, pp. 151–170, <http://dx.doi.org/10.1080/0163660X.2014.1002161>

The U.S. mindset needs to shift to **accept greater risk** without being reckless. **Military power alone does not guarantee a credible deterrent**. U.S. efforts to bolster its military presence in the Asia–Pacific—a central pillar of the rebalancing strategy—counter the geographic, kinetic and political pillars of China’s A2/AD strategy. For example, the United States is forward-deploying more assets in the region, such as the Marine Air Ground Task Force Detachment already deployed to Australia as well as the stated goal of positioning 60 percent of all U.S. warships to the Asia–Pacific by 2020. This addresses the geographic pillar. Attempts to address the kinetic pillar include new operational concepts such as Air-Sea Battle, which “relies on highly integrated and tightly coordinated operations across war-fighting domains” in order “to disrupt and destroy enemy A2-AD networks and their defensive and offensive guided weapons systems in order to enable US freedom of action to conduct concurrent and follow-on operations.”73 Bolstering U.S. alliances with Japan, South Korea, Australia, the Philippines, and Thailand, as well as partnerships with Indonesia, Malaysia, India, Singapore, Vietnam, and New Zealand are critical components to U.S. efforts to ensure political access and support in the region. These efforts are commendable—the United States rightly works to preserve its military superiority and retain its ability to project power in the region. During the Cold War, when the greatest pacing threats were land conflicts, forward deploying U.S. forces in Europe and Asia were sufficient to demonstrate the credibility of the U.S. commitment to peace in those regions. But **China is currently testing the waters not because its leaders are uncertain about the balance of power**, **but because they are probing the balance of resolve**. This means that **staying ahead in terms of military might is insufficient** in contemporary East Asia. **China’s strategists are betting that the side with the strongest military does not necessarily win the war**—the **foundation** of the **deterrent pillar of its A2/AD strategy**. Indeed, China’s experience in fighting the Korean War proves that a country willing to sacrifice blood and treasure can overcome a technologically superior opponent. The **belief that balance of resolve drives outcomes more so than the balance of power** is the **foundation of China’s new, more assertive strategy**; but U.S. responses to date have failed to account for it. Canned demonstrations of U.S. power fail to address the **fundamental uncertainty** concerning **U.S. willingness, not ability, to fight.** The U.S. **focus on de-escalation** in all situations only **exacerbates** this issue. The Cold War experience solidified the Western narrative stemming from World War I that inadvertent escalation causes major war, and therefore crisis management is the key to maintaining peace.74 This has created a situation in which the main U.S. goal has been de-escalation in each crisis or incident with Beijing. But **Chinese leaders do not share this mindset**—**they believe leaders deliberately control the escalation process** and **therefore wars happen because leaders decide** at a given juncture that the **best option is to fight**.75 China is masterful at **chipping away at U.S. credibility** through advancing militarization and coercive diplomacy. It often **uses limited military action** to **credibly signal its willingness to escalate** if its **demands are not met**. Strategist Thomas Schelling theoretically captured this approach when he wrote it is “the sheer inability to predict the consequences of our actions and to keep things under control … that can intimidate the enemy.”76 Because **China introduces risk for exactly this reason**, the **U.S. focus on deescalation** through crisis management is **unlikely to produce any change in Chinese behavior**—if anything it will **only encourage greater provocations**. Beijing has **identified the U.S. fear of inadvertent escalation**, and is **exploiting it** to **compel the United States to give in to its demands** and preferences. In this way, the U.S. focus on de-escalation may actually be the **source of instability** by **rewarding** and **encouraging further Chinese provocations**. To **signal to China that the United States will not opt out of a conflict**, Washington must **signal willingness to escalate** to higher levels of conflict **when China is directly and purposely testing U.S. resolve**. This may include reducing channels of communication during a conflict, or involving additional regional actors, to **credibly demonstrate** that **China will not be able to use asymmetry of resolve to its advantage.** The current mindset—that crisis management is the answer in all scenarios— will be difficult to dislodge, given the tendency among U.S. military ranks to focus on worst-case “great battle” scenarios. While realistic in Cold War operational planning, decision makers should consider instead the less violent and prolonged engagements that characterize Chinese coercive diplomacy when evaluating risk and reward, such as the 1962 Sino–Indian War or the 1974 Battle of the Paracel Islands. The idea that any conflict with China would escalate to a major war, destroy the global economy, and perhaps even **escalate to** a **nuclear exchange** has **no foundation in Chinese thinking**, and **causes the United States to concede in even the smallest encounters**. While **the Chinese leadership has proven to be more risk-acceptant** than the United States (or perhaps more accurately, to assess the risks to be less than those perceived by U.S. strategists), **Xi still wants to avoid an armed conflict** at this stage. In his November 2014 keynote address at the Central Foreign Affairs Work Conference, he noted that China remains in a period of strategic opportunity in which efforts should be made to maintain the benign strategic environment so as to focus on internal development.77 Ultimately, the U.S. regional objective must be peace and stability at an acceptable cost. Given this, it is critical to understand the four components of China’s A2/AD strategy, the strategic foundation for China’s recent assertiveness, and how best to maintain the U.S. position as a Pacific power. In addition to regularly attending meetings in the region and developing new technology, new platforms, and new operational concepts designed to defeat China’s A2/AD strategy, the United States needs to break free of its Cold Warbased paradigm paralysis and rethink conceptions of limited war, escalation, and risk. Scolding China and imposing symbolic costs for each maritime incident is unlikely to **inspire the corrective change** U.S. thinkers are hoping for. The United States needs to fundamentally change its approach by **accepting higher risk** and **allowing for the possibility of escalation**—both vertically in force as well as horizontally to include other countries. This admittedly is a difficult balance, especially given the need to avoid emboldening U.S. allies to take actions that run contrary to U.S. interests. But only by mastering these two balancing acts—focusing on **balancing resolve**, rather than forces, and **prioritizing stability over crisis management**—will the United States be able to **maintain peace and stability in East Asia** **without sacrificing U.S. or allied interests.**

**2. No endless intervention --- Cold War and Iraq syndrome proves.**

**Brooks et al. 12** (John Ikenberry, Ph. D in Political Science from Chicago, Professor of Politics and International Affairs at the Woodrow Wilson School at Princeton University, Senior Fellow at the Brookings Institute, Co-Director of Princeton’s Center for International Security Studies; William Wohlforth, Ph. D in Political Science from Yale, Webster Professor of Government at Dartmouth College; Stephen Brooks, Ph. D in Political Science from Yale, Associate Professor of Government at Dartmouth College, Senior Fellow at the Belfer Center for Science and International Affairs at Harvard University; “Don’t Come Home, America”, http://www.carlanorrlof.com/wp-content/uploads/2013/03/DontComeHomeAmerica.pdf)

For many advocates of retrenchment, the mere possession of peerless, globe-girdling military capabilities leads inexorably to a dangerous expansion of U.S. definitions of national interest that then drag the country into expensive wars.64 For example, sustaining ramified, long-standing alliances such as NATO leads to mission creep: the search for new roles to keep the alliance alive. Hence, critics allege that NATO’s need to “go out of area or out of business” led to reckless expansion that alienated Russia and then to a heedless broadening of interests to encompass interventions such as those in Bosnia, Kosovo, and Libya. In addition, peerless military power creates the temptation to seek total, non-Clausewitzian solutions to security problems, as allegedly occurred in Iraq and Afghanistan.65 Only a country in possession of such awesome military power and facing no serious geopolitical rival would fail to be satisfied with partial solutions such as containment and instead embark on wild schemes of democracy building in such unlikely places. In addition, critics contend, the United States’ outsized military creates a sense of obligation to use it if it might do good, even in cases where no U.S. interests are engaged. As Madeleine Albright famously asked Colin Powell, “What’s the point of having this superb military you’re always talking about, if we can’t use it?” Undoubtedly, possessing global military intervention capacity expands opportunities to use force. If it were truly to “come home,” the United States would be tying itself to the mast like Ulysses, rendering itself incapable of succumbing to temptation. Any defense of deep engagement must acknowledge that it increases the opportunity and thus the logical probability of U.S. use of force compared to a grand strategy of true strategic disengagement. Of course, **if the alternative to deep engagement is an over-the-horizon intervention stance**, then the temptation risk **would persist after retrenchment**. The main problem with the interest expansion argument, however, is that it essentially boils down to one case: **Iraq**. Sixty-seven percent of all the casualties and 64 percent of all the budget costs of all the wars the United States has fought since 1990 were caused by that war. Twenty-seven percent of the causalities and 26 percent of the costs were related to Operation Enduring Freedom in Afghanistan. All the other interventions—the 1990–91 Persian Gulf War, the subsequent airstrike campaigns in Iraq, Somalia, Bosnia, Haiti, Kosovo, Libya, and so on—**account for 3 percent of the casualties** and 10 percent of the costs.66 Iraq **is the outlier** not only in terms of its human and material cost, but also in terms of the degree to which the overall burden was shouldered by the United States alone. As Beckley has shown, in the other interventions allies either spent more than the **U**nited **S**tates, suffered greater relative casualties, or both. In the 1990–91 Persian Gulf War, for example, the United States ranked fourth in overall casualties (measured relative to population size) and fourth in total expenditures (relative to GDP). In Bosnia, European Union (EU) budget outlays and personnel deployments ultimately swamped those of the United States as the Europeans took over postconflict peacebuilding operations. In Kosovo, the **U**nited **S**tates **suffered one combat fatality**, the sole loss in the whole operation, and it ranked sixth in relative monetary contribution. In Afghanistan, the **U**nited **S**tates is the number one financial contributor (it achieved that status only after the 2010 surge), but its relative combat losses rank fifth.67 In short, **the interest expansion argument would look much different without Iraq in the picture.** There would be no evidence for the **U**nited **S**tates **shouldering a disproportionate share of the burden**, and the overall pattern of intervention would look “unrestrained” **only in terms of frequency, not cost**, with the debate hinging on whether the surge in Afghanistan was recklessly unrestrained.68 How emblematic of the deep engagement strategy is the U.S. experience in Iraq? The strategy’s supporters insist that Iraq was a Bush/neoconservative aberration; certainly, there are many supporters of deep engagement who strongly opposed the war, most notably Barack Obama. Against this view, opponents claim that it or something close to it was inevitable given the grand strategy. Regardless, the more important question is whether continuing the current grand strategy condemns the **U**nited **S**tates **to more such wars**. The Cold War experience **suggests a negative answer**. After the **U**nited **S**tates suffered a major disaster in Indochina (to be sure, dwarfing Iraq in its human toll), it responded by waging the rest of **the Cold War using proxies** and highly limited interventions. Nothing changed in the basic structure of the international system, and U.S. military power recovered by the 1980s, yet the **U**nited **S**tates **never again undertook a large expeditionary operation** until after the Cold War had ended. All indications are that **Iraq has generated a similar effect for the post–Cold War era**. If there is an Obama doctrine, Dominic Tierney argues, it can be reduced to “No More Iraqs.”69 Moreover, the president’s thinking is reflected in the Defense Department’s current strategic guidance, which asserts that “U.S. forces will no longer be sized to conduct large-scale, prolonged stability operations.”70 Those developments in Washington are also part of a wider rejection of the Iraq experience across the American body politic, which political scientist John Mueller dubbed the “Iraq Syndrome.”71 **Retrenchment advocates would need to present much more argumentation and evidence to support their pessimism on this subject.**

1. **Turn --- US empire is the GREATEST anticolonial force in history.**

**Deudney & Ikenberry 15** (Daniel Deudney, Johns Hopkins University G. John Ikenberry, Princeton University “America’s Impact: The End of Empire and the Globalization of the Westphalian System”, August 2015, http://scholar.princeton.edu/sites/default/files/gji3/files/am-impact-dd-gji-final-1-august-2015.pdf)

In contemporary debates, this argument undercuts, modifies, and qualifies characterizations held by so many of the **U**nited **S**tates as **essentially imperial**, and the American order as an empire. In our rendering, the **U**nited **S**tate is not the last Western empire, but **the first anti-imperial and post-imperial great power in the global system.** Our argument is thus focused on the consequences of American foreign policy for the evolution of the international system, and we do not in this confined treatment offer an explanation for the origins of U.S. foreign policy. In short, we offer an argument about impacts rather than the sources of America’s antiimperial and pro-Westphalian role. Against the backdrop of this evolution of the international system and the four waves of empire building and dismantlement, it becomes possible to see more clearly the many ways in which the **U**nited **S**tates played important **anti-imperial, anti-colonial, and pro-Westphalian roles**. 16 The Pattern of American Anti-Imperial, Anti-Colonial, and Pro-Westphalian Impacts In each of the four waves of empire building and dismantlement, the **U**nited **S**tates had an impact. The **U**nited **S**tates was the first “new nation” to emerge from a rebellion against European imperial rule during the first wave of modern empire. The **U**nited **S**tates also supported the independence of other European settler colonies throughout the Americas and, with the Monroe Doctrine, helped sustain their independence against European efforts to recolonize parts of the Americas. In the second wave of late 19th century empire-building, the **U**nited **S**tates, despite its great relative power, **did not establish an empire of its own of any significance or duration**. And during the latter part of the 20th century, the **U**nited **S**tates pushed European decolonization, thus **facilitating the breakup of second wave empires**. In the great world wars in the 20th century, the **U**nited **S**tates played an important role in thwarting a third wave of imperial projects of **Germany, Japan, and Italy**. In the second half of the 20th century, the **U**nited **S**tates played **decisive roles, both ideological and military**, in thwarting the fourth wave of empire building, the expansion of the communist great power, the Soviet Union, **as well as communist coups and revolutions in many weak and small independent states.** Table

Description automatically generated The **U**nited **S**tates also played a variety of important roles in **building and strengthening Westphalian institutions**, **moderating inter-state anarchy**, and **facilitating** the ability of states to survive **as independent members of international society**. From its inception, the **U**nited **S**tates was precocious in its support for the **law of nations**, the **institutions of the society of states**, particularly **the laws of war** and neutrality, and public **international law**, as a means of **restraining war and aggression**. In both the 19th and 20th centuries, the **U**nited **S**tates, first regionally and then globally, inspired and helped **legitimate anti-colonial and anti-imperial independence movements** and national liberation struggles among peoples struggling **against empires all over the world**. In the 20th century, the **U**nited **S**tates led the efforts to institutionalize Westphalian norms of non-aggression and sovereign independence, first with the League of Nations and then with the United Nations Charter. In the second half of the 20th century, the American-led liberal international order institutionalized free trade and multilateral cooperation, thus providing the **infrastructure for a global economic system**, thus enabling smaller and weaker states to **sustain their sovereign**. Also in the second half of the 20th century, the American system of military alliances contribute**d to the dampening of violent conflicts among allied states**, particularly in Europe and East Asia, thus Table

Description automatically generated**protecting the Westphalian system from the return of violent conflict and empire-building.**  Taken together, these varied American activities in the world clearly provide strong preliminary evidence for our claim that the United States has **significantly contributed to the dismantlement of empires**, the **thwarting of further empire-building, and to the universalization, institutionalization, and stabilization of the Westphalian state-system.**

1. **Turn --- heg is key to restraint --- transition causes more entanglement and lashout.**

**Beckley 15** (Michael Beckley is a research fellow in the International Security Program at Harvard Kennedy School’s Belfer Center for Science and International Affairs., “The Myth of Entangling Alliances Michael Beckley Reassessing the Security Risks of U.S. Defense Pacts”, <http://live.belfercenter.org/files/IS3904_pp007-048.pdf>)

The finding that U.S. entanglement is rare **has important implications for international relations scholarship** and U.S. foreign policy. For scholars, **it casts doubt on classic theories of imperial overstretch** in which great powers exhaust their resources by accumulating allies that free ride on their protection and embroil them in military quagmires.22 The U.S. experience instead suggests that **great powers can dictate the terms of their security commitments and that allies often help their great power protectors avoid strategic overextension.** For policy, the rarity of U.S. entanglement suggests that the United States’ current grand strategy of deep engagement, which is centered on a network of standing alliances, does not preclude, and may even facilitate, U.S. **military restraint**. Since 1945 the United States has been, by some measures, the most militarily active state in the world. The most egregious cases of U.S. overreach, however, **have stemmed not from entangling** alliances, but from the penchant of American leaders **to define national interests expansively**, to overestimate the magnitude of foreign threats, and to underestimate the costs of military intervention. Scrapping alliances will not correct these bad habits. In fact, disengaging from alliances may unleash the **U**nited **S**tates **to intervene recklessly** abroad while **leaving it without partners** to share the burden **when those interventions go awry**.

1. **Turn --- Stats all go aff – unipolarity has ushered in massive progress since 1991**

**Beckley ’18** - Fellow in the International Security Program at Harvard Kennedy School's Belfer Center for Science and International Affairs and assistant professor of political science at Tufts University

Michael Beckley, Unrivaled: Why America Will Remain the World’s Sole Superpower, Ithaca, New York: Cornell Studies in Security Affairs, 2018, p. 135-137

No Hegemonic Rivalry

The story of world politics is often told as a game of thrones in which a rotating cast of great powers battles for top-dog status. According to researchers led by Graham Allison at Harvard, there have been sixteen cases in the past fi ve hundred years when a rising power challenged a ruling power. 3 Twelve of these cases ended in carnage. One can quibble with Allison’s case selection, but the basic pattern is clear: **hegemonic rivalry has sparked a catastrophic war every forty years on average for the past half millennium**.

The emergence of **unipolarity** in 1991 **has put this cycle of hegemonic competition on hold**. Obviously wars and security competition still occur in today’s unipolar world—in fact, as I explain later, unipolarity has made certain types of asymmetric confl ict more likely—**but none of these confl icts have the global scope or generational length of a hegemonic rivalry.**

To appreciate this point, just consider the Cold War—one of the four “peaceful” cases of hegemonic rivalry identifi ed by Allison’s study. Although the two superpowers never went to war, they divided the world into rival camps, waged proxy wars that killed millions of people, and pushed each other to the brink of nuclear Armageddon. For forty-fi ve years, World War III and human extinction were nontrivial possibilities.

Since the collapse of the Soviet Union, by contrast, the United States has not faced a hegemonic rival, and the world, though far from perfect, has been more peaceful and prosperous than ever before.

**Just look at the numbers**. From 1400 to 1991, the rate of war deaths worldwide hovered between 5 and 10 deaths per 100,000 people and spiked to 200 deaths per 100,000 during major wars. 4 After 1991, however, war death rates dropped to 0.5 deaths per 100,000 people and have stayed there ever since. **Interstate wars have disappeared almost entirely**, **and the number of civil wars has declined by more than 30 percent**. 5 Meanwhile, the global economy has quadrupled in size, creating more wealth between 1991 and 2018 than in all prior human history combined. 6

What explains this unprecedented outbreak of peace and prosperity? Some scholars attribute it to advances in communications technology, from the printing press to the telegraph to the Internet, which supposedly spread empathy around the globe and caused entire nations to place a higher value on human life.

Such explanations are appealing, because they play on our natural desire to believe in human progress, but are they convincing? Did humans suddenly become 10 to 20 times less violent and cruel in 1991? Are we orders of magnitude more noble and kind than our grandparents? Has social media made us more empathetic? **Of course not**, which is why **the dramatic decline in warfare after 1991 is better explained by geopolitics than sociology**. 8

The collapse of the Soviet Union not only ended the Cold War and related proxy fi ghting, it also opened up large swathes of the world to democracy, international commerce, and peacekeeping forces—all of which surged after 1991 and further dampened confl ict. 9 Faced with overwhelming U.S. economic and military might, most countries have decided to work within the American-led liberal order rather than fi ght to overturn it. 10 As of 2018, nearly seventy countries have joined the U.S. alliance network—a Kantian community in which war is unthinkable—and even the two main challengers to this community, China and Russia, begrudgingly participate in the institutions of the liberal order (e.g., the UN, the WTO, the IMF, World Bank, and the G-20), engage in commerce with the United States and its allies, and contribute to international peacekeeping missions. 11 History may not have ended in 1991, but it clearly changed in profound ways—and mostly for the better.

1. **Military expenditure---socialism would force massive downsizing.**

**Dye 13**, Thomas R., 9-2-2013, "Socialism and Militarism," Cambridge Core, https://www.cambridge.org/core/journals/ps-political-science-and-politics/article/abs/socialism-and-militarism/DBB95D0056464F0683D10AF2AC0AEBA6

Marxists typically argue exactly this point, using capitalism as their example. The **maintenance of a large military establishment undergirds the modern capitalist economy**. According to this argument, if it were not for the **prop provided by military spending**, advanced capitalism would fall victim to its most pervasive internal “contradiction”—underconsumption. In order to absorb “surplus capital” capitalist governments must increase spending; they cannot spend on welfare functions without undermining work incentive, so they spend on the **military instead** (Baran and Sweezy, 1968;Melman, 1972). This spending not only uses up surplus capital, but also provides capitalist states with the wherewithal to support imperialism.

**Big budget key to military readiness.**

**Clevenger 2-3-22**

(Andrew, https://rollcall.com/2022/02/03/congress-should-pass-defense-budget-to-deter-putin-senators-say/)

One of the **most powerful messages** Congress could send to **deter** Russian President Vladimir **Putin** from **invading Ukraine** would be to **pass a defense appropriations bill,** two members of the Senate Armed Services Committee said Thursday. Speaking at an event hosted by the Wilson Center, Mississippi's Roger Wicker, the second most senior Republican on the Armed Services Committee, said funding for the Defense Department could be part of a larger omnibus spending bill. He urged President Joe **Biden to get personally involved**, and to call House and Senate leadership to a meeting as soon as possible to **iron out** any lingering differences over spending levels. “Everybody agrees that working off of **defense appropriations** from a year and a half ago are **completely inadequate and sends exactly the wrong signal** not only to Vladimir **Putin** but to our friends and **potential adversaries** all over the world,” he said. “I hope what is about to happen would build a fire under us. Let’s get our national defense spending up to date.” New Hampshire Democrat Jeanne Shaheen, a senior member of both the Armed Services and Foreign Relations committees, agreed. “You’re absolutely right,” she said. “Putin’s thinking, ‘Boy, they **can’t even pass a budget**, never going to be able to unite against our actions,’ and **China** is looking at that as well.” Funding deadline The government is currently funded via a continuing resolution, which locks in spending at the levels established by the previous fiscal year’s spending bills. The current continuing resolution is set to expire on Feb. 18, meaning Congress will either have to enact new spending bills, pass another continuing resolution, or face a government shutdown.

1. **Socialists would OBVIOUSLY reject the current global capitalist free trade regime --- that causes RETRENCHMENT.**

**Brooks and Wohlforth 16** – Professor of Government at Dartmouth College, PhD from Yale University

Stephen Brooks, and William C. Wohlforth, Daniel Webster Professor of Government in the Dartmouth College Department of Government, *America Abroad: Why the Sole Superpower Should Not Pull Back from the World*, Oxford, New York: Oxford UPress (2016), pp. 196-197

It is all too easy to think of other ways retrenchment might be taken in directions unforeseen by its advocates, but **even if** it were implemented **perfectly**, it rests on what many might see as **optimistic assumptions** about the robustness of the current, and largely favorable, global order. **Most important** are the expectations that any **disruptions** to the order from the shock of a US pullback would be **minor**, borne mainly by others, and ultimately less costly to the United States than sustaining deep engagement. In other words, retrenchment proponents assume either that **today’s economic and institutional order** does **not need to be backstopped** by US deep engagement or, to the degree that it does, that it is just **not important enough** to the United Stated to warrant the cost of a deeply engaged grand strategy.

This book has shown that **the weight of scholarship casts strong doubt on those assumptions**. Ending the US leadership role would **put the institutional order**—necessary for managing the **global economy** as well as **other transnational issues**—at risk. **Withdrawing US security guarantees** would **raise security tensions in regions**, potentially **generating conflict** that could harm US economic interests and ultimately its security as well. A newly insecure and leaderless world would be **much more prone to nuclear proliferation**. To their credit, a number of retrenchment proponents acknowledge these risks, just as we have acknowledged deep engagement’s potential pitfalls. The chief response of these analysts is that these risks are most likely to be borne by other states, and so the costs they might impose on the United States are likely to be less than the costs of sustaining deep engagement.

To **take that bet**, one must believe that the United States is **well insulated** from potential disruptions abroad. This book shows that the odds on that bet are **unfavorable across a range of issues**. Retrenchment proponents discount some of these, like **cooperation** in international institutions, but they **clearly agree** that **economic well-being** is a basic US interest. And grand strategic retrenchment would be a **wager on the proposition** that economic globalization **would not be disrupted by any regional security competition or war that emerged** as a result of US withdrawal or that, **if it is disrupted, US firms and investors can avoid being significantly harmed** by any turbulence in the markets. Eugene Gholz and Daryl Press are the only retrenchment proponents who examine the global economy in any depth, and they have a noteworthy faith in economic globalization simultaneously being remarkably resilient and yet also highly adaptable. They argue that US firms and investors will be able to adapt, and that economic costs from any turbulence in the markets will be lower than the costs of deep engagement. Although **they do not say why** they expect this to be the case, they appear to **presume** **cooperation** on the **global economy** will **continue relatively unhindered** without a **single leading state that can use alliance relationships** to help broker favorable bargains. Finally, they **predict that global oil markets will remain efficient and oil prices will always quickly stabilize if a conflict emerges** in a major oil-producing region.

**Oversees presence key to avoid conflict.**

Colin **Dueck 15** --- Foreign Policy Research Institute senior fellow.   
[Published: 04-30-2015. “The Strategy of Retrenchment and Its Consequences.” ISN. Accessible: <http://www.isn.ethz.ch/Digital-Library/Articles/Detail/?lng=en&id=190230>]

In truth, retrenchment in US military spending, force posture, and security strategy under President Obama has had several consequences he probably did not intend. First, while there is less immediate expense in maintaining a smaller-sized force, sized to handle only one major regional contingency at a time – and with no intention of engaging in large-scale ground campaigns – there is obviously a trade-off here in terms of cost and risk. Naturally, when the United States **downsizes its presence** overseas, **this tends** to unnerve allies and **encourage adversaries**. **Allies depend upon** believable, material **indicators of American commitment**, including a **strong military presence** together with a **credible readiness** to use it. **Adversaries are deterred by the same**. Some leading strategic statements issued by the administration, such as the new National Security Strategy, do not really spell out or concede any such trade-off between cost and risk. Instead, they simply take it for granted that the increased risk is manageable. In effect, current **plans assume** or perhaps hope that international adversaries **will not take advantage** of America's scaled-back ability to handle a range of possible challenges. US **adversaries may not be so forgiving**. They might also **misperceive** the true **extent of American commitment** and **resolve**, under the **impression** the **US won't respond**. Indeed **this is how** many of **America's wars have begun** in the past. So a **smaller force**, together with indicators of limited US capabilities, is hardly a guarantee of peace, either for the United States or for others. On the contrary, it has **often preceded** the **outbreak of war**. [8]

**Unraveling of the global alliance system triggers every impact—And solves nothing, because history proves that the war will come to us**

Mira **Rapp-Hooper**, Stephen A. Schwarzman Senior Fellow for Asia Studies at the Council on Foreign Relations and a Senior Fellow at Yale Law School’s Paul Tsai China Center, 20**20**, Saving America’s Alliances: The United States Still Needs the System That Put It on Top, Foreign Affairs

The stakes of **failing** to reform the **alliance system** could **scarcely be higher**. If Washington does not act, it will miss the opportunity to **protect its dearest interests on relatively favorable terms**, before China’s growing power and Russia’s revanchism undermine the **system’s proven guarantees**. The reform agenda recommended here is vast, but it is far less burdensome than a U.S. foreign policy that cannot rely on allies. The United States can no more go it alone now than it could in the immediate postwar years. **Whether the United States has alliances or not**, American security and prosperity **will still require an open and independent Asia and Europe**. **Even if Washington pulled back from both theaters**, the **United States would still face cyberattacks**, **financial and infrastructural disruptions**, **and assaults on its democratic institutions**. And by **retrenching**, Washington would **lose whatever readiness for conflict it currently has**. If the country **later joined** a war abroad, it would have to do so only after **significant time delays** and **without the allied cooperation** that might have **allowed it to prevail**. Put simply, the United States might **fall into a conflict that it could have instead deterred—one now waged with hypersonic speed and destruction**.

1. **BUT, independently---their 1AC representations alone link.**

**Kagan 98** (Robert Kagan, PhD, graduate of Harvard’s Kennedy School of Government, adjunct history professor at Georgetown, senior associate at the Carnegie Endowment for International Peace, “The benevolent empire”, Foreign Policy)

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

**Especially because *nuanced debates* about the necessity internationalism lock in deep engagement --- the public primed to ignore the benefits of great-power peace in favor of shallow indictments of its cost.**

**Brands 18** [Hal, Henry Kissinger Distinguished Professor at Johns Hopkins University's School of Advanced International Studies and a senior fellow at the Center for Strategic and Budgetary Assessments." American Grand Strategy in the Age of Trump." Page 21-23]

Fifth and finally, sustaining America’s post–Cold War strategy entails **persuading the American public** to **recommit** to that strategy and the investments it requires. The state of American opinion on that subject is currently ambiguous. Polling data indicates that public support for most key aspects of American internationalism has recovered somewhat from where it was in 2012–13, and is again at or near postwar averages.32 But the 2016 election cycle and its eventual outcome revealed **strong support** for candidates who advocated **rolling back key elements of post–Cold War (**and post–World War II) **grand strategy**, from free trade to U.S. alliances. This atmosphere reflects **discontent** with the **failures** and **frustrations** of U.S. grand strategy in the post–Cold War era, no doubt, yet it also reflects the fact that American strategy seems at risk of becoming a **victim of its own success**.33 By helping to foster a comparatively stable and congenial environment, American policies have made it more difficult for Americans to **remember** why **significant investments in the global order are needed** in the first place. Today, this **ambivalence** is becoming increasingly **problematic**, for the simple reason that properly resourcing American strategy requires making politically difficult trade-offs with respect to entitlements and other ballooning domestic costs. It is also becoming problematic, of course, because even if the American public seems to support particular aspects of American grand strategy, the **public** has shown itself **willing to elect a president who appears to care little** for the successful postwar and post–Cold War tradition, even if he has, so far, maintained more aspects of that tradition as president than his campaign rhetoric might have led one to expect. In the future—and indeed, looking beyond Trump’s presidency— sustaining American grand strategy will thus require more **intensive political efforts**. American leaders will need to more effectively make the case for **controversial** but **broadly beneficial policies** such as **free trade**, while also addressing the inevitable socioeconomic dislocations such policies cause.34 They will need to more fully articulate the **underlying logic** and **value of alliances** and other **commitments** whose costs are often more **visible—not to say greater—than their benefits.** They will need to remind Americans that their country’s leadership has not been a **matter of charity**; it has helped produce an international order that is exceptional in its stability, liberalism, and benefits for the United States. Not least, they will need to make the case that the **costs that the country has** borne in support of that order are designed to avoid the necessity of bearing **vastly higher costs if the international scene returned to a more tumultuous state**. After all, the success of American statecraft is often reflected in the **bad things** that **don’t happen** as well as in the **good things that do.** Making this point is **essential to reconsolidating domestic support now and in the future**—and to **preserving a grand strategy** that has delivered **pretty good results for a quarter century.**

**The LIO is sustainable---internal mechanisms maintain global stability and raise global standards of living---the alternative risks global catastrophe**

Daniel **Deudney and** G. John **Ikenberry ’18**, \*Deudney: Associate Professor of political science, international relations and political theory at Johns Hopkins University, received the Alumni Distinguished Teaching Award at Johns Hopkins University, former senior research fellow at the TransAtlantic Academy at the German Marshall Fund, \*\*Ikenberry: Albert G. Milbank Professor of Politics and International Affairs at Princeton University, Co-Director of Princeton’s Center for International Security Studies, served as a member of the Policy Planning Staff in 1991-92, as a member of an advisory group at the State Department in 2003-04, and as a member of the Council on Foreign Relations Task Force on U.S.-European relations, “Liberal World: The Resilient Order,” *Foreign Affairs* 2018, Issue 4, pgs. 18-22

In many respects, today's liberal democratic malaise is a **byproduct of the liberal world order's success.** After the Cold War, that order became a global system, expanding beyond its birthplace in the West. But as free markets spread, problems began to crop up: economic inequality grew, old political bargains between capital and labor broke down, and social supports eroded. The benefits of globalization and economic expansion were distributed disproportionately to elites. Oligarchic power bloomed. A modulated form of capitalism morphed into winnertake- all casino capitalism. Many new democracies turned out to lack the traditions and habits necessary to sustain democratic institutions. And large flows of immigrants triggered a xenophobic backlash. Together, these developments have called into question the legitimacy of liberal democratic life and created openings for opportunistic demagogues.

Just as the causes of this malaise are clear, so is its solution: a return to the **fundamentals of liberal democracy**. Rather than deeply challenging the first principles of liberal democracy, the current problems call for reforms to better realize them. To reduce inequality, political leaders will need to return to the social democratic policies embodied in the New Deal, pass more progressive taxation, and invest in education and infrastructure. To foster a sense of liberal democratic identity, they will need to emphasize education as a catalyst for assimilation and promote national and public service. In other words, the remedy for the problems of liberal democracy is more liberal democracy; **liberalism contains the seeds of its own salvation.**

Indeed, liberal democracies have **repeatedly recovered** from crises resulting from their own excesses. In the 1930s, overproduction and the integration of financial markets brought about an economic depression, which triggered the rise of fascism. But it also triggered the New Deal and social democracy, leading to a more stable form of capitalism. In the 1950s, the success of the Manhattan Project, combined with the emerging U.S.-Soviet rivalry, created the novel threat of a worldwide nuclear holocaust. That threat gave rise to arms control pacts and agreements concerning the governance of global spaces, deals forged by the United States in collaboration with the Soviet Union. In the 1970s, rising middle-class consumption led to oil shortages, economic stagnation, and environmental decay. In response, the advanced industrial democracies established oil coordination agreements, invested in clean energy, and struck numerous international environmental accords aimed at reducing pollutants. The problems that liberal democracies face today, while great, are **certainly not more challenging** than those that they have faced and overcome in these historically recent decades. Of course, there is no guarantee that liberal democracies will successfully rise to the occasion, but to count them out would **fly in the face** of repeated historical experiences.

Today's dire predictions ignore these past successes. They suffer from a blinding presentism. Taking what is new and threatening as the master pattern is an understandable reflex in the face of change, but it is almost never a very good guide to the future. Large-scale human arrangements such as liberal democracy **rarely change as rapidly or as radically** as they seem to in the moment. If history is any guide, today's illiberal populists and authoritarians will evoke resistance and countermovements.

THE RESILIENT ORDER

After World War II, liberal democracies joined together to create an international order that reflected their shared interests. And as is the case with liberal democracy itself, the order that emerged to accompany it cannot be easily undone. For one thing, it is deeply embedded. Hundreds of millions, if not billions, of people have geared their activities and expectations to the order's institutions and incentives, from farmers to microchip makers. However unappealing aspects of it may be, replacing the liberal order with something significantly different would be **extremely difficult.** Despite the high expectations they generate, revolutionary moments often **fail to make enduring changes.** It is unrealistic today to think that a few years of nationalist demagoguery will dramatically undo liberalism.

Growing interdependence makes the order especially difficult to overturn. Ever since its inception in the eighteenth century, liberalism has been deeply committed to the progressive improvement of the human condition through scientific discovery and technological advancements. This Enlightenment project began to bear practical fruits on a large scale in the nineteenth century, transforming **virtually every aspect** of human life. New techniques for production, communication, transportation, and destruction poured forth. The liberal system has been at the forefront not just of stoking those fires of innovation but also of addressing the negative consequences. Adam Smith's case for free trade, for example, was strengthened when it became easier to establish supply chains across global distances. And the age-old case for peace was vastly strengthened when weapons evolved from being simple and limited in their destruction to the city-busting missiles of the nuclear era. Liberal democratic capitalist societies have thrived and expanded because they have been particularly adept at **stimulating and exploiting innovation** and at **coping with their** spillover effects and **negative externalities**. In short, **liberal modernity excels at both harvesting the fruits of modern advance and guarding against its dangers.**

This dynamic of constant change and ever-increasing interdependence is only **accelerating**. Human progress has caused grave harm to the planet and its atmosphere, yet climate change will also require unprecedented levels of international cooperation. With the rise of bioweapons and cyberwarfare, the capabilities to wreak mass destruction are getting cheaper and ever more accessible, making the international regulation of these technologies a **vital national security imperative** for all countries. At the same time, global capitalism has drawn more people and countries into cross-border webs of exchange, thus making virtually everyone dependent on the **competent management** of international finance and trade. In the age of global interdependence, even a realist must be an internationalist.

The international order is also likely to persist because its survival does not depend on all of its members being liberal democracies. The return of isolationism, the rise of illiberal regimes such as China and Russia, and the general recession of liberal democracy in many parts of the world appear to bode ill for the liberal international order. But contrary to the conventional wisdom, many of its institutions are not uniquely liberal in character. Rather, they are Westphalian, in that they are designed merely to solve problems of **sovereign states**, whether they be democratic or authoritarian. And many of the key participants in these institutions are anything but liberal or democratic.

Consider the Soviet Union's cooperative efforts during the Cold War. Back then, the liberal world order was primarily an arrangement among liberal democracies in Europe, North America, and East Asia. Even so, the Soviet Union often worked with the democracies to help build international institutions. Moscow's committed antiliberal stance did not stop it from partnering with Washington to create a **raft of arms control agreements.** Nor did it stop it from cooperating with Washington through the World Health Organization to spearhead a global campaign to **eradicate smallpox**, which succeeded in completely eliminating the disease by 1979.

More recently, countries of all stripes have crafted global rules to guard against environmental destruction. The signatories to the Paris climate agreement, for example, include such autocracies as China, Iran, and Russia. Westphalian approaches have also thrived when it comes to governing the commons, such as the **ocean, the atmosphere, outer space, and Antarctica**. To name just one example, the 1987 Montreal Protocol, which has thwarted the destruction of the ozone layer, has been actively supported by democracies and dictatorships alike. Such agreements are not challenges to the sovereignty of the states that create them but collective measures to solve problems they cannot address on their own.

Most institutions in the liberal order do not demand that their backers be liberal democracies; they only require that they be status quo powers and capable of fulfilling their commitments. They do not challenge the Westphalian system; they **codify it.** The UN, for example, enshrines the principle of state sovereignty and, through the permanent members of the Security Council, the notion of great-power decision-making. **All of this makes the order more durable.** Because much of international cooperation has nothing at all to do with liberalism or democracy, when politicians who are hostile to all things liberal are in power, they can still retain their international agendas and keep the order alive. The persistence of Westphalian institutions provides a **lasting foundation** on which distinctively liberal and democratic institutions can be erected in the future.

Another reason to believe that the liberal order will endure involves the return of ideological rivalry. The last two and a half decades have been profoundly anomalous in that liberalism has had **no credible competitor**. During the rest of its existence, it faced competition that made it stronger. Throughout the nineteenth century, liberal democracies sought to outperform monarchical, hereditary, and aristocratic regimes. During the first half of the twentieth century, autocratic and fascist competitors created strong incentives for the liberal democracies to get their own houses in order and band together. And after World War II, they built the liberal order in part to contain the threat of the Soviet Union and international communism.

The Chinese Communist Party appears increasingly likely to seek to offer an alternative to the components of the existing order that have to do with economic liberalism and human rights. If it ends up competing with the liberal democracies, they will again face pressure to champion their values. As during the Cold War, they will have incentives to undertake **domestic reforms and strengthen their international alliances.** The collapse of the Soviet Union, although a great milestone in the annals of the advance of liberal democracy, had the ironic effect of eliminating one of its main drivers of solidarity. The bad news of renewed ideological rivalry could be **good news for the liberal international order.**

**No free-riding OR overstretch.**

Assumes all neg authors’ args

**Norloff 18** Carla Norloff 18, Associate Professor in the Department of Political Science at the University of Toronto, PhD in International Relations from the Graduate Institute of International Studies, Hegemony and inequality: Trump and the liberal playbook, January 2018, International Affairs, Volume 94, Issue 1, <https://academic.oup.com/ia/article/94/1/63/4762707>

LIO = Liberal International Order

The second relevant theoretical approach is grounded in Waltzian realism. According to this approach, states should pursue their national interest defined narrowly, responding to threats that affect them directly. The doctrine of restraint, also called selective engagement, sees the maintenance of long-term hegemony as exceedingly costly and futile, breeding resentment and requiring rivals to be defeated and outcompeted in a continuous effort to thwart attempts at balancing. Balancing occurs when states seek to reduce the military power of exceptionally dominant states. The tendency for states to balance power is a hard systemic law, which no state can escape, and which guarantees that a unipolar distribution of power will eventually become bipolar or multipolar. Academic advocates of selective engagement approve of Trump's call for a more restrained foreign policy while distancing themselves from his other ideas.44 They believe America's postwar grand strategy spills too much blood and treasure and carries high opportunity costs,45 and that the United States should instead pursue a strategy of offshore balancing, refocusing policies around a narrow definition of the national interest limited to preserving regional hegemony in the western hemisphere and preventing the rise of regional hegemons.46 They consider US security interests to be at stake in three areas—Europe, east Asia and the Persian Gulf—with only east Asia requiring significant onshore engagement.47 Broadly agreeing with Trump, they say allies have to learn how to fend for themselves, and that the US should introduce uncertainty about forthcoming military support.48 In order to improve the plight of fellow Americans, the United States should reorientate public policy around domestic goals, giving up some international goals. For proponents of these arguments, America's international commitments clash with its domestic commitments.¶ Three flawed assumptions¶ Three features of the LIO emerge as problematic from these two perspectives. First, other countries free-ride on US political and economic leadership. Second, there are fundamental trade-offs between America's military and economic capability: US security commitments are responsible for US economic decline. Third, there are fundamental trade-offs between America's international and domestic posture. On the basis of this analysis, to promote America's national interest, the grand strategy supporting the LIO should be replaced with strategic restraint; the US should stop bearing a disproportionate share of the costs associated with solving global problems and let others take care of themselves, restricting US involvement to protecting vital security interests, defending the homeland and preventing the emergence of a regional hegemon.¶ However, the three assumptions underlying this analysis, and criticisms of the LIO, **mischaracterize** America's liberal dilemma. The first questionable assumption is that international cooperation resembles a public goods problem whereby the US, as the largest state, bears disproportionate costs while free-riding allies reap disproportionate benefits. Second, the negative repercussions of US security commitments for US economic strength are rarely balanced against the full benefits of US security commitments to the United States itself. Third, the assumption that there is an international–domestic trade-off and that whatever resources have been ‘squandered’ on international engagement can readily be diverted to the pursuit of productive, welfare-enhancing, domestic goals grossly understates both US benefits from the LIO and the risks attached to dismantling ‘selected’ parts of the LIO.49¶ When international cooperation is cast as a public goods dilemma, it is easy to come to the conclusion that the hegemon is in a disadvantageous position. But the public goods analogy does not adequately capture the essence of international cooperation, because few issues are characterized by the properties that define public goods—non-rivalry and non-exclusion.50 Rather, the hegemon provides a mix of public and private goods, or imperfect public goods.51 Despite these recognized flaws, and **much scholarship** to the contrary, the public goods version of HST remains influential.¶ Rejecting the ‘exploited hegemon’ version of HST, several scholars point to the ways in which the hegemon is positionally primed to benefit disproportionately from underwriting the LIO.52 They argue that public goods provision offers **more opportunities** than constraints, and, while they recognize that free-riding is a possible threat to the hegemon's long-term rule,53 they emphasize the ways in which the hegemon can use its dominance to internalize positive externalities and externalize negative externalities.54 As long as the hegemon is not providing pure public goods, the distribution of gains will not necessarily favour other states. And as long as the distribution of gains does not favour other states, providing an open economy does not necessarily compromise the hegemon's security interests or its position of dominance.55¶ The founders of HST, Robert Gilpin and Stephen Krasner, believed that hegemonic orders were particularly robust during the hegemon's ascendancy, and therefore worried greatly about the future of US hegemony and the LIO as the US underwent relative decline in the 1970s and 1980s.¶ Contemporary scholars, on the other hand, emphasize the cyclical property of postwar hegemony, seeing the **U**nited **S**tates as capable of **reversing** phases of decline by using different levers of power to avoid absolute decline.56 They see different forms of power interacting favourably for the hegemon, with financial dominance reinforcing commercial dominance, commercial dominance facilitating financial dominance, and security dominance boosting both commercial and financial dominance.57¶ Since the 1980s, IR scholars have tended to view the United States as militarily strong yet economically weak, a development hastened with the rise of China and other emerging economies in the third millennium.58 But even today, after many rounds of decline (and ascent), the United States has no peer competitor either militarily or economically. Commercially robust but financially vulnerable, China ranks as the world's third largest military power after Russia and the United States. While Russia's military continues to be the US military's principal rival, it is not as potent as it was under the Soviet Union. And while Russia's economy is not as debilitated as it was under the Soviet Union, it continues to be frail. Japan and Germany, two of America's principal allies, are economically strong, but militarily weak.¶ As figures 1 and 2 reveal, the United States has sustained its economic lead throughout the postwar era, boasting the world's first economy with an unrivalled capacity for economic output, an impressive commercial record and an unsurpassed financial position. US economic performance is grossly underrated. First, as shown in figure 1, which displays US GDP, trade and company size, US GDP is still roughly a quarter of global GDP (just below the dotted 25 per cent line). Declinists take the considerable fall in America's postwar share of global GDP as a sign of weakness. But it is unrealistic to think that the United States would continue to command a third of global GDP as it did immediately after the Second World War—particularly since much of the observed decline was the result of deliberate efforts by the United States to bolster its allies in western Europe and east Asia through the Marshall Plan and other initiatives.59 What is rather remarkable is that, even with the rise of non-allies such as China, America's share of world GDP has stabilized around a quarter and continues to be nearly twice as large as China's share. Second, as also shown in figure 1, US commercial capability aggregated into its combined share of world exports and imports—trade—is slightly higher than China's. But exports and imports are not the best way to measure commercial prowess, because the contemporary web of production globalizes manufacturing. Owing to global supply chains, imported final goods include intermediate inputs and technology produced and developed in the United States that do not show up as exports but nonetheless provide American jobs and income. And when exporting final goods, US firms depend on low trade barriers to import low-cost intermediate inputs. The United States' ability to spread production worldwide has been accompanied by long-term rising trends in numbers of foreign affiliates, value added and net income, generating significant profits for the United States.60 As shown in figure 1, the aggregate value of US companies far exceeds that of any other country.¶ Figure 1:¶ Great Power production and commercial capability, 2016¶ View largeDownload slide¶ Great Power production and commercial capability, 2016¶ Figure 2:¶ Great Power financial and military capability, 2016¶ View largeDownload slide¶ Great Power financial and military capability, 2016¶ Third, few assessments compare the relative financial capabilities of Great Powers. Studies often favour narrow definitions of financial power over broader assessments. Some focus on the relative size of US financial markets, some on financial networks, some on reserve currency issuance, but few provide an aggregate picture.61 These incomplete portrayals lead to gross underestimation of US financial power.62 As shown in figure 2, US financial markets account for slightly more than a quarter of the global total, and US reserve currency provision far surpasses that of any other state or states, and that of the eurozone.¶ Fourth, as also demonstrated in figure 2, the **U**nited **S**tates is the world's most formidable military power, its capabilities far exceeding those of any other nation. Taking into account front-line capabilities on the ground, on the sea and in the air, as well as the capacity for reconnaissance, strategic transport and communication to project power, the United States has no rival.63¶ The United States' multidimensional power base clearly puts it in a class above rival powers. Yet its privileged position in the international system is even greater than what these snapshot barometers indicate, because significant synergies exist between the various dimensions.64¶ US security dominance supports US commercial and monetary dominance, and its commercial and monetary dominance are mutually supportive. First, by providing security guarantees, stabilizing hot-spots and securing sea lanes, the United States ensures that international trade and finance can occur without disruption. This is of great value to the United States itself because, as the world's single largest economy, it has a high stake in guaranteeing stable economic relations. Second, propping up the financial realm, America's vast security network provides incentives for allies to continue supporting the dollar's role as the number one global currency.65 Third, the dollar's global role gives the United States the capacity to borrow at exceptionally low rates, providing it with extraordinary macroeconomic flexibility to ease balance of payments adjustments, particularly trade adjustments.66 Fourth, America's commercial position bolsters the dollar's global role by facilitating trade adjustment as governments, particularly in emerging markets, continue to finance US deficits by holding dollar assets in the hope of gaining continued access to US markets.67¶ ‘America first’ promises to touch all of these areas, overhauling longstanding US policies in the security, commercial and monetary spheres. But its real menace lies in its potential for sparking drastic changes by overturning policies in just one sphere. If the United States ceases to defend allies, and reduces its commitment to secure the international environment, cross-border trade and investment will operate in a more uncertain setting. While it is impossible to predict which policy is most likely to unleash an unfavourable chain of events, a hypothetical example can be used to illustrate the presumptive cascade. If we assume the United States follows through with significant commercial retreat, then we should expect monetary consequences. With the United States ceasing to account for a significant portion of international trade, official and private investors will increasingly hold alternative currencies for reserves and payment. If the diversification out of dollars is substantial, the dollar could gradually lose its centrality in the monetary order, complicating the adjustment of US trade imbalances. Balance of payments difficulties could very well ricochet back in the monetary sphere, with a crisis of confidence over trade imbalances triggering a run on the dollar. With the dollar under pressure, its international role for governments and private actors could come into question. If the dollar is no longer widely used for reserves and payments, US financial markets will lose importance relative to other financial markets. A diminished role for US financial markets implies lower demand for US assets, raising US borrowing costs. And the loss of US borrowing privileges will have security ramifications, since financing US military power will become more expensive.68 With these developments, America's slippage in the ranks of Great Powers will be assured.¶ The real liberal dilemma¶ President Trump misidentifies the nature of the redistribution problem confronting America, misinterpreting unequal internal redistribution as unequal external redistribution. The liberal dilemma is not that the LIO distributes gains unfavourably to the United States, but that not everyone in the United States wins because US domestic policies have not kept pace with global economic integration. Economic globalization can deepen domestic inequality. Import competition causes some sectors to shrink, and workers employed in contracting sectors may not be fully absorbed in expanding sectors. Neo-classical trade theory predicts that economic activity will increase in the sector using the country's abundant factor since its reward will increase relative to that of the scarce factor.69 In the case of an advanced capital-abundant country such as the United States, this means that the reward to capital will increase relative to labour. Financial globalization has even more acute effects on the distribution of income, further raising the reward to capital relative to labour.70 However, since suspending international economic exchange reduces national welfare gains, countries are better off expanding the pie, and compensating losers with the higher gains available from economic globalization. The United States needs to bring back ‘embedded liberalism’ to redistribute benefits from openness through greater safeguards and labour adjustment programmes, including trade adjustment, so that the LIO can begin to work for all Americans.71¶ Dissatisfaction with the international distribution of income is, however, insufficient to explain the backlash against globalization. President Trump correctly identified the liberal dilemma inside the United States as the clash between liberal ideals and the preservation of a racial hierarchy which put ‘white America first’—a contradiction which has resulted in a racial and educational divide at the ballot box.72 To fully understand waning American support for the LIO, one must look to the unravelling of America's liberal identity as a principal cause of the less secure domestic foundations of the LIO. Some elements of America's liberal identity, such as ‘political democracy, constitutional government, individual rights [and] private property based economic systems’, remain intact. However, other elements, such as ‘toleration of diversity in non-civic areas of ethnicity and religion’ are in jeopardy.73 In fomenting an ‘us and them’ division between Americans and foreigners alleged to be exploiting the United States, and by stoking an internal division between Americans of different ethnicities and faiths, Trump unveiled an international and domestic hierarchy that some thought no longer existed. How did these factors intermingle with income inequality in the 2016 US elections?¶ The extent of inequality in the United States¶ Income inequality in the United States has increased since the late 1960s. By 2015, the top 5 per cent earned 28 times as much, and the top 20 per cent 16 times as much, as the lowest 20 per cent of Americans. This share has risen over time irrespective of the incumbent president's party affiliation, as shown in figure 3, which traces this development back to the late 1970s. Below I use mean income data from the US Census Bureau to discern the effect of income inequality on different ethnic groups. Ideally, this analysis would be performed using median income data, but this is not consistently available across all measures of interest.74¶ Figure 3:¶ Income inequality between the top and bottom income earners in the United States, 1978–2016¶ View largeDownload slide¶ Income inequality between the top and bottom income earners in the United States, 1978–2016¶ Concerns about income may have loomed large in the 2016 presidential elections. It could be, for instance, that by 2016 income inequality in the United States had reached a tipping point, a level that Americans were no longer prepared to tolerate. The only vote margin—that is, the difference in percentage of votes between Republicans and Democrats—that was consistently and substantially different from those in the 2008 and 2012 elections was the margin for those earning less than US$50,000 a year. Although this group—arguably the most affected by the widening income gap—still supported the Democratic candidate overall (though to a lesser extent than in the two previous elections), the margin between the Democratic and Republican votes narrowed to 12 points from 22 points in 2008 and 2012. The margins for higher-income groups were not as wide, nor were they significantly different from the levels recorded in the 2008 and 2012 elections. In an anti-establishment election, factors other than income, such as Clinton's ‘elitism’, might have been a liability. But the unfavourable opinion of Clinton (81 per cent) was less strong among those who voted for Trump than disapproval of former President Obama (89 per cent).75 It is, however, possible that dissatisfaction with Clinton was greater within the group earning under US$50,000.¶ While income did matter in the 2016 election, it was not, on its own, the most important predictor of the outcome. As shown in figures 4 and 5, income did play a role, but primarily as it intersected with other factors, particularly education and colour.76 In the following paragraphs I consider the income growth of non-college-educated whites relative to college-educated whites; and the absolute income (including income growth) of non-college-educated whites relative to the overall non-college-educated population.¶ Figure 4:¶ Income growth among US citizens with education below college degree level, 1998–2016¶ View largeDownload slide¶ Income growth among US citizens with education below college degree level, 1998–2016¶ Figure 5:¶ Income growth among US citizens with education above college degree level, 1998–2016¶ View largeDownload slide¶ Income growth among US citizens with education above college degree level, 1998–2016¶ In 2016, white voters without a college degree voted for Trump (66 per cent) with much higher percentages than in 2012 (61 per cent) and 2008 (58 per cent), and with much higher margins (see figure 4). But white voters without a college degree (both those with and those without a high school diploma) supported Trump despite experiencing greater income growth during the full span of Obama's presidency than any other white group defined by educational level. Their income expansion was also stronger than any other education group during Obama's second term (2012–2016). However, during Obama's first term (2008–2012), their income did not grow as fast as that of white Americans with advanced degrees, although they did better than those with an associate (i.e. two-year college) degree or bachelor's degree. Despite stronger income development than college-educated income earners, whites without a college degree voted for Trump with a 37-point margin, whereas whites with a college degree favoured Trump with only a 3-point margin. Although these numbers suggest that something other than income explains Trump's victory, it could still be that the higher margins for white voters without college degrees reflect discontent with low real incomes.¶ If low real incomes explain Trump's support among white voters without college degrees, we should find general support for Trump among voters with low real incomes. However, since 1998 the mean income of whites without college degrees has always been higher than the mean income of all those without college degrees. If their income remained higher, was their income growth slower? During the full length of Obama's presidency, and during his first term, whites without a college degree experienced higher growth than all income earners without a college degree. Only during Obama's second term did the mean income of whites without a college degree underperform the income of all earners without a college degree. The growth differential between the two groups during this period,77 however, is quite small, for both those with and those without a high school diploma: the mean income of workers without a high school diploma increased by 13.41 per cent, compared to 12.99 per cent growth for whites without a high school diploma. The mean income of all workers with a high school diploma increased by 5.73 per cent; of whites with a high-school diploma, by 5.60 per cent. It is noteworthy that during Obama's second term the overall mean income of all earners with a college degree increased less than for whites with a college degree. The biggest difference was for whites with an advanced degree, who earned US$1,394 a year less than the mean income of all recipients of advanced degrees. Yet despite slower income growth, white college graduates were disinclined to vote Republican in the 2016 elections (see figure 5).¶ If dissatisfaction with income played a role in explaining why white voters without a college degree endorsed Trump, the only evidence for it is the relatively lower income growth of white earners without college degrees compared to all earners without college degrees between 2012 and 2015. Disaggregating the income differential for non-college-educated whites, those without a high-school diploma experienced 0.43 per cent lower income growth, and those with a diploma 0.13 per cent lower income growth, than all non-college-educated earners within the corresponding educational group. It is highly unlikely that these small percentage differences explain why whites without a college degree favoured Trump with a 37-point margin whereas all earners without a college degree favoured Trump with only a 7-point margin.¶ If income mattered only in conjunction with education and colour in the 2016 elections, income might have been more decisive in distressed regions. One of the biggest surprises in the 2016 presidential election was how the Democrats lost the ‘blue wall’ states in the ‘Rust Belt’—Pennsylvania in the north-east; Iowa, Wisconsin, Michigan and Ohio in the mid-west. The Democrats also lost Florida in the south, a traditionally Republican state, which Obama won in 2008 and 2012.¶ Declining employment and income are said to have contributed to support for Trump in conventionally Democratic states. But there are several problems with this explanation. While the decline in the mid-west is real, it has been in the making for a very long time. During the Obama years, specifically between 2008 and 2016, income in the mid-west rose more sharply than in all other regions. During Obama's second term, both white and overall income growth was stronger in the mid-west than in any other region. Yet the Republican vote exceeded the Democratic vote in the mid-west by the second-highest margin of any region (see figure 6). Moreover, during the same period, income growth for whites was higher than for all ethnic groups combined; and yet whites in the mid-west voted Republican by a margin of 20 points, compared to a margin of 5 points for the region overall. However, during Obama's second term, white income growth in the mid-west was lower than in all other regions except for the west. Overall income growth was worse in the mid-west than in all other regions. Yet the white margin in favour of Trump was stronger in the mid-west (20 points) than in the west (5 points), and the overall margin in favour of Trump in the mid-west (5 points) was considerably lower than for whites in the mid-west (20 points).¶ Figure 6:¶ Income growth by region and race, 1998–2015¶ View largeDownload slide¶ Income growth by region and race, 1998–2015¶ Given the higher proportion of whites in the mid-west (76 per cent) than nationally (61 per cent), and the higher number of voters in the region aged over 25 years without a college degree (71 per cent) than nationally (55 per cent),78 it is likely that factors of education, colour and income combine to explain the level of support for Trump in 2016.¶ In the 2016 election, racial polarization, as measured by the difference between white and non-white preferences for Trump, was highest in the south, second to highest in the mid-west and north-east, and lowest in the west. These cleavages were most apparent in the south and mid-west. White voters were aligned with Trump in the south (67 per cent) and the mid-west (57 per cent), non-white voters with Clinton in the south (77 per cent) and mid-west (75 per cent).¶ Racially differentiated voting patterns do not necessarily mean that voting is racially motivated. It could be that whites are generally more conservative on a range of issues and that their views were therefore better aligned with the policies espoused by the Republican than the Democratic candidate. Yet that would not explain why so many white college-educated voters fled the Republican presidential nominee in 2016 (see figure 5). Rather, there exists some evidence that racist attitudes encouraged a portion of the white electorate to align with Trump. For example, 80 per cent of white evangelical Christians supported Trump.79 Their vote is important because although they account for a lower share of the population today (17 per cent) than in 2008 (21 per cent), they still account for 26 per cent of the vote because a lot of them turn out to vote.80 Their high proportion of the vote suggests that racism might have been a relevant issue. In the months before the elections, a non-partisan study by the American Values Atlas revealed that white evangelicals were less likely to perceive discrimination against blacks, with only 36 per cent saying blacks were discriminated against ‘a lot’, compared to the national average of 57 per cent.81¶ Trump and the liberal playbook¶ In 2016, socio-cultural fissures within the United States played a critical role in the election of the presidential candidate most disparaging of the LIO. Trump's call to put America ‘first’ internationally, and white Christians ‘first’ domestically, resonated with non-college-educated white voters who saw their historic privileges fading. Not all grievances were racially motivated; certainly, some poorer non-college-educated whites compared their present situation unfavourably with the rosier circumstances of their families' past.82¶ The relationship between education and race was first noted over seven decades ago. Gunnar Myrdal's 1944 book An American dilemma was famously cited in the Supreme Court decision in Brown v. Board of Education (1954), and helped desegregate education in the United States by demonstrating that education could not be separate but equal for blacks.83 Myrdal went further, calling for an ‘educational offensive against racial intolerance’ and the forging of an ‘American creed’, a civic culture with equal rights for all Americans, to overcome the contradiction between American liberal ideals and the reality of racial discrimination.84¶ Since then, great progress has been made. Blacks, and other minorities, in the United States are equal before the law and have equal political rights, and greater social and economic opportunities, than before. Education has no doubt played a significant role in reducing explicit racist behaviour or individual racism, that is, ‘overt acts by individuals, which cause death, injury or the violent destruction of property’.85 But discrimination is a problem beyond what most people would recognize as specific instances of racist behaviour. Institutional racism is a ‘less overt, far more subtle, less identifiable’ form of racism, which ‘originates in the operation of established and respected forces in society’.86 The concept of white privilege is the flip side of institutional racism and refers to the unearned benefits enjoyed as a result of being white.87 The concept is not intended to mean that every white person is ‘privileged’ or that no other form of privilege exists. It is intended to expose the existence of an implicit racial hierarchy in society and the political, economic and legal inequality which it reproduces.88 Attempts to attenuate white privilege are met with suspicion and opposition by those who benefit from it. For example, today a majority of white Americans (55 per cent) believe they are discriminated against, and nearly half of them (26 per cent) attribute this to US ‘laws and government policies’.89 Whites who believe they face institutional racism are unlikely to see a difference between policies designed to reduce unmerited privileges and policies that reduce merited privileges. They are also unlikely to appreciate how restrictive the scope for affirmative action is. For example, in the case of university admissions policies, quotas have been unconstitutional since the 1978 Supreme Court decision in Regents of the University of California v. Bakke. Many states even forbid the use of race in admissions procedures. Where states do permit the use of race, it may be used only as one criterion in promoting diversity, and only if all other methods fail, as laid down in the 2013 Supreme Court decision in Fisher v. University of Texas.¶ The political scientist and public intellectual Walter Russell Mead has explained the 2016 election outcome as a ‘Jacksonian revolt’ in which many ‘white Americans find themselves in a society that talks constantly about the importance of identity, that values ethnic authenticity, that offers economic benefits and social advantages based on identity—for everybody but them’.90 Another political scientist, Mark Lilla, proposes an end to identity politics as a way to secure broader support for liberal policies.91 I agree with Mead that identity politics cannot be unilateral, and I agree with Lilla that the American habit of categorizing individuals according to essentialist criteria is contrary to liberal principles. But I am not sure either of them would agree that there has been an essentialist identity politics in the United States, going back at least to the eighteenth century, constructed around the primacy of a white American identity of European Christian descent. Reactions against this unspoken identity politics lay beneath claims of institutional racism long before Trump gave voice to a ‘white America first’ policy at home.¶ College-educated white Americans are more likely to recognize the advantages attached to being white (47 per cent) than white Americans without college degrees (17 per cent).92 A possible reason for this is that higher education fosters liberal attitudes, and provides exposure to different ethnic groups, limiting blatant forms of racism.93 But even though college-educated whites are less inclined to vote for their privilege, and more prepared to see their privilege, there is plenty of room in the liberal playbook for race-based discrimination. There's a playbook in force that liberals are supposed to follow. The playbook prescribes responses to different forms of racism, and these responses tend to be outraged responses. When no colleague or friend is threatened by charges of racism, the playbook works. But the playbook can also be a trap leading to bad decisions because discriminatory practices often implicate someone's colleague, friend, family or wider community. The trap is especially pernicious in higher education, where people tend to overestimate their liberal inclinations, and where opportunities, support and intellectual attribution are largely network-based.94 It is therefore unsurprising that a higher percentage of college-educated blacks (55 per cent) say they have been disadvantaged by their race than non-college-educated blacks (29 per cent). An even higher percentage of all blacks (81 per cent) who at some point attended college say they were treated differently because of their race: perhaps an overlooked factor in the reasons why blacks are less likely to finish college.95¶ In addition to the different experiences and beliefs about race to which education gives rise, a partisan divide exists, with Republicans (43 per cent) more likely than Democrats (27 per cent) to say whites, rather than blacks, experience a lot of discrimination.96 Only 37 per cent of Republicans (against 76 per cent of Democrats) say racism is a problem.97 Attitudes towards blacks also extend to other groups. From the 2016 exit polls, we know that Trump voters were more likely to support a wall along the Mexican border (85 per cent) than Clinton voters (10 per cent), to support deportation of illegal immigrants (83 per cent vs 14 per cent) and view immigration as the most pressing problem for the country (64 per cent vs 33 per cent).98¶ Overall, the evidence presented in this article suggests not only that education and race were strong predictors of the 2016 presidential vote, but that racism was a contributing factor.¶ Summary and conclusion¶ Trump did not create angst about America's dominant position in the world, or about white America's dominant position vis-à-vis other ethnic groups, but he tapped into these two currents more unabashedly than any other presidential candidate in postwar history. This article deconstructs ‘America first’ into two components, an international component and a domestic component, which share common symptoms (lost greatness) and common remedies (redistribution).¶ In the first two sections of this article, I discussed the international component, and how ‘America first’ threatens to undermine the LIO. I showed how ‘America first’ reflects concerns about American decline and American overextension in three areas: the security, trade and monetary spheres. A common theme in this narrative is how the United States is being exploited by other countries, and how disengaging from the LIO presents a better path forward. In the security area, the world should no longer count on the US to act as global policeman or to tolerate unfair burden-sharing within security alliances. In trade, the US will no longer stand by as other countries free-ride on America's openness. In the monetary realm, the dollar's global role is not as good as gold. While Trump's views on the LIO are quite idiosyncratic, and have yet to be fully implemented, declinists and proponents of retrenchment share certain aspects of this outlook.¶ In opposition to this perspective, I have provided **broad-based metrics** demonstrating that the United States remains by a long way the leading state in the world today, and argued that it would be a **lot worse off** under alternatives to the LIO than it has been in the postwar era and is today. A counterfactual setting, where the United States does not provide international security, would be a more uncertain and more economically **fragile one**, with more limited commerce and investment. A United States of America in which the commercial and financial playing field, including the dollar's role, no longer spans the globe, but is domestically confined, will reduce US prosperity and geopolitical reach. Yet there is a growing sense, correctly identified by President Trump, that America's global engagement is not benefiting all Americans.

**Political support is at an all-time high.**

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But even if Trump has the authority to scuttle the alliance, he is very unlikely to do so. There is **virtually no support**—in **his own administration**, among **the American public**, or **in Congress**— for taking a **wrecking ball to NATO**. Even as Trump cycles through foreign policy advisers of various ideological persuasions, they are all **competent enough** to understand the abiding **strategic value of NATO**. The **electorate** similarly **knows better** than Trump. A 2018 Chicago Council on Global Affairs survey indicates that **75 percent of Americans** believe the United States should either **maintain or increase** the nation’s commitment to **NATO**—exactly the same as in 2016, before Trump took office.

**Congress**, though currently a wasteland when it comes to cooperation across the aisle, has responded to Trump’s NATO-phobia by becoming a **bipartisan cheerleading squad** for the alliance. Even as Trump disrupted last summer’s NATO summit by insulting and threatening allies—his aides reportedly finalized the summit declaration in advance to limit the damage he could do at the meeting—the Senate by a **margin of 97 to 2** passed a **resolution of support** for NATO. The House did the same by a unanimous voice vote, with then Speaker Paul Ryan (R-Wis.) calling the alliance “indispensable.”

If Trump wants out of NATO, precedent suggests that there is little Congress can do to stop him.

This past January, following leaks that Trump was considering pulling out of NATO, the House reaffirmed support for the U.S. commitment to collective defense and voted 357 to 22 to bar the use of federal funds to withdraw the United States from the alliance. A bill aimed at impeding a U.S. withdrawal from NATO has also been introduced in the Senate. According to Senator Jim Risch (R-Idaho), chair of the Senate Foreign Relations Committee, “there is **zero appetite** in the United States Congress **to leave NATO**.” As another shot across Trump’s bow, House Speaker Nancy Pelosi and Senate Majority Leader Mitch McConnell invited NATO head Jens Stoltenberg to address a joint session of Congress when he comes to Washington next month for the alliance’s anniversary celebration.

**Support on the other side** of the Atlantic is **similarly strong**. Around **two-thirds of Europeans approve** of the alliance. Most European democracies not yet members of NATO are **clamoring to get** in. Confidence in U.S. leadership may have plummeted, but **Europeans still want** their security guarantor to **stay put**. Furthermore, **European member states** are finally taking steps to **increase defense spending**. Twenty-four of NATO’s 29 members increased their defense budgets in 2018, and nine NATO members will this year reach the NATO benchmark of spending two percent of GDP on defense—compared with just four members in 2014. A majority of members are on track to meet this benchmark by the target date of 2024 set at the 2014 summit.

Even Trump is applauding Europe for **raising its military spending**, noting in his February State of the Union that “we have secured a $100 billion dollar increase in defense spending from NATO allies.” The **uptick in spending** actually began **before Trump was elected**—the product of Russia’s invasion of Ukraine and the 2014 summit at which the two percent benchmark was formalized. Nonetheless, if letting Trump take credit for convincing Europeans to invest more in defense improves his view of the alliance, then let’s by all means indulge him.

To be sure, Europe’s leaders are hedging their bets. The European Union is undertaking defense reforms to strengthen “strategic autonomy” just in case Europeans do find themselves on their own. But that outcome is hardly their preference. Especially as Brexit and populism challenge the project of European integration, the **last thing Europeans want** is the **exit of their U.S. protector**

and pacifier. Moreover, Europe’s new readiness to invest in defense will ultimately **strengthen NATO**, not lead to strategic decoupling: **the more capable Europeans are** on defense, **the more the U**nited **S**tates will **value the Atlantic link**.