# 1NC --- Kentucky R4

## OFF

### OFF

Framework

#### Interpretation and violation: the affirmative must defend the implementation and desirability of a topical plan – they don’t

#### Should means action by the agent

Ericson 3 (Jon M., Dean Emeritus of the College of Liberal Arts – California Polytechnic U., et al., The Debater’s Guide, Third Edition, p. 4)

The Proposition of Policy: Urging Future Action In policy propositions, each topic contains certain key elements, although they have slightly different functions from comparable elements of value-oriented propositions. 1. An agent doing the acting ---“The United States” in “The United States should adopt a policy of free trade.” Like the object of evaluation in a proposition of value, the agent is the subject of the sentence. 2. The verb should—the first part of a verb phrase that urges action. 3. An action verb to follow should in the should-verb combination. For example, should adopt here means to put a program or policy into action though governmental means. 4. A specification of directions or a limitation of the action desired. The phrase free trade, for example, gives direction and limits to the topic, which would, for example, eliminate consideration of increasing tariffs, discussing diplomatic recognition, or discussing interstate commerce. Propositions of policy deal with future action. Nothing has yet occurred. The entire debate is about whether something ought to occur. What you agree to do, then, when you accept the affirmative side in such a debate is to offer sufficient and compelling reasons for an audience to perform the future action that you propose.

#### The United States federal government 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

#### Prohibition means a law that forbids a certain action

Garner, Black’s Law Dictionary editor-in-chief, 16 [Bryan A., Black’s Law Dictionary, Fifth Pocket Edition, “prohibition”, p. 630]

prohibition. (15c) 1. A law or order than forbids a certain action.

#### Vote NEG:

#### A limited, predictable stasis point generates effective contestation. Engaging in a season-long process of research, competitive argumentation, and refinement is best achieved when the NEG is reasonably prepared for the AFF’s arguments, and when the AFF is concretely tied to a stable advocacy. Three impacts:

#### 1---Competition---Our interpretation maximizes it by keep the neg around a 50% winrate – It also overdetermines argumentative content and utility AND separates debate from other activities and academia.

#### 2---Clash---Debates intrinsic advantage is not talking about what we find interesting or valuable, but the unique process of argumentative refinement and negation – removing the stasis destroys engagement which is key to research, advocacy, and reflexivity

### OFF

China DA

#### Artificial Intelligence (AI) is the only credible threat China will pose to U.S primacy --- The ability of the U.S to leverage private innovation is key

Stephen, 21 (Capt Stephen, Captain Fuller’s (MS, Tarleton State University; BS, University of Phoenix. He is an ANG Cyber Operations Officer serving as the Director of Operations of the Base Communications Flight at Will Rogers, ANGB., 3-12-2021, accessed on 8-31-2021, Air University (AU), "China in Search of AI Supremacy", https://www.airuniversity.af.edu/Wild-Blue-Yonder/Article-Display/Article/2532254/china-in-search-of-ai-supremacy/)//Babcii

In order to totally understand the need of the United States to maintain and compete for artificial intelligence (AI) supremacy over our near peer threat, China, we must first look at the Chinese Communist Party’s (CCP) militarily goals and what makes them unique in their pursuit. According to the Department of Defense’s (DOD) 2000’s Annual Report on Military and Security Developments Involving the People’s Republic of China, the People’s Liberation Army’s (PLA) **ground, air, and naval forces** were sizable but **mostly obsolete**. Their **cyber capabilities were rudimentary**, and its use of information technology was well behind the curve.1 China’s defense industry was **struggling to produce high-quality systems**. Flash forward two decades and the PLA’s objective is to become a “world-class military” by the end of 2049; this per the DOD’s Military and Security Developments Involving the People’s Republic of China, 2020. How does a country once floundering by the wayside with obsolete weaponry and technology make such dramatic leaps to be able to announce their intentions of becoming a “world-class” military by the end of 2049? In just a short 20 years, the Chinese are already surpassing us, the mightiest military in the world, in shipbuilding, land-based conventional ballistic and cruise missiles, and integrated air defense systems. Alongside conventional warfare, the CCP is investing heavily in technology innovations and has specifically mentioned **AI** as a **paramount part of their National Defense Strategy**. Why is AI so important? What is AI? AI can be thought of as the ability of an artificial agent to achieve goals in a “wide range of environments.”2 What China is interested in is more in line with the deep learning aspect of AI. Deep learning, now popularly associated with artificial intelligence, is a technique that harnesses neural networks to train algorithms to do specified tasks, such as image recognition.3 With this deep learning, there are many military applications such as automating military equipment to perform a task(s) while learning better strategies to simply taking more and more of the human element out while the AI makes decisions based on the algorithms that are input into the system(s). While focusing on how it will benefit China economically and socially, they will also be utilizing technology, specifically AI to improve their military efforts; no real line between them in the Chinese construct. Although China is not yet up to par with the rest of the—primarily Western—world, they are putting significant capital in its progress. A perfect example of how serious China is in investing in AI is the AI startup SenseTime. In a four-year span, it went from an academic project to becoming the world’s most valuable artificial intelligence company with a current valuation of $4.5 billion. SenseTime is now the largest algorithm provider in China, as well as the fifth largest AI platform. Along with other tech titans, SenseTime is working with the Chinese government on Made in China 2025, an initiative to make the country economically autonomous.4 Made in China 2025 states the strategic goals of turning China to a major manufacturing power. By 2020, their goal was to consolidate manufacturing power and increase manufacturing digitalization. By 2035, Chinese manufacturing will reach an intermediate level among manufacturing powers. By 2049, China’s manufacturing sector status will become more consolidated, and China will become the leader among the world’s manufacturing powers.5 In order to accomplish this, the Chinese are relying on technology innovations from AI companies such as SenseTime. This brings us to the why and how China is able to rely on civilian innovation as much as it does for not only the social and economic benefits but also the direct alignment of military goals. ”Military-Civil Fusion, or MCF, is an aggressive, national strategy of the CCP. Its goal is to enable the PRC to develop the most technologically advanced military in the world… Under MCF, the CCP is systematically reorganizing the Chinese science and technology enterprise to ensure that new innovations simultaneously advance economic and military development.”6 As a national strategy, military-civil fusion traces roots to the Maoist idea of “people’s warfare,” which prescribed a “whole-of-society” approach to military mobilization, and builds on industrial policy to drive military modernization.7 While civilian companies, such as SenseTime and Ali-Baba, are working to improve the social and economic functions of China; they are also directly in line with the CCP to improve the innovations and the capabilities of the PLA. Unlike the United States, there is no clear line or delineation between the government and its civilian counterparts. The partnership goes both ways; not only do the civilian entities in China share technology and AI algorithms with the government but the CCP ensures that there is plenty of capital invested in the civilian sector, primarily to the companies and entities that have a direct role in achieving the ambitious plans of the CCP. When searching for MCF, the number one topic that comes up time and time again is that of AI. Chinese firms and research institutes are advancing uses of AI that could undermine US **economic leadership and provide an asymmetrical advantage in warfare**. Chinese military strategists see AI as a breakout technology that could enable China to rapidly modernize its military, surpassing overall US capabilities and developing tactics that specifically target US vulnerabilities.8 The CCP is rapidly growing its arsenal, whether it be conventional warfare items or aggressively investing in technology and innovations. Although the PRC does not have the technology and the assets, the engineers, or the capabilities that we have right now, they are **pumping all the resources they can** to ensure that they reach their end state of being a player that everyone has to recognize on an equal playing field. What can a country such as the United States do when we have moral obligations that the CCP does not have, nor institutes? Having a gray area between the civilian sector and the military gives them a clear advantage as there is no such thing as a separation of government and the civilian sector. Our government has some leeway in pushing tax dollars towards certain functions that will improve our overall social and economic structure but crossing the line of government versus private sector is still a clear boundary that most will not cross. We have a democracy as to where our government can change greatly every two to four years, whereas the Chinese have a government that is setup to exist generationally and even past that. Our greatest asset of Democracy might also be the reason that the CCP and the PLA can gain on us in the future, possibly. **The greatest advantage that the United States has over China is our free market system.** **We enable companies to compete** for monetary advantage and with only little government interference/oversight unlike China, which consistently monitors all businesses and citizens. In 2019, privately held AI companies attracted nearly $40 billion in disclosed equity investment—defined as venture capital, private equity, and mergers and acquisitions—across more than 3,100 discrete transactions. US companies attracted most of this investment: $25.2 billion in disclosed value (64 percent of the global total) across 1,412 transactions.9 What does this tell us? Well, China has not attracted the investment that most think; if $25.2 billion or 64 percent of the global total is still coming from the United States, then maybe the competition is not as close as most think it is. Our military depends greatly on our private companies coming up with usable applications for civilian purposes and then the military legally purchases or contracts the item for military use. We do not stifle civilian innovation; we tend to reuse the items in different manners but depend on that civilian innovation for the next greatest thing in technology. Nothing is owed to the United States government and the civilian companies can negotiate the value of their AI product. Although China is focusing more internally on their own startups, their AI narrative, and it seems to not be at the level that our AI innovation is, we must continue to proceed with caution. As soon as we let down our guard, China may surpass us and could possibly one day become the world’s AI leader.

#### Tech antitrust crushes the U.S. edge in AI research over China – The link outweighs the consolidation turn. Small firms can’t access the scale or funding necessary to lead AI innovation.

Dakota Foster 20. graduate student at Oxford University and a former visiting researcher at the Center for Security and Emerging Technology, 6/2/20, “Antitrust investigations have deep implications for AI and national security,” <https://www.brookings.edu/techstream/antitrust-investigations-have-deep-implications-for-ai-and-national-security/>

Secretary of Defense Mark Esper has argued that artificial intelligence is likely to shape the future of warfare, and the national-security community has largely backed that conclusion. The most recent National Defense Strategy, released in 2018, highlights AI’s importance, noting that the Pentagon will seek to harness “rapid application[s] of commercial breakthroughs…to gain competitive military advantages.” With defense officials arguing that U.S. military superiority may hinge on artificial intelligence capabilities, antitrust action aimed at America’s largest tech companies—and leading AI innovators—could affect the United States’ technological edge. But the effects of such action are highly uncertain. Will a less concentrated tech sector comprised of slightly smaller firms fuel innovation and create openings for a new generation of tech companies? Or will reductions to scale significantly hurt leading tech firms’ ability to leverage the traditional building blocks of AI innovation—like computing power and data—into breakthroughs? The answers to these questions aren’t clear cut but offer a way to begin thinking about how antitrust enforcement could impact artificial intelligence innovation and national security more broadly. Unlike some earlier national-security technologies, the commercial sector plays an outsize role in AI development. As a result, government access to both AI products and innovation hinges, in large part, on industry. While academia, private research labs, and AI start-ups offer important contributions to AI development, major American technology companies have traditionally led the field. Last year, Microsoft, Facebook, Amazon, Google, and Apple ranked among the ten largest recipients of U.S. artificial intelligence and machine learning (ML) patents. Changes to the composition of America’s tech sector might boost net AI innovation. From 2013-2018, 90 percent of successful Silicon Valley AI start-ups were purchased by leading tech companies. This is a potentially worrisome trend for AI innovation. After all, incumbent firms and emerging companies can have very different incentives. Entrenched tech giants may be more focused on maintaining market share than disrupting markets altogether. As Big Tech increasingly moves to acquire AI start-ups, individual firm dynamics also shift. Instead of “building for scale,” start-ups begin to “build for sale,” adopting a mentality that may be ill-suited for moonshot innovations. Would a company like DeepMind (now owned by Google parent-company Alphabet), for example, have developed AlphaGo—the ground-breaking computer program that became the first to beat a human player in Go—if the firm’s primary goal was to be acquired by a bigger player? Antitrust action could shift these incentives and spur competition, potentially opening the door for new AI innovations—and for a new wave of AI companies. With their smaller statures, some of these firms might focus on more niche AI applications, including defense-related products, as start-ups like Anduril and ShieldAI have done. Today’s tech giants have every financial incentive to cater to foreign markets and the average consumer, not to the U.S. federal government. Indeed, with its global user-base, it is hard to imagine Google tailoring its AI innovation decisions to U.S. defense needs. The same may not hold within an AI ecosystem where some companies built, for example, in the mold of Palantir (a data-analytics company with clear national-security applications) consider government their primary customer and subsequently concentrate on its demands. National-security agencies, from the Pentagon to the U.S. intelligence community, could stand to benefit from more targeted innovation—and from an industrial base better attuned to their needs. As Christian Brose points out, only a fraction of the U.S.’s billion-dollar tech “unicorns” have operated in the defense sector, leaving the U.S. military “shockingly behind the commercial world in many critical technologies.” As Silicon Valley’s largest companies consolidate AI talent and novel ideas through acquisitions, these companies gain an ever-larger say in the future of AI. This consolidation, which antitrust action could disrupt, may not favor innovation. But breaking up major tech firms also has potential pitfalls for AI innovation. With scale comes resources, and AI innovation is resource-intensive, requiring large quantities of data, diverse datastores, and vast computing power—known as “compute” in industry jargon. American tech giants’ huge revenues uniquely equip them to fund costly AI research. Google’s DeepMind, arguably the world’s leading AI-research organization, is billions of dollars in debt and lost over $500 million in 2018 alone. Google’s fortress-like balance sheet can easily absorb the costs associated with such cutting-edge research, but smaller firms likely cannot. The economics of compute offer a concrete example of this dynamic. The rapidly increasing volume of compute required for deep learning research, coupled with compute’s prohibitively expensive prices, creates significant barriers to entry and innovation for smaller AI firms. As Microsoft co-founder Paul Allen noted in 2019, the “exponentially higher” costs of compute may leave the U.S. with only “a handful of places where you can be on the cutting edge.” Even the most well-funded independent AI organizations rely on Big Tech’s compute resources. OpenAI’s billion-dollar compute partnership with Microsoft, reached after OpenAI spent millions renting compute from leading tech firms, offers one example. Changes to firms’ scale also may impact their access to data, another key resource required for AI innovation. Studies have linked the performance of deep learning models to the quantity of data fed into them. At present, tech giants have access to unprecedented volumes of data about their users. Google, for example, can harness data from Google Search, Maps, YouTube, Gmail, and other sources. If antitrust enforcement leads to divestment or broader break-ups, access to data may diminish, lessening innovation. Would reduced access to large, internal datastores hurt U.S. tech companies’ ability to innovate relative to China, whose biggest firms have largely evaded antitrust action? Big Tech executives, including Mark Zuckerberg, have argued that antitrust action could hinder U.S. competitiveness. Data access is a growing point of concern along these lines. The U.S. National Security Commission on AI has reportedly discussed the possibility of data pooling among allied countries to “offset” any data advantage held by China. However, it remains unclear just how central big data will be to the future of AI innovation (promising ML techniques like few-shot learning are not data intensive) and how well big companies can utilize their large datasets in the first place. National security and antitrust are rarely part of the same conversation. The realities of today’s AI ecosystem should challenge that dynamic. American AI innovation is concentrated in the private sector—particularly within its largest, most dominant firms. As these firms face antitrust scrutiny, policymakers and lawmakers alike need to consider the AI ecosystem that they will have a hand in creating. They will need to contemplate its competitiveness, its innovativeness, its responsiveness to defense and national-security needs, and its accessibility to government. Will its companies have the resources to access and acquire key inputs for AI innovation like compute and data? Will the sector’s composition encourage competition at every level? Or will it stifle new growth and engage in anti-innovative practices? American leadership in AI—a key national security technology—may hinge on an AI ecosystem shaped by antitrust action. It will be imperative that innovation considerations play a role in forging it.

#### Chinese lead causes nuclear escalation

Kroenig and Gopalaswamy, 18 (Matthew Kroenig and Bharath Gopalaswamy, Kroenig is an Associate Professor of Government and Foreign Service at Georgetown University and Deputy Director for Strategy in the Scowcroft Center for Strategy and Security at the Atlantic Council. , Gopalaswamy is the Director of the South Asia Center at the Atlantic Council. He holds a PhD in mechanical engineering with a specialization in numerical acoustics from Trinity College, Dublin., 11-12-2018, accessed on 8-11-2021, Bulletin of the Atomic Scientists, "Will disruptive technology cause nuclear war? - Bulletin of the Atomic Scientists", <https://thebulletin.org/2018/11/will-disruptive-technology-cause-nuclear-war/>)//Babcii

Rather, we should think more broadly about how new technology might affect global politics, and, for this, it is helpful to turn to scholarly international relations theory. The dominant theory of the causes of war in the academy is the “bargaining model of war.” This theory identifies rapid shifts **in the balance of power as a** primary cause of conflict. International politics often presents states with conflicts that they can settle through peaceful bargaining, but **when bargaining** breaks down, war results. Shifts in the balance of power are problematic because they undermine effective bargaining. After all, why agree to a deal today if your bargaining position will be stronger tomorrow? And, a clear understanding of the military balance of power can contribute to peace. (Why start a war you are likely to lose?) But **shifts in the balance of power** muddy understandings **of** which states have the advantage. You may see where this is going. New technologies threaten to create potentially destabilizing shifts in the balance of power. For decades, stability in Europe and Asia has been supported by US military power. In recent years, however, the balance of power in Asia has begun to shift, as China has increased its military capabilities. Already, Beijing has become more assertive in the region, claiming contested territory in the South China Sea. And the results of Russia’s military modernization have been on full display in its ongoing intervention in Ukraine. Moreover, China may have the lead over the United States in emerging technologies that could be decisive for the future of military acquisitions and warfare, including 3D printing, hypersonic missiles,quantum computing, 5G wireless connectivity, **and** artificial intelligence (AI). And Russian President Vladimir Putin is building new unmanned vehicles while ominously declaring, “Whoever leads in AI will rule the world.” If China or Russia are able to incorporate new technologies into their militaries before the United States, then this could lead to the kind of rapid shift in the balance of power **that** often causes war. If Beijing believes emerging technologies provide it with a newfound, local military advantage over the United States, for example, it may be **more willing** than previously **to** initiate conflict over Taiwan. And if Putin thinks new tech has strengthened his hand, he may be more tempted to launch a Ukraine-style invasion of a NATO member. Either scenario could bring these nuclear powers into direct conflict with the United States, and once nuclear armed states are at war, there is an inherent risk of nuclear conflictthrough limited nuclear war strategies, nuclear **brinkmanship**, or simple accidentor inadvertent escalation**.** This framing of the problem leads to a different set of policy implications. The concern is not simply technologies that threaten to undermine nuclear second-strike capabilities directly, but, rather, any technologies that can result in a meaningful shift in the broader balance of power. And **the** solution **is not** to preserve **second-strike** **capabilities, but** to preserve prevailing power balances more broadly. When it comes to new technology, this means that the United States should seek **to maintain an innovation edge**. Washington should also work with other states, including its nuclear-armed rivals, to develop a new set of arms control and nonproliferation agreements and export controls to deny these newer and potentially destabilizing technologies to potentially hostile states. These are no easy tasks, but **the consequences of Washington losing the race** for technological superiority to its autocratic challengers just **might mean nuclear Armageddon.**

#### End of unipolarity causes global escalation --- Only unipolarity can explain post WWII peace

Michael Beckley 18. Professor of political science at Tufts. *Unrivaled: Why America Will Remain the World’s Sole Superpower*. Cornell University Press.

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 ﬁve 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 conﬂict more likely—but none of these conﬂicts 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 identiﬁed 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-ﬁve 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. 7

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 ﬁghting, 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 conﬂict. 9 Faced with overwhelming U.S. economic and military might, most countries have decided to work within the American-led liberal order rather than ﬁght 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.

#### Existential risks come first – cognitive bias goes our way

GPP 17 (Global Priorities Project, Future of Humanity Institute at the University of Oxford, Ministry for Foreign Affairs of Finland, “Existential Risk: Diplomacy and Governance,” Global Priorities Project, 2017, <https://www.fhi.ox.ac.uk/wp-content/uploads/Existential-Risks-2017-01-23.pdf> edited

1.2. THE ETHICS OF EXISTENTIAL RISK In his book Reasons and Persons, Oxford philosopher Derek Parfit advanced an influential argument about the importance of avoiding extinction: I believe that if we destroy mankind, as we now can, this outcome will be much worse than most people think. Compare three outcomes: (1) Peace. (2) A nuclear war that kills 99% of the world’s existing population. (3) A nuclear war that kills 100%. (2) would be worse than (1), and (3) would be worse than (2). Which is the greater of these two differences? Most people believe that the greater difference is between (1) and (2). I believe that the difference between (2) and (3) is very much greater. ... The Earth will remain habitable for at least another billion years. Civilization began only a few thousand years ago. If we do not destroy [hu]mankind, these few thousand years may be only a tiny fraction of the whole of civilized human history. The difference between (2) and (3) may thus be the difference between this tiny fraction and all of the rest of this history. If we compare this possible history to a day, what has occurred so far is only a fraction of a second.65 In this argument, it seems that Parfit is assuming that the survivors of a nuclear war that kills 99% of the population would eventually be able to recover civilisation without long-term effect. As we have seen, this may not be a safe assumption – but for the purposes of this thought experiment, the point stands. What makes existential catastrophes especially bad is that they would “destroy the future,” as another Oxford philosopher, Nick Bostrom, puts it.66 This future could potentially be extremely long and full of flourishing, and would therefore have extremely large value. In standard risk analysis, when working out how to respond to risk, we work out the expected value of risk reduction, by weighing the probability that an action will prevent an adverse event against the severity of the event. Because the value of preventing existential catastrophe is so vast, even a tiny probability of prevention has huge expected value.67 Of course, there is persisting reasonable disagreement about ethics and there are a number of ways one might resist this conclusion.68 Therefore, it would be unjustified to be overconfident in Parfit and Bostrom’s argument. In some areas, government policy does give significant weight to future generations. For example, in assessing the risks of nuclear waste storage, governments have considered timeframes of thousands, hundreds of thousands, and even a million years.69 Justifications for this policy usually appeal to principles of intergenerational equity according to which future generations ought to get as much protection as current generations.70 Similarly, widely accepted norms of sustainable development require development that meets the needs of the current generation without compromising the ability of future generations to meet their own needs.71 However, when it comes to existential risk, it would seem that we fail to live up to principles of intergenerational equity. Existential catastrophe would not only give future generations less than the current generations; it would give them nothing. Indeed, reducing existential risk plausibly has a quite low cost for us in comparison with the huge expected value it has for future generations. In spite of this, relatively little is done to reduce existential risk. Unless we give up on norms of intergenerational equity, they give us a strong case for significantly increasing our efforts to reduce existential risks. 1.3. WHY EXISTENTIAL RISKS MAY BE SYSTEMATICALLY UNDERINVESTED IN, AND THE ROLE OF THE INTERNATIONAL COMMUNITY In spite of the importance of existential risk reduction, it probably receives less attention than is warranted. As a result, concerted international cooperation is required if we are to receive adequate protection from existential risks. 1.3.1. Why existential risks are likely to be underinvested in There are several reasons why existential risk reduction is likely to be underinvested in. Firstly, it is a global public good. Economic theory predicts that such goods tend to be underprovided. The benefits of existential risk reduction are widely and indivisibly dispersed around the globe from the countries responsible for taking action. Consequently, a country which reduces existential risk gains only a small portion of the benefits but bears the full brunt of the costs. Countries thus have strong incentives to free ride, receiving the benefits of risk reduction without contributing. As a result, too few do what is in the common interest. Secondly, as already suggested above, existential risk reduction is an intergenerational public good: most of the benefits are enjoyed by future generations who have no say in the political process. For these goods, the problem is temporal free riding: the current generation enjoys the benefits of inaction while future generations bear the costs. Thirdly, many existential risks, such as machine superintelligence, engineered pandemics, and solar geoengineering, pose an unprecedented and uncertain future threat. Consequently, it is hard to develop a satisfactory governance regime for them: there are few existing governance instruments which can be applied to these risks, and it is unclear what shape new instruments should take. In this way, our position with regard to these emerging risks is comparable to the one we faced when nuclear weapons first became available. Cognitive biases also lead people to underestimate existential risks. Since there have not been any catastrophes of this magnitude, these risks are not salient to politicians and the public.72 This is an example of the misapplication of the availability heuristic, a mental shortcut which assumes that something is important only if it can be readily recalled. Another cognitive bias affecting perceptions of existential risk is scope neglect. In a seminal 1992 study, three groups were asked how much they would be willing to pay to save 2,000, 20,000 or 200,000 birds from drowning in uncovered oil ponds. The groups answered $80, $78, and $88, respectively.73 In this case, the size of the benefits had little effect on the scale of the preferred response. People become numbed to the effect of saving lives when the numbers get too large. 74 Scope neglect is a particularly acute problem for existential risk because the numbers at stake are so large. Due to scope neglect, decision-makers are prone to treat existential risks in a similar way to problems which are less severe by many orders of magnitude. A wide range of other cognitive biases are likely to affect the evaluation of existential risks.75

## Case

#### Vote neg on presumption

#### [1] The Ballot --- No intrinsic reason why getting it is key to the aff’s project --- The ballot is not the destruction of the world computer --- It’s a tool to communicate a decision to tabroom

#### [2] Alienation --- Competitive incentives of debate mean that people will ally against the aff and grow resentment towards the aff when they hit it which makes collective action against <the world computer> impossible

#### Their theory’s reductive, no structural systemic failure, and contingency’s best

Susen, 19—Reader in Sociology at the School of Arts and Social Sciences of City, University of London (Simon, “No escape from the technosystem?,” Philosophy & Social Criticism, October 9, 2019, dml)

A major irony of Feenberg’s book is the following contradiction: on several occasions, he criticizes, and distances himself from, technological determinism; key parts of his argument suggest, however, that he himself flirts with, if not subscribes to, technological determinism. He rightly maintains, and convincingly demonstrates, that ‘society and technology are inextricably imbricated’.240 This insight justifies the underlying assumption that there is no comprehensive study of society without a critical sociology of technology. Yet, to contend that ‘[s]ocial groups exist through the technologies that bind their members together’241 is misleading. For not all social groups are primarily defined by the technologies that enable their members to relate to, and to bond with, one another. Indeed, not all social relations, or social bonds, are based on, let alone determined by, technology.

Of course, Feenberg is right to argue that ‘technologically mediated groups influence technical design through their choices and protests’.242 Ultimately, though, the previous assertion is tautological. This becomes clear if, in the above sentence, we replace the word ‘technological(ly)’ with terms such as ‘cultural(ly)’, ‘linguistical(ly)’, ‘political(ly)’, ‘economic(ally)’, or indeed another sociological qualifier commonly used to characterize the specificity of a social relation. Hence, we may declare that ‘culturally, linguistically, politically, and economically mediated groups influence cultural, linguistic, political, and economic conventions through their choices and protests’. In saying so, we are stating the obvious. If, however, we aim to make a case for cultural, linguistic, political, or economic determinism, then this is problematic to the extent that we end up reducing the constitution of social arrangements to the product of one overriding causal set of forces (whether these be cultural, linguistic, political, economic, technological, or otherwise).

While declaring that he is a critic of technological determinism, Feenberg – in central passages of his book – gives the impression that he is one of its fiercest advocates. Feenberg’s techno-Marxist evolutionism is based on the premise that ‘progress is realized essentially through technosystem change’243 – that is, on the assumption that, effectively, human progress is reducible to technological development. Feenberg is right to stress that ‘[t]echnical progress is joined indissolubly to the democratic enlargement of access to its benefits and protection from its harms’.244 ‘Concretization’,245 understood in this way, conceives of progress as a ‘local, context-bound phenomenon uniting technical and normative dimensions’.246 We may add, however, that progress has not only technical (or technological) but also economic, cultural, and political dimensions, which contain objective, normative, and subjective facets. At times, the differentiation between these aspects is blurred, if not lost, in Feenberg’s account, given his tendency to overstate the power of technology at the expense of other crucial social forces. In other words, progress is not only ‘inextricably entangled with the technosystem’,247 but it is also indissolubly entwined with the economic, cultural, and political systems in which it unfolds and for (or against) which it exerts its objective, normative, and subjective power.

The preceding reflection takes us back to the problem of techno-reductionism:

The struggle over the technosystem began with the labor movement. Workers’ demands for health and safety on the job were public interventions into production technology.248

All struggles over social (sub)systems have not only a technological but also various other (notably economic, cultural, and political) dimensions. Demands made by particular subjects (defined by class, ethnicity, gender, age, or ability – or a combination of these sociological variables) are commonly expressed in public interventions not only into production technology, but also into economic, cultural, and political systems. In all social struggles (including class struggle), technology can be an important means to an end, but it is rarely an end in itself. Put differently, social struggles are partly – but seldom essentially, let alone exclusively – about technology.

#### Growth is sustainable because of the shift to a knowledge economy---AND making it faster is key to outrun entropy---extinction

Gennady Shkliarevsky 18, professor of history at Bard College where he has taught since 1985, 1-5-2018, "Tax Cuts and the Problem of Economic Growth," International Policy Digest, https://intpolicydigest.org/2018/01/05/tax-cuts-and-the-problem-of-economic-growth/

Does this problem have a solution? Is it possible for humanity to break out of the current vicious circle and achieve a constant, stable, sustained, or even exponentially increasing economic progress? Production and consumption are the two most important categories in our economy and economic thinking. They constrain each other and this mutual constraint acts as a limitation on the rate of our economic growth. The typical effect of the expansion of production is the increase in supply. Supply growth results in declining prices. The decline in prices signals that the market is saturated and production must slow down. When production slows down, supply diminishes and prices begin to grow, which triggers a new expansion of production. When production expands, our wealth grows and economy appreciates. Consumption generally depreciates products and thus our wealth declines and our economy depreciates. Thus, production and consumption constrain each other and this constraint limits the rate of our economic growth. In order to solve this problem and achieve constant growth, we need to constantly rejuvenate our economy, we need to ensure a sustained supply of new products to the market and, moreover, we need to make sure that these products are needed. The main economic problem we face today is precisely in bringing novelties to the marketplace. Many business people, economists, pundits and politicians have stressed that we will have to innovate our way out of the current economic predicament. Therefore, creativity and creation are the key to solving the problem of growth. However, creativity, or what we call entrepreneurship when we talk about economy, is not a science. We cannot use it in any predictable way. It is a very uncertain and contingent factor that is fraught with many unknowns and surprises. Therefore, the problem of economic growth is reformulated into the problem of how to make innovation constant, predictable, and steady, rather than sporadic and contingent. In other words, how can we control our creativity? As has already been pointed out, consumption acts as a constraint on production. Production appreciates and consumption depreciates. The tendency of consumption to depreciate our economy is the reason for the existence of limits to rates of economic growth. As one can see, production and consumption are two most essential economic functions. They are mutually dependent, complementary and cannot exist without each other. The problem for achieving constant and sustained growth is that their vectors point in different directions: one toward appreciation and the other toward depreciation. However, do they have to be opposed to each other? There are two kinds of consumption that we know. One kind of consumption is consumption of final products. Indeed, this kind of consumption always depreciates products. You drive your new car out of the parking lot and it immediately loses value. But this form of consumption is not the only one we know. There is also a form of consumption that appreciates products, for example, consumption of raw materials or semi-finished products. Another interesting case of consumption that appreciates is the consumption of technological devices and machines. Indeed, physical use of such devices and machines depreciates them. However, they also represent certain technological knowledge. Knowledge consumption involves our mind. Mental consumption inevitably involves mediation and, therefore, construction that takes place in our mind. In other words, in order to consume something our mind has to create forms of mediation that allow us to consume this something, or, in other words, we have to produce it in our mind. Our sense organs transmit to our brain electrical signals that the brain interprets. We produce reality and production necessarily involves appreciation. Thus mental consumption involves necessarily the creation of new knowledge and hence appreciation. The above argument bears one important conclusion that consumption does not necessarily involve depreciation. Consumption can also, like production, be associated with appreciation, particularly consumption that involves mental activity that is associated with production of knowledge, or creation. We live in the era of knowledge society when knowledge is the main means of production and the principal product. The share of knowledge production by comparison with the production of consumer goods is constantly growing and already begins to outstrip the latter. Since consumption of knowledge, just like its production, is associated with appreciation, the transition to knowledge society suggests that in the modern economy both consumption and production will lead to appreciation and increase in wealth. They do not stand opposed to each other and their balance does not slow down the economy but is the source of its appreciation and constant growth. Balance in this case means that when production grows, so does consumption and both contribute to appreciation of the economy and economic growth. The constraint on the rates of growth disappears and the pace of economic growth can accelerate. The combined effect of growth that comes from production and consumption is double from what it is in our current economy. In other words, economic growth becomes exponential and limitless: as production increases, so does consumption, and more consumption leads to greater appreciation and greater wealth. This infinite and exponential economic growth is not only possible, but is, in fact, essential. Without such growth our civilization simply cannot exist. Our civilization is essentially a dissipative system that constantly generates entropy. As soon as this system ceases to create new levels and forms of organization, it begins to deplete available resources. The only way it can sustain itself indefinitely is by constantly redefining itself in ways that allow us to capture new flows of energy and resources; and where there are new flows of energy and resources, work can be performed. It is our destiny to play this catch-up game, and the only way we can play it indefinitely is by constantly creating new levels and forms of organization of reality so as to maintain the overall entropy level at zero. There is no way for our civilization to go back to less powerful levels of organization of social production, as advocated by the adepts of de-growth, or even to maintain the same level of production organization (steady-state economy). Limits to growth or de-growth are not ultimately realistic possibilities. Our civilization can only move forward. If we decide to terminate the progress of our civilization, we will embark on the path that leads only to its eventual disintegration and disappearance—an option that even supporters of limits to growth or de-growth do not want to entertain.

#### IEA studies and empirics prove that universal decoupling is occuring --- global emissions have stalled for years despite consistent growth

**Riti** et. al **17** [Joshua Sunday Riti, School of Economics, Huazhong University of Science and Technology, Department of Economics, Faculty of Social Sciences, University of Jos, “Decoupling CO2 emission and economic growth in China: Is there consistency in estimation results in analyzing environmental Kuznets curve?”, Journal of Cleaner Production Volume 166, 10 November 2017, Pages 1448-1461, Science Direct]

According to the International Energy Agency (IEA), universal carbon dioxide-greenhouse gas related emissions shows some stability in 2015 at approximately 32.1 Gt for the second year in a row, validating the decoupling of global greenhouse gas emissions and economic growth (Enerdata, 2015; Itskos et al., 2016). The stalling of global emissions is no surprise, as this is in line with the slowing trend in annual emission growth over the past three years, starting from 2.0% in 2013 to 1.1% in 2014 and further down to 0.1% in 2015. A similar trend of declining growth in global emissions could also be seen from 2010 to 2012, starting from 5.7% down to 0.7%. It is debatable whether the plateaued emission level will continue and results from structural changes (Jackson et al., 2016; Qi et al., 2016; Green and Stern, 2016). In 2009, a stronger global downward trend of 1.0% was recorded, compared to 2008 levels, but this was due to the global economic downturn. Stalling in emissions is not coupled with the GDP trend, as global GDP kept up with an annual growth of 3.0% in 2015 compared to 2014. A more structural change with a shift away from carbon-intensive activities, particularly in China but also in the United States, contributed considerably to this trend. This achievement was made possible through the global investment in energy efficiency which increased by 6% in 2015 (IEA, 2010) and the rise in the proportion of renewables in the generation of power. It is estimated that the share of renewables was around 90 percent of the latest power generation in year 2015, with power from wind alone responsible for over 50 percent.

#### Its too late to *cut emissions* – try or die for growth. Only innovation can sequester carbon. Capitalism is key to innovation.

Emily Holden, Guardian US, ‘18, "Could carbon-capture technology be a silver bullet to stop climate change?," Guardian, https://www.theguardian.com/environment/2018/oct/17/carbon-capture-technology-climate-change-solutions

People have done too much damage to the climate to avoid catastrophe just by halting the burning of fossil fuels. They now will have to re-engineer the world, according to scientists with the UN’s Intergovernmental Panel on Climate Change. The livability of the planet will thus depend largely on tools that are now available only on a small scale and currently still expensive.

This carbon capture machine, by Healthy Climate Alliance in partnership with Blue Planet, can pull carbon dioxide from the air and store it in construction materials.

The key, Fiekowsky said, is not the technology itself. It’s having a meaningful goal: restoring the climate, “because it means maybe we’re not doomed”.

The UN’s recent report – which says it will require unprecedented action within the next 12 years to keep temperatures from climbing beyond a current 1C increase to a 1.5C increase – does not inspire optimism in many carbon removal experts.

While it’s technically feasible to slow fossil fuel use fast enough and capture enough greenhouse gases to limit warming, the world is not on track to do so.

California plans to show the world how to meet the Paris climate target

Scaling up carbon capture technology is possible but will be difficult, said Kurt Waltzer, managing director for the Clean Air Task Force.

“We are absolutely going to have to have a significant amount of carbon removal, there’s no question about it,” Waltzer said. “The level will probably depend on how quickly we can get to a zero-carbon world, but it is going to be enormous.”

Most of the work has previously centered around sequestering carbon from power plants, which is different than drawing it from the air.

James Mulligan, carbon removal expert at World Resources Institute, said direct-air carbon capture technologies are “unproven at the scale that we’ll need them”. A decade ago, they were viewed as “impossibly expensive”, he said. Now, some are touting a cost of $100 to $200 per ton of carbon.

“That’s still expensive,” Mulligan said. “But halting climate change isn’t going to be free.”

Reforestation and new agricultural practices could also trap carbon and help slow warming. But direct removal will still be necessary.

With direct-air capture, the most obvious option is to store carbon underground. But technologies that create a sellable product will help reduce costs. Three of the biggest direct-air carbon removal companies – Carbon Engineering, Climeworks and Global Thermostat – are all working to store CO2 in something useable.

#### Growth solves war – data

Lin 17 [Oon Yong; 4/23/2017; International Economics at SUNY Buffalo, under the supervision of Dr. Sandeep Bhakshar, PhD in economics; “Conflict and Trade,” http://geoeconomics.net/2017/09/13/conflict-and-trade/]

CONFLICT AND TRADE TODAY

In the post-cold war era, actual conflicts are relatively few and far between especially between developed nations due to advances in military hardware [nuclear options]. Conflicts took on other forms such as economic warfare and proxy wars. Fortunately, advances in military technology were met with advances in international relations which led to the founding of intergovernmental organizations in the 20th-century.

Trade in the modern context can be examined through globalization which serves as an all-encompassing word that represented progress, cultural exchange and increased trade. Development took off in the 1980s to 1990s, most notably from 1990 to 1996, capital inflows to developing countries increased by a massive 600% (Stiglitz, 2006). The World Trade Organization was formed in 1995, absorbing the General Agreement on Tariffs and Trade [GATT], the organization enabled countries to have a combined platform to address international trade issues which developed and developing countries would both benefit in a world that was accelerating quickly in terms of trade.

China’s control of rare earth mineral exports in the global market and the usefulness of the WTO is an example worth observing. China has an effective 97% control of the rare-earth elements market (Müller, Schweizer, & Seiler, 2016). It posed an issue as the Chinese government applied export quotas, causing global firms that use these minerals to be fearful of a supply issue due to the concentration of the source. Rare earth metals were useful in many applications and that contributed to the concern, United States firms used them for several product developments ranging from technological turbines to lab purposes such as for their magnetic properties. In 2014, an argument was brought up to the World Trade Organization [WTO] by the European Union, United States, and Japan in 2012 about the control of rare earth exports (World Trade Organization, 2015). The timing was nearly 11 years after the accession of China to the WTO, the panel concluded in 2014 that China’s export tariffs on rare earth exports were inconsistent with their WTO obligations. A study conducted by Müller et. al. (2016) begs to differ and found that U.S. firms could have adopted defensive actions such as stockpiling these materials and that export control effects were not overtly damaging after China has joined the World Trade Organization. But it remained apparent that the Chinese government did use its policies to benefit Chinese firms at the expense of non-domestic companies before they had joined the WTO. On 20 May 2015, China responded to the WTO’s request to conform to its panel’s recommendations and to fulfill its obligations to WTO law. China accepted the panel’s judgment, and the issue was resolved amicably.

Bilateral agreements that increase cooperation through trade can also help reduce potential conflict. In 2010, a free trade agreement known as the Economic Framework Cooperation Agreement was initiated between ROC Taiwan and PRC China, details of the agreement were finalized in June 2013. The deal’s results were twofold, firstly Taiwan benefited from the trade potential that China provided. Secondly, the agreement led to reduced pressure by PRC China on ROC Taiwan’s agenda of pursuing free trade agreements with New Zealand and Singapore (Kan & Morrison, 2013). The change in China’s political stance during that time allowed ROC Taiwan to ink deals in quick succession, initially [ANZTEC] with New Zealand on the 10th of July 2013, and subsequently with Singapore [ASTEP] on 7th November 2013. Bernard Cole of the National War College in Washington, DC shares that the possibility of ROC Taiwan and PRC China conflict has been reduced (Navarro, 2016) and the de-escalation can be partially attributed to the constant flow of trade between both countries.

The most revolutionary organization for trade was the formation of the intergovernmental organization known as the European Union [EU]. The EU was founded after World War II [the deadliest war] to prevent future wars. The EU expressed the primary motivation for the formation, “The first steps were to foster economic cooperation: the idea being that countries that trade with one another become economically interdependent and so more likely to avoid conflict.” (European Union, 2017, para 2). At its founding the EU had six member countries, today it has 28 member countries some of which are fully committed to its economic and monetary union. Furthermore, the EU is at the forefront of democratic thought and champions a broad range of issues such as human rights, internet privacy, and democracy.

In support of the idea for the notion of trade and growth bringing peace to society, A Modern Peace? Schumpeter, the Decline of Conflict, and the Investment–War Trade-Off Professors Chatagnier and Castelli argues that

To sustain growth (a basic requirement for every industrialized economy), governments and entrepreneurs must reinvest profits in innovation. Political leaders also benefit, as they can extract more revenue from a richer society. Within industrialized economies, war threatens this virtuous mechanism of investment, innovation, profits, and taxes, rendering it materially unprofitable. (Chatagnier & Castelli, 2016)

Their argument was based on the assumptions that industrialized economies which have grown to generate additional revenue for society, in general, tends not to prefer wars as it was contrary to the needs of an industrialized economy (Jentleson, 2007). Advocating that an extra dollar spent on military expenditures is one less dollar spent on economic growth for the society. They found that over the last fifty years from 2016, wars were not profitable and that industrialization does indeed reduce a nation’s incentive to enter conflicts due to the economic changes of industrialization. Additionally, the authors recognized that trade between industrialized societies potentially leads to peaceful attitudes (Chatagnier & Castelli, 2016).

#### Growth is locked in --- a transition would have to literally remake everything

**Koch** and Büchs **19** [Max Koch, Faculty of Social Sciences, Socialhögskolan, Lund University, Milena Büchs, Sustainability Research Institute, School of Earth and Environment, University of Leeds, “Challenges for the degrowth transition: The debate about wellbeing”, Futures Volume 105, January 2019, Pages 155-165, https://www.sciencedirect.com/science/article/pii/S0016328718300715#!]

Economic growth, as an attribute of market capitalism, has structural properties – it is needed to stabilise modern societies as it provides employment, public sector provision through tax revenues, rising wages, and hence social stability (Petridis et al., 2015: 178, Rosa et al., 2017). Economic growth is organised around and shapes a range of tightly coupled structures, including institutions, norms, discourses, culture, technologies, competences, identities, etc. Historically speaking, growth is a fairly recent phenomenon which only picked up in the 19th century together with the industrialisation of Western economies. In a co-evolutionary process, a range of institutions developed which are now coupled to a growth-based capitalist economy, including the nation state, representative democracy, the rule of law and current legal, financial, labour market, education, research, and welfare systems. These are based on philosophies which emerged to justify and give meaning to these institutions, for instance on individualism, freedom, justice, sovereignty, or power. The embeddedness of the growth-based capitalistic economic system in these co-evolved institutions and ways of thinking makes it difficult to transition to a degrowth system because the change of the economic system would need to involve a parallel transformation of those coupled systems. In Luhmann’s words, the constitution of the current system “defuturises” (Luhmann, 1976: 141) the future, it reduces the “openness” of the future; “path dependency” or even “lock-in” are related expressions that capture this idea. Two examples which directly link to people’s wellbeing can illustrate this point: the relationship between welfare states and growth, and between growth and people’s mind-sets and identities.

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### 2NC --- TVA’s

#### The United States federal government should expand its core antitrust law to make digital colonialism an anticompetitive business practice

Kwet ’19 – (Michael Kwet is a Visiting Fellow at Yale’s Information Society Project. His current areas of research include education technology, the global digital economy, tech startups, safe and smart city initiatives, big data, and Free and Open Source Software. Mike holds a Ph.D. in Sociology from Rhodes University in South Africa. “Digital colonialism: US empire and the new imperialism in the Global South,” 01/14/2019, pg. 5-9)//pshah

Under colonialism, Europeans dispossessed the natives of their land, settled their territories, put them to work as slaves and servants, instituted horrific acts of violence, and perpetuated dependency and plunder through strategic underde- velopment. Corporations played a pivotal role through the ‘pathological pursuit of profit and power’.7 In 1602, the Dutch East India Company became the first modern global corporation. Fifty years later, it initiated European conquest in Southern Africa with the establishment of the Cape Colony. Over the next two centuries, whites seized large swathes of land as colonists expanded into the interior. After the discovery of diamonds and gold, the British and the Afrikaners consolidated the remaining majority of land and further sub- jugated the African population under racist regimes of labour exploitation. In no time flat, a handful of corporations came to dominate large parts of the economy.8 today, a new form of corporate colonisation is taking place. Instead of the con- quest of land, Big tech corporations are colonising digital technology. the fol- lowing functions are all dominated by a handful of US multinationals: search engines (Google); web browsers (Google Chrome); smartphone and tablet oper- ating systems (Google Android, Apple iOS); desktop and laptop operating sys- tems (Microsoft Windows); office software (Microsoft Office, Google G Suite); cloud infrastructure and services (Amazon, Microsoft, Google, IBM); social net- working platforms (Facebook, twitter); transportation (Uber, Lyft); business net- working (Microsoft LinkedIn); streaming video (Google Youtube, Netflix, hulu); and online advertising (Google, Facebook) – among others. GAFAM now comprise the five wealthiest corporations in the world, with a combined market cap exceeding $3 trillion.9 If South Africans integrate Big tech products into their society, the United States will obtain enormous power over their economy and create technological dependencies that will lead to perpetual resource extraction. Early research and case examples suggest the economic impact of Big tech intermediaries is detrimental to local African industries. Murphy, Carmody and Surborg, who studied the role of ICts among small, medium, and micro-sized enterprises (SMMEs) in South Africa’s and tanzania’s wood and tourism indus- tries, found that ICts introduced the dominance of information intermediaries. Increased use of ICts also led to greater worker surveillance in some instances. they concluded that ICt integration is, on balance, benefiting foreign-owned businesses and corporations.10 Similar conclusions can be derived from press accounts of the transportation industry. Since Uber began operating in Johannesburg in 2013, there have been labour strikes and violent clashes in the ‘South African taxi wars’. Several e-hailing taxi murders have been carried out by metered taxi drivers, who have warned that Uber will ‘burn’ if it remains in South Africa. At the same time, many Uber drivers endure onerous working conditions for low pay.11 Uber has had devastating effects in Africa and beyond.12 the company takes around 25 per cent commission for each trip, in addition to hidden costs,13 leading to an outflow of revenue from the local economy to foreign coffers. Moreover, it is able to undercut local markets by offering artificially low prices: Uber can operate at a loss – to the tune of billions – thanks to funding from Wall Street and other wealthy investors.14 With the backing of corporate finance, it leverages predatory subsidies, network effects, Big Data analytics, and the deregulatory effects of its position as an ‘intermediary’ to stamp out competition and colonise the market. Within just two years, Uber sported a net worth of R1.65 billion ($125 million) inside South Africa.15 Similar problems have emerged in the media. In April 2017, the online news outlet *GroundUp* dropped Google Ads from its website. *GroundUp*’s Nathan Geffen explains the Google advertising model is ‘broken’ for publishers who ‘have to put up with poor quality, misleading adverts in exchange for small change’. ‘the problem’, Geffen says, ‘is that nearly all the power in the online advertising relationship lies with Google.’ the ad giant also serves up censorship threats: in one example, Google issued a warning to *GroundUp* for publishing a picture containing a painted bare breast as part of a protest action.16 In November 2017, *Financial Mail*’s Anton harber wrote a feature story deem- ing Google and Facebook ‘the biggest threat to South African news media’.17 Google takes 70 per cent of local online advertising, while social media – led by Facebook – takes another 12 per cent. the major South African media groups are left with just 8 per cent of the pie. the Google and Facebook ‘nemesis’ is an expanding duopoly: the two take 77 per cent of online advertising spend in the US and captured virtually all the ad growth in 2016.18 If this continues, harber exclaims, ‘the big two could have a devastating effect on the media’s role in defin- ing democracy’.19 these early examples provide clear instances of digital colonialism whereby foreign corporations undermine local development, dominate the market, and extract revenue from the Global South, with power obtained primarily through the *structural* domination of digital architecture, which leads to more general forms of *imperial control*. Colonial conquest typically entails dispossession of valuable resources from the native peoples and ownership and control of infrastructure by colonial powers. In many parts of the Global South, critical infrastructure such as railways was designed by foreign imperialists not to benefit the indigenous population, but to service the mother country. In the arrangement that emerged through European colonialism, raw materials were extracted by exploited local labour and shipped back to the empire. In some cases, colonial forces would import the cheap, machine-made industrial products to the villages, undermining local artisans and the capacity to build competitor industries. In Africa and elsewhere, railroads were built from the country interior straight to the ports and military stations, with little ‘spread effect’ to connect up the indigenous people. the architectural design of the production system was not engineered to benefit the local inhabitants, but to ‘serve immediate European needs’.20 Under digital colonialism, foreign powers, led by the US, are planting infrastructure in the Global South engineered for their own needs, enabling economic and cultural domination while imposing privatised forms of governance. to accomplish this task, major corporations design digital technology to ensure their own dominance over critical functions in the tech ecosystem. this allows them to accumulate profits from revenues derived from rent (in the form of intellectual property or access to infrastructure) and surveillance (in the form of Big Data). It also empowers them to exercise control over the flow of information (such as the distribution of news and streaming services), social activities (like social network- ing and cultural exchange), and a plethora of other political, social, economic and military functions mediated by their technologies. the control of code is foundational to digital domination. In *Code: and Other Laws of Cyberspace*, Lawrence Lessig famously argued that computer code shapes the rules, norms and behaviours of computer-mediated experiences in ways similar to architecture in physical space (e.g. imperial railways designed for colonisation).21 ‘Code is law’ in the sense that it has the power to usurp legal, institutional and social norms impacting the political, economic and cultural domains of society. this critical insight has been applied in fields like copyright, free speech reg- ulation, Internet governance, blockchain, privacy, and even torts. What has been missed, however, is how US dominance of code – and other forms of digital architecture – usurps other countries’ sovereignty. Digital forms of power are linked through the three core pillars of the digital ecosystem: software, hardware and network connectivity.22 (Software is the set of instructions that define and determine what your computer can do. hardware is the physical equipment used for computer experiences. the network is the set of protocols and standards computers use to talk to each other, and the connections they make.) Software functions as the coded logic that constrains and enables particular user experiences. For example, software determines rules and policies such as whether or not users can post a message anonymously at a website, or whether or not users can make a copy of a copyright-restricted file like an e-book. the rules that a programmer codes into the software largely determine technological freedoms and shape users’ experiences using their devices. thus, software exerts a powerful influence on the behaviour, policies and freedoms of people using digi- tal technology. *Control over software* is a source of digital domination primarily exercised through software licences and hardware ownership. Free Software licences allow people to use, study, modify and share software as they see fit.23 By contrast, non- free software licences grant a software designer control over users by precluding the ability to exercise those freedoms. With proprietary software, the human- readable source code is closed off to the public, and owners usually restrict the ability to use the software without paying. In the case of Microsoft Windows, for example, the public must pay for the programme in order to use it, they cannot read the source code to understand how it works, they cannot change its behaviour by changing the code, and they cannot share a copy with others. thus with proprietary licensing, Microsoft maintains absolute control over how the software works. the same goes for other proprietary apps, like Google Play or Adobe Photoshop.24 By design, non-free software provides the owner power over the user experience. It is authoritarian software. *Control over hardware* is a second source of digital domination. this can take at least three forms: software run on third-party servers, centralised ownership of hardware, or hardware designed to prevent users from changing the software. In the first scenario, software is executed on someone else’s computer. As a result, users are dispossessed of their ability to control it. this is typically accomplished through Software as a Service (SaaS) in the cloud. For example, when you visit the Facebook website, the interface you are provided executes on third-party hardware (i.e. on Facebook’s cloud servers). Because users cannot change the code running on Facebook’s servers, they cannot get rid of the ‘like’ button or change the Facebook experience. ‘there is no cloud’, the saying goes, ‘just some- one else’s computer’. Corporations and other third parties design cloud services for remote control over the user experience. this gives them immense power over individuals, groups and society.25 In the second scenario, people become dispossessed of hardware ownership itself. With the rise of cloud computing, it is possible that hardware manufacturers will soon only offer low-powered, low-memory devices (similar to the terminals of the 1960s and 1970s) and computer processing and data storage will be primarily conducted in centralised clouds. With end-users dispossessed of processing power and storage, software and data would be under the absolute con- trol of the owners and operators of clouds.26 In the third scenario, hardware is manufactured with locks that prevent users from changing the software on the devices. By locking down devices to a pre- determined set of software choices, the hardware manufacturer determines which software is allowed to run when you turn on your device.27 thus, hardware restrictions can prevent the public from controlling their devices, granting device manufacturers power over users. *Control over network connectivity* is a third source of digital domination. Net neutrality regulation proposes that Internet traffic should be ‘neutral’ so that Internet Service Providers (ISPs) treat content flowing through their cables, cel- lular towers and satellites equally. According to this philosophy, those who own the pipes are ‘common carriers’ and should almost never be allowed to manipu- late the data that flows through them.28 this constrains the ability of wealthy media providers to pay for faster content delivery speeds than less wealthy pro- viders (such as grassroots organisations, small businesses, and common people). More importantly, by treating traffic equally, net neutrality prevents network discrimination against various forms of traffic critical to civil rights and liberties. For example, the tor browser facilitates anonymous Internet communications, but the use of the tor network can be detected by ISPs and throttled (i.e. slowed to a crawl).29 Net neutrality prevents this form of discrimination and protects the end user’s freedom to utilise the Internet as they wish, without third-party favouritism, blocking, or throttling. Let us consider some concrete examples as to how software, hardware, and networks constitute sources of power and control related to social justice in the Global South.

### 2NC --- Extra

#### Framework solves the aff --- civic monopolization means an informed public is key to challenge big tech --- legal engagement is essential to provide cover for political action

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The digital world is currently out of joint. A small number of tech companies are very large, dominant and growing. They have not just commercial influence, but an impact on our privacy, our freedom of expression, our security, and – as this study has shown – on our civic society. Even if they mean to have a positive and constructive societal impact – as they make clear they do – they are too big and have too great an influence to escape the attention of governments, democratic and non-democratic. Governments have already responded, and more will. Most of these government responses are destined to fail. They are destined to fail for three reasons: they have not yet adequately defined the problem they are trying to solve; they are using tools that are not suited to dealing with these organisations and the services they provide; and they do not have a vision of where they would like digital society to end up. On the first, the problem, this is generally defined narrowly in terms of privacy, security, and economics. Debates on privacy centre on the collection and use of personal data by the tech giants. Those on security focus on the extent to which governments should or should not have access to that personal data. Economic questions relate chiefly to tax and the degree to which the tech giants may be unfairly promoting their own services over those of their competitors. The antitrust case launched by the European Commission against Google in April 2015, for example, centres on the extent to which Google was, or was not, using its position as an intermediary to promote its own shopping service over those of its competitors. The Commission claimed that Google had ‘abused its dominant position in the markets for general internet search services in the European Economic Area (EEA) by systematically favouring its own comparison shopping product in its general search results pages.’330 The Commission may, or may not, be able to show the tech giant biased its results to its own service, but it will much harder to demonstrate how this this hurt the end user, particularly given that the service is provided free at the point of use. This is why, as this study has shown**, the problem also needs to be framed in civic terms**. It needs to be recognized that these organisations and their services are starting to play significant civic roles in democratic society, and that, in playing these roles, **they are gaining political and social power**. Democratic societies may decide, in some cases, that this is a fair trade given the benefits - though there has been precious little discussion to date as to the terms of trade and the advantages and disadvantages of reliance. In other cases, societies may decide the risks outweigh the benefits. They then need to figure out how to respond. Working out how to respond will not be straightforward. The tools currently available to democratic governments – including legislation, regulation and taxation – are not well suited to dealing with the issues raised by the tech giants. These organisations are very large and transnational, often work to a different economic model to other corporations, and work in a communications environment that is fundamentally different from their predecessors. Until we better understand and communicate the dilemmas they raise, and until the public become concerned about the potential – or actual – threats they represent, it will be difficult to respond effectively. In the nineteenth and early twentieth century, antitrust law was applied more successfully once the problem of ‘bigness’ – that the law was introduced to address – **was more carefully investigated and exposed**. In January 1903, for example, the first of Ida **Tarbell’s** ‘muckraking’ investigations of John D. Rockefeller’s Standard Oil was published in McClure’s magazine. In this, and her following articles, Tarbell detailed how the rise to dominance of Standard Oil ‘was aided at every stage by discriminatory railroad rates and illegal tactics – bribery, fraud, criminal underselling and intimidation.’331 Such was the popular response to Tarbell’s investigations that she was lauded as the ‘Joan of Arc among moderns’ and ‘one of the most commanding figures in American letters.’332 Her **exposure of Standard Oil’s history and practices** **helped** Theodore Roosevelt **steer** his **bills against trusts through Congress** – on rail rebates, on the expedition of antitrust action, and on the establishment of a Department of Commerce with a Bureau of Corporations that had powers to investigate trusts. Eight years later, the US Supreme Court ruled that Standard Oil had abused its dominant position and should be broken up. It was **the combination of the investigation, the exposure, and the public response that enabled political action to be taken.** There has, as yet, been no twenty first century equivalent of Ida Tarbell’s investigations into the tech giants. Democratic societies also need a much clearer vision of where they would like to end up. What would a progressive digital future look like? How should plurality and diversity be defined in an age of information abundance? Should the digital civic landscape be devolved or centralized? These democratic objectives will need to include the needs of the citizen as well as the consumer, and of civic society as well as the security state. Such a vision ought to be led by the public, and has to take account of the state of the digital environment over twenty-five years after the advent of the web. The vision is unlikely to include over reliance on a small cadre of transnational tech companies, but may well include the convenience and efficiency that comes from using one provider for certain services like general search. Without greater clarity on the potential consequences of digital dominance, and a clearer vision of where democratic societies would like to end up, **there is a risk that they jeopardize the** tremendous civic benefits of **digital technology, and fail to build a digital ecosystem** that enables civic participation while protecting citizen’s rights. Without devising progressive responses democratic societies will be left with two alternatives, neither of which is attractive. They can take a laissez-faire approach, accepting that the digital environment will be dominated by a handful of tech giants, and that the most effective way of affecting their behaviour is through persuasion and collaboration. Or, they can react regressively to digital developments, banning services, imposing punishments and even prosecuting organisations and employees who run the tech companies’ tools. Democratic societies do not yet understand the phenomenon of the tech giants, what the phenomenon means in civic terms, what benefits it brings to governance, and the dangers inherent in it. Only once they understand the phenomenon better, and understand where it can help **and where it can damage civic society, will they be in a position to work out how best to respond.**

### Reasonability

Reject it arbitrary

Links to offense

## AI DA

### 2NC --- O/V

#### Failure to stop China allows them to establish a global dystopian surveillance state. Only Western democracies have self-correcting protections to safeguard citizens from over-stretch.

Charlie Campbell 19. East Asia Correspondent for TIME. "The Entire System Is Designed to Suppress Us': What the Chinese Surveillance State Means for the Rest of the World." https://time.com/5735411/china-surveillance-privacy-issues/.

Still, the risks are considerable. As Western democracies enact safeguards to protect citizens from the rampant harvesting of data by government and corporations, China is exporting its AI-powered surveillance technology to authoritarian governments around the world. Chinese firms are providing high-tech surveillance tools to at least 18 nations from Venezuela to Zimbabwe, according to a 2018 report by Freedom House. China is a battleground where the modern surveillance state has reached a nadir, prompting censure from governments and institutions around the globe, but it is also where rebellion against its overreach is being most ferociously fought.

“Today’s economic business models all encourage people to share data,” says Lokman Tsui, a privacy expert at the Chinese University of Hong Kong. In China, he adds, we are seeing “what happens when the state goes after that data to exploit and weaponize it.”

Some 1,500 miles northwest of where Mrs. Chen recovered her purse, surveillance in China’s restive region of Xinjiang has helped put an estimated 1 million people into “re-education centers” akin to concentration camps, according to the U.N. Many were arrested, tried and convicted by computer algorithm based on data harvested by the cameras that stud every 20 steps in some parts.

In the name of fighting terrorism, members of predominantly Muslim ethnic groups—mostly Uighurs but also Kazakhs, Uzbeks and Kyrgyz—are forced to surrender biometric data like photos, fingerprints, DNA, blood and voice samples. Police are armed with a smartphone app that then automatically flags certain behaviors, according to reverse engineering by the advocacy group Human Rights Watch. Those who grow a beard, leave their house via a back door or visit the mosque often are red-flagged by the system and interrogated.

Sarsenbek Akaruli, 45, a veterinarian and trader from the Xinjiang city of Ili, was arrested on Nov. 2, 2017, and remains in a detention camp after police found the banned messaging app WhatsApp on his cell phone, according to his wife Gulnur Kosdaulet. A citizen of neighboring Kazakhstan, she has traveled to Xinjiang four times to search for him but found even friends in the ruling Chinese Communist Party (CCP) reluctant to help. “Nobody wanted to risk being recorded on security cameras talking to me in case they ended up in the camps themselves,” she tells TIME.

Surveillance governs all aspects of camp life. Bakitali Nur, 47, a fruit and vegetable exporter in the Xinjiang town of Khorgos, was arrested after authorities became suspicious of his frequent business trips abroad. The father of three says he spent a year in a single room with seven other inmates, all clad in blue jumpsuits, forced to sit still on plastic stools for 17 hours straight as four HikVision cameras recorded every move. “Anyone caught talking or moving was forced into stress positions for hours at a time,” he says.

Bakitali was released only after he developed a chronic illness. But his surveillance hell continued over five months of virtual house arrest, which is common for former detainees. He was forbidden from traveling outside his village without permission, and a CCTV camera was installed opposite his home. Every time he approached the front door, a policeman would call to ask where he was going. He had to report to the local government office every day to undergo “political education” and write a self-criticism detailing his previous day’s activities. Unable to travel for work, former detainees like Bakitali are often obliged to toil at government factories for wages as miserly as 35¢ per day, according to former workers interviewed by TIME. “The entire system is designed to suppress us,” Bakitali says in Almaty, Kazakhstan, where he escaped in May.

The result is dystopian. When every aspect of life is under constant scrutiny, it’s not just “bad” behavior that must be avoided. Muslims in Xinjiang are under constant pressure to act in a manner that the CCP would approve. While posting controversial material online is clearly reckless, not using social media at all could also be considered suspicious, so Muslims share glowing news about the country and party as a means of defense. Homes and businesses now feel obliged to display a photograph of China’s President Xi Jinping in a manner redolent of North Koreans’ public displays for founder Kim Il Sung. Asked why he had a picture of Xi in his taxi, one Uighur driver replied nervously, “It’s the law.”

Besides the surveillance cameras, people are required to register their ID numbers for activities as mundane as renting a karaoke

booth. Muslims are forced from buses to have their IDs checked while ethnic Han Chinese passengers wait in their seats. At intersections, drivers are ushered from their vehicles by armed police and through Tera-Snap “revolving body detector” equipment. In the southern Xinjiang oasis town of Hotan, a facial–recognition booth is even installed at the local produce market. When a system struggled to compute the face of this Western TIME reporter, the impatient Han women queuing behind berated the operator, “Hurry up, he’s not a Uighur, let him through.”

China strenuously denies human-rights abuses in Xinjiang, justifying its surveillance leviathan as battling the “three evils” of “separatism, terrorism and extremism.” But the situation has been described as a “horrific campaign of repression” by the U.S. and condemned by the U.N. Washington has also started sanctioning companies like HikVision whose facial–recognition technology is ubiquitous across the Alaska-size region. But Western aversion to surveillance is much broader and stems in no small part from abuses like the Facebook/Cambridge Analytica scandal, in which the “scraped” personal information of up to 87 million people was acquired by the political consultancy to swing elections around the world.

China is also rolling out Big Data and surveillance to inculcate “positive” behavior in its citizens via a Social Credit system. In China’s eastern coastal city of Rongcheng, home to 670,000 people, every person is automatically given 1,000 points. Fighting with neighbors will cost you 5 points; fail to clean up after your dog and you lose 10. Donating blood gains 5. Fall below a certain threshold and it’s impossible to get a loan or book high-speed train tickets. Some Chinese see the benefit. High school teacher Zhu Junfang, 42, enjoys perks such as discounted heating bills and improved health care after a series of good works. “Because of the Social Credit system, vehicles politely let pedestrians cross the street, and during a recent blizzard people volunteered to clear the snow to earn extra points,” she says.

Such intrusive government is anathema to most in the West, where aversion to surveillance is much broader and more visceral. Whether it’s our Internet browser history, selfies uploaded to social media, data scavenged from fitness trackers or smart-home devices possibly recording the most intimate bedroom conversations, we are all living in what’s been dubbed a “surveillance economy.” In her book The Age of Surveillance Capitalism, Shoshana Zuboff describes this as “human experience [broken down into data] as free raw material for commercial practices of extraction, prediction, and sales.”

When it comes to facial recognition, resistance is intense given the huge potential for indiscriminate data harvesting. The E.U. is reviewing regulations to give its citizens explicit rights over use of their facial-recognition data. While tech giants Microsoft and Amazon have already deployed the technology, they are also calling for clear legal parameters to govern its use. Other than privacy, there are equality issues too. According to a study by MIT Media Lab, facial-recognition software correctly identified white men 99% to 100% of the time, but that dipped as low as 65% for women of color. Civil-liberties groups are especially uneasy since facial recognition, despite its widespread use by American police, is rarely cited as evidence in subsequent court filings. In May, San Francisco became the first major U.S. city to block police from using facial–recognition software.

Even in China, where civil liberties have long been sacrificed for what the CCP deems the greater good, privacy concerns are bubbling up. On Oct. 28, a professor in eastern China sued Hangzhou Safari Park for “violating consumer privacy law by compulsorily collecting visitors’ individual characteristics,” after the park announced its intention to adopt facial–recognition entry gates. In Chongqing, a move to install surveillance cameras in 15,000 licensed taxicabs has met a backlash from drivers. “Now I can’t cuddle my girlfriend off duty or curse my bosses,” one driver grumbles to TIME.

Russia’s election meddling around the world highlights the risks of commercially harvested data being repurposed for nefarious goals. It’s a message taken to heart in Hong Kong, where millions have protested over the past five months to push for more democracy. These demonstrators have found themselves in the crosshairs after being identified via CCTV cameras or social media. Employees for state airline Cathay Pacific have been fired and others investigated based on evidence reportedly gleaned via online posts and private messaging apps.

This has led demonstrators to adopt intricate tactics to evade Big Brother’s all-seeing eye. Clad in helmets, face masks and reflective goggles, they prepare for confrontations with the police with military precision. A vanguard clutch umbrellas aloft to shield their activities from prying eyes, before a second wave advances to attack overhead cameras with tape, spray paint and buzz saws. From behind, a covering fire of laser pointers attempts to disrupt the recordings of security officers’ body-mounted cameras.

Fending off the cameras is just one response. When Matthew, 22, who used only his first name for his own safety, heads to the front lines, he always leaves his regular cell phone at home and takes a burner. Aside from swapping SIM cards, he rarely reuses handsets multiple times since each has a unique International Mobile Equipment Identity digital serial number that he says police can trace. He also switches among different VPNs—software to mask a user’s location—and pays for protest–related purchases with cash or untraceable top-up credit cards. Voice calls are made only as a last resort, he says. “Once I had no choice but to make a call, but I threw away my SIM immediately afterward.”

The Hong Kong government denies its smart cameras and lampposts use facial-recognition technology. But “it really comes down to whether you trust institutions,” says privacy expert Tsui. For Matthew, the risks are real and stark: “We are fighting to stop Hong Kong becoming another Xinjiang.”

Ultimately, even protesters’ forensic safeguards may not be enough as technology advances. In his Beijing headquarters, Huang Yongzhen, CEO of AI firm Watrix, shows off his latest gait-recognition software, which can identify people from 50 meters away by analyzing thousands of metrics about their walk—even with faces covered or backs to the camera. It’s already been rolled out by security services across China, he says, though he’s ambivalent about privacy concerns. “From our perspective, we just provide the technology,” he says. “As for how it’s used, like all high tech, it may be a double-edged sword.”

Little wonder a backlash against AI-powered surveillance is gathering pace. In the U.S., legislation was introduced in Congress in July that would prohibit the use of facial recognition in public housing. Japanese scientists have produced special glasses designed to fool the technology. Public campaigns have railed against commercial uses—from Ticket-master using facial recognition for concert tickets to JetBlue for boarding passes. In May, Democratic Congresswoman Alexandria Ocasio–Cortez linked the technology to “a global rise in authoritarianism and fascism.”

#### Turns the aff --- China’s version of tech colonialism is worse

Samm Sacks 18, Cybersecurity Policy and China Digital Economy Fellow at New America, 6/18/18, “Beijing Wants to Rewrite the Rules of the Internet,” https://www.theatlantic.com/international/archive/2018/06/zte-huawei-china-trump-trade-cyber/563033/

Other countries, meanwhile, have adopted only parts of China’s law. Independent of Beijing, Russia has forged a model akin to China’s, embracing an intrusive government role in cyberspace including the most expansive data localization and surveillance regime in the world. Last week Vietnam adopted a cybersecurity law that mirrors China’s. India has imposed some indigenous technical standards, and is considering legislation to enact domestic-sourcing requirements for cybersecurity technologies.

China’s model appeals to these countries because it provides them with tools to take control of an open internet. Online platforms used for terrorism and political dissent threaten national stability. The Edward Snowden revelations and crippling cyber attacks like WannaCry and Mirai create a sense of vulnerability that China’s model promises to fix.

The most alluring feature of the China model appears to be content control, as a broad range of China’s neighbors and partners engage in blocking, filtering, and manipulating internet content. Also alluring: its rules for storing data on servers in-country, which can help law enforcement and intelligence officials get access to user information.

The problem with China’s model is that it crashes headlong into the foundational principles of the internet in market-based democracies: online freedom, privacy, free international markets, and broad international cooperation. China’s model may also not even be effective in delivering on its promises. For example, government-imposed content-control measures have proven to be poor tools in fighting online extremism. Filtering or removing online content has been compared to a game of “whack-a-mole,” making it ineffective and cost-prohibitive. Such controls also suppress countervailing discourse from key anti-extremism influencers, which have proven to be effective in offering compelling alternative narratives and discrediting extremist ideas.

The implications for the strength and resilience of the global internet ecosystem are troubling. China’s control-driven model defies international openness, interoperability, and collaboration, the foundations of global internet governance and, ultimately, of the internet itself. The 21st Century will see a battle of whether it is the China model or the more inclusive, transparent, collaborative principles that underpinned the internet’s rise that come to dominate global cybersecurity governance.

### 2NC --- Heg Sustainable

#### 1. Heg is sustainable --- It not even close

Hal Brands & Charles N. Edel 19. \*\*Hal Brands, Henry A. Kissinger Distinguished Professor of Global Affairs at the Johns Hopkins University School of Advanced International Studies; Resident Scholar at the American Enterprise Institute. \*\*Charles Edel, Assistant Professor of strategy and policy at the U.S. Naval War College; CFR International Affairs Fellow. *The Lessons of Tragedy: Statecraft and World Order*. 2019.

It is easy to lose sight of this fact amid all the upheaval both in America and overseas. Yet the basic picture remains unambiguous. **The United States is no fallen hegemon.** America still accounted for **22 percent of global GDP** in 2016—not far off the historical average since the 1970s—and it **spent as much on defense as the next eight nations combined.** When U.S. treaty allies are factored in, America’s geopolitical coalition possessed nearly **60 percent of global GDP and military spending**, an amount that still vastly exceeds the economic and military power of all U.S. rivals put together, and that seems unimpressive only in comparison to the utterly peerless primacy of the 1990s. Washington remains at the **center of a global network made up of over thirty treaty allie**s, another thirty or so quasi-allies, and still more security and diplomatic partners, **giving it geopolitical leverage and relationships** that no competitor can approach. And **even in the age of Trump, no rival boasts anything close to America’s experience and expertise in coordinating complex military and diplomatic endeavors.** This is not to say that all is well. America’s competitors have closed the gap in some key areas; that narrowing margin is **encouraging the geopolitical tests Washington confronts today.** There are questions regarding whether the United States still has enough military might to uphold key regional balances around the world, which are inseparable from questions about how wisely the country will address its long-term fiscal dilemmas. There are even graver questions as to whether Americans and their leaders still want to use the nation’s power in the service of the postwar order. But the primary limiting factors here are political and psychological rather than material. They relate to historical amnesia, and to a reluctance to make hard choices and face hard facts, rather than any catastrophic collapse of American power. The United States still **possesses advantages that most previous leading powers can only envy; its capabilities are surely sufficient**—particularly when combined with the strengths of its allies—to mount a credible defense of the international system it has constructed. To say the U.S.-led order is endangered is a counsel of realism, but to say the situation is irretrievable is a counsel of unwarranted despair.

### 2NC --- Realism

#### pursuit of power is inevitable – consensus of research

Wolforth 9 (William C. Wohlforth – Dartmouth University International Relations Professor, January 2009, “Unipolarity, Status Competition, and Great Power War”, <https://cpb-us-e1.wpmucdn.com/sites.dartmouth.edu/dist/b/174/files/2013/04/War.pdf>, accessed 8/5/18,)

The historical record surrounding major wars is rich with evidence suggesting that positional concerns over status frustrate bargaining: expensive, protracted conflict over what appear to be minor issues; a propensity on the part of decision makers to frame issues in terms of relative rank even when doing so makes bargaining harder; decision-makers’ inability to accept feasible divisions of the matter in dispute even when failing to do so imposes high costs; demands on the part of states for observable evidence to confirm their estimate of an improved position in the hierarchy; the inability of private bargains to resolve issues; a frequently observed compulsion for the public attainment of concessions from a higher ranked state; and stubborn resistance on the part of states to which such demands are addressed even when acquiescence entails limited material cost. The literature on bargaining failure in the context of power shifts remains inconclusive, and it is premature to take any empirical pattern as necessarily probative. Indeed, Robert Powell has recently proposed that indivisibility is not a rationalistic explanation for war after all: fully rational leaders with perfect information should prefer to settle a dispute over an indivisible issue by resorting to a lottery rather than a war certain to destroy some of the goods in dispute. What might prevent such bargaining solutions is not indivisibility itself, he argues, but rather the parties’ inability to commit to abide by any agreement in the future if they expect their relative capabilities to continue to shift.[22](http://muse.jhu.edu/journals/world_politics/v061/61.1.wohlforth.html#f22) This is the credible commitment problem to which many theorists are now turning their attention. But how it relates to the information problem that until recently dominated the formal literature remains to be seen.[23](http://muse.jhu.edu/journals/world_politics/v061/61.1.wohlforth.html#f23) The larger point is that positional concerns for status may help account for the puzzle of bargaining failure. In the rational choice bargaining literature, war is puzzling because it destroys some of the benefits or flows of benefits in dispute between the bargainers, who would be better off dividing the spoils without war. Yet what happens to these models if what matters for states is less the flows of material benefits themselves than their implications for relative status? The salience of this question depends on the relative importance of positional concern for status among states. Do Great Powers Care about Status? Mainstream theories generally posit that states come to blows over an international status quo only when it has implications for their security or material well-being. The guiding assumption is that a state’s satisfaction with its place in the existing order is a function of the material costs and benefits implied by that status.[24](http://muse.jhu.edu/journals/world_politics/v061/61.1.wohlforth.html#f24) By that assumption, once a state’s status in an international order ceases to affect its material wellbeing, its relative standing will have no bearing on decisions for war or peace. But the assumption is undermined by cumulative research in disciplines ranging from neuroscience and evolutionary biology to economics, anthropology, sociology, and psychology that human beings are powerfully motivated by the desire for favorable social status comparisons. This research suggests that the preference for status is a basic disposition rather than merely a strategy for attaining other goals.[25](http://muse.jhu.edu/journals/world_politics/v061/61.1.wohlforth.html#f25) People often seek tangibles not so much because of the welfare or security they bring but because of the social status they confer. Under certain conditions, the search for status will cause people to behave in ways that directly contradict their material interest in security and/or prosperity.

#### Realism is the only way to understand China’s rise---idealism about world politics leads to failed feel-good fixes that make great power war more likely.

Stephen M. Walt 18. Robert and Renée Belfer professor of international relations at Harvard University. “The World Wants You to Think Like a Realist.” Foreign Policy. https://foreignpolicy.com/2018/05/30/the-world-wants-you-to-think-like-a-realist/

Realism has a long history and many variants, but its core rests on a straightforward set of ideas. As the name implies, realism tries to explain world politics as they really are, rather than describe how they ought to be. For realists, power is the centerpiece of political life: Although other factors sometimes play a role, the key to understanding politics lies in focusing on who has power and what they are doing with it. The Athenians’ infamous warning to the Melians captures this perfectly: “The strong do what they can, and the weak suffer what they must.” Quentin Tarantino couldn’t have put it any better.

For realists, states are the key actors in the international system. There is no central authority that can protect states from one another, so each state must rely upon its own resources and strategies to survive. Security is a perennial concern — even for powerful states — and states tend to worry a lot about who is weaker or stronger and what power trends appear to be. Cooperation is far from impossible in such a world — indeed, at times cooperating with others is essential to survival — but it is always somewhat fragile. Realists maintain that states will react to threats first by trying to “pass the buck” (i.e., getting someone else to deal with the emerging danger), and if that fails, they will try to balance against the threat, either by seeking allies or by building up their own capabilities.

Realism isn’t the only way to think about international affairs, of course, and there are a number of alternative perspectives and theories that can help us understand different aspects of the modern world. But if you do think like a realist — at least part of the time — many confusing aspects of world politics become easier to understand.

If you think like a realist, for example, you’ll understand why China’s rise is a critical event and likely to be a source of conflict with the United States (and others). In a world where states have to protect themselves, the two most powerful states will eye each other warily and compete to make sure that they don’t fall behind or become dangerously vulnerable to the other. Even when war is avoided, intense security competition is likely to result.

And by the way, thinking like a realist helps you understand why China is no longer committed to Deng Xiaoping’s policy of “peaceful rise.” That approach made sense when China was weaker, and it fooled plenty of Westerners into thinking China could be inveigled into being a responsible stakeholder that would meekly embrace various institutions and arrangements created by others back when China was weak. But realists understand that a more powerful China would eventually want to modify any features that were not in China’s interest, as Beijing has begun to do in recent years. Bottom line: Thinking like a realist is essential if you want to understand Sino-American relations.

If you think like a realist, you wouldn’t be surprised that the United States has repeatedly used military force in distant lands over the past 25 years and especially after 9/11. Why? For one simple reason: Nobody could prevent it. Americans were also convinced their global role was indispensable and that they had the right, the responsibility, and the wisdom to interfere all over the world. But America’s dominant position was the permissive condition that made this overweening ambition seem feasible, at least for a while. As Kenneth Waltz warned way back in 1993: “One may hope that America’s internal preoccupations will produce not an isolationist policy, which has become impossible, but a forbearance that will give other countries at long last the chance to deal with their own problems and make their own mistakes. But I would not bet on it.” Good realist that he was, Waltz understood that the “vice to which great powers easily succumb in a multipolar world is inattention; in a bipolar world, overreaction; in a unipolar world, overextension.” And that’s precisely what happened.

If you think like a realist, the crisis in Ukraine looks rather different than the typical Western version of events. Western accounts typically blame Putin for most of the trouble, but realists understand that major powers are always sensitive about their borders and are likely to react defensively if other great powers start encroaching on these regions. Ever heard of the Monroe Doctrine? In the case of Ukraine, the United States and its European allies had been expanding NATO steadily eastward (violating pledges made to Soviet leaders when Germany reunified) and ignoring repeated warnings from Moscow. By 2013, the United States and European Union were making a concerted effort to pull Ukraine into closer alignment with the West and openly interfering in Ukraine’s domestic political processes. Because the Obama administration did not think like realists, however, it was blindsided when Putin seized Crimea and derailed the EU/U.S. effort. Putin’s response was neither legal nor legitimate nor admirable, but it wasn’t surprising either. It is equally unsurprising that these events alarmed the Europeans and prompted NATO to shore up its defenses in Eastern Europe, precisely as a realist would expect.

Thinking like a realist can also help you understand why the EU is in trouble. The entire EU project was designed to transcend nationalism and subordinate state interests within broader supranational institutions. Its architects hoped the separate national identities and interests that had torn Europe apart repeatedly would fade over time and a broad pan-European identity would supplant them. European unity was facilitated by the Cold War because the Soviet threat gave Western Europe ample incentive to cooperate, gave the Soviets’ Eastern European satellites an ideal to aspire to, and kept the “American pacifier” on the continent. But once the Cold War was over, nationalism returned with a vengeance and especially after the euro crisis hit. Suddenly, populations wanted their elected officials not to save Europe but to save them. Despite herculean efforts by a number of European leaders and EU officials, these centrifugal tendencies seem to be getting worse, as the Brexit decision, the recent elections in Italy, and the resurgent nationalism in Poland and Hungary all attest. Those who hoped that European integration would prove irreversible have trouble understanding how their noble experiment went awry, but realists don’t.

If you think like a realist, you might not be quite so outraged by the support that Iran and Syria gave the anti-American insurgency in Iraq after 2003. You might not like it, but you wouldn’t find their conduct surprising. Their response was classic balance of power behavior because the United States had just overthrown Saddam Hussein and the Bush administration had made it clear that Syria and Iran were next on its hit list. It made good strategic sense for Damascus and Tehran to do whatever they could to keep the United States bogged down in Iraq so that Washington couldn’t reload the shotgun and come after them. Americans have every reason to be upset by what these states did, but if more U.S. officials thought like realists, they would have expected it from the get-go.

And if you think like a realist, it is obvious why North Korea has gone to enormous lengths to acquire a nuclear deterrent and obvious why a country such as Iran was interested in becoming a latent nuclear weapons state as well. These states were deeply at odds with the world’s most powerful country, and prominent U.S. officials kept saying that the only solution was to topple these regimes and replace them with leaders more to their liking. Never mind that regime change rarely works as intended; the more important point is that any government facing a threat like that is going to try to protect itself. Nuclear weapons aren’t good for blackmail or conquest, but they are a very effective way to deter more powerful states from trying to overthrow you with military force. And you’d think Americans would understand this, given that the U.S. government thinks it needs thousands of nuclear weapons in order to be secure, despite its favorable geographic position and overwhelming conventional superiority. If U.S. leaders think like that, is it any wonder that some weaker and more vulnerable powers conclude that having a few nukes might make them more secure? And is it so surprising that they might be reluctant to give them up in exchange for assurances or promises that might easily be reversed or withdrawn? Someone really should explain this logic to John Bolton.

Thinking like a realist also helps you understand why states with radically different political systems often act in surprisingly similar ways. To take an obvious example, the United States and Soviet Union could not have been more different in terms of their domestic orders, but their international behavior was much the same. Each led vast alliance networks, toppled governments they didn’t like, assassinated a number of foreign leaders, built tens of thousand of nuclear weapons (deployed on missiles, bombers, and submarines), intervened in far-flung lands, tried to convert other societies to their preferred ideology, and did what they could to bring the other down without blowing up the world. Why did they behave in such similar fashion? Because in an anarchic world, each had little choice but to compete with the other, lest it fall behind and become vulnerable to the other’s predations.

Last but not least, if you think like a realist, you’re likely to be skeptical about the ambitious schemes that idealists keep dreaming up to bring an end to conflict, injustice, inequality, and other bad things. Striving to build a safer and more peaceful world is admirable, but realism reminds us that the ambitious efforts to remake world politics always create unintended consequences and rarely deliver the promised results. It also reminds that even allies fear unchecked power and will have misgivings whenever the United States tries to run the world. If you think like a realist, in short, you are more likely to act with a degree of prudence, and you’ll be less likely to see opponents as purely evil (or see one’s own country as wholly virtuous) and less likely to embark on open-ended moral crusades. Ironically, if more people thought like realists, the prospects for peace would go up.

### 2NC --- Revisionism

#### China is a revisionist power --- Only our evidence accounts for the Xi Doctrine that legitimizes Chinese aggression

Thayer and Han 6-12-2019 - Bradley A. Thayer is Professor of Political Science at the University of Texas San Antonio. Lianchao Han is vice president of Citizen Power Initiatives for China and a visiting fellow at the Hudson Institute. (“The ‘Xi Doctrine’: Proclaiming and Rationalizing China’s Aggression,” *National Interest*, <https://nationalinterest.org/feature/%E2%80%98xi-doctrine%E2%80%99-proclaiming-and-rationalizing-china%E2%80%99s-aggression-62402>)

Using the occasion of the Shangri-La Dialogue in Singapore this month, Chinese Minister of National Defense and State Councilor Gen. Wei Fenghe, delivered a sharp message to the United States, which may be termed the “Xi Doctrine” on China’s use of force, after Chinese premier Xi Jinping. Wei declaring both China’s resolve to aggress to advance its interests and a rationalization for the use of force. Wei’s de facto threat of war should not be lost in his nuances, deliberate ambiguity, or in translation. His remarks were so bellicose that the world has noticed, as was certainly intended by the leadership of the Chinese Communist Party (CCP). Empirical evidence of China’s aggression is increasingly common, from its attempt to dominate the South China Sea, the neo-imperialist effort to gain control of states through the Belt and Road Initiative, to its technological imperialism to control 5G and artificial intelligence technologies. What is rather less frequent are statements from high-level Chinese officials proclaiming the country’s intent to be aggressive and offering an attempted legitimizing principle justifying that aggression. While much of the content of Wei’s remarks were in keeping with the gossamer pronouncements on China’s peaceful intentions, as well as a paean to Xi Jinping’s leadership, they still conveyed that China is ready and willing to resort to war if the United States stands in its way of global expansion; and they made clear that China must go to war, or even a nuclear war, to occupy Taiwan. Specifically, there are four elements that comprise the Xi Doctrine and are indications of China’s signaling its willingness to use force. The first component is a new and alarming proclamation of the undisguised threats to use force or wage an unlimited war. China is becoming bolder as its military power grows. This is evidenced in Wei’s muscular remarks on the People’s Republic of China’s approach against Taiwan, his explicit statement that China does not renounce the use of force against Taiwan, and his effort to deter the United States and its allies from intervention should an attack occur. Wei forcefully stated: “If anyone dares to separate Taiwan from China, the Chinese military has no choice but must go to war, and must fight for the reunification of the motherland at all costs.” “At all cost” means that China will not hesitate to use nuclear weapons or launching another Pearl Harbor to take over Taiwan. This is a clear warning of an invasion. Second, the Xi Doctrine legitimizes territorial expansion. Through his remarks, Wei sought to convince the rest of the world that China’s seizure of most of the South China Sea is an accomplished fact that cannot be overturned. He made bogus accusations, which included blaming the United States for “raking in profits by stirring up troubles” in the region. He insisted that only ASEAN and China must resolve the issue. He claimed that China’s militarization on South China Sea islands and reefs were an act of self-defense. Should this be allowed to stand, then the Xi Doctrine will set a perilous precedent of successful territorial expansion, which will further entice China and jeopardize the peace of the region. Third, the doctrine targets the United States as a cause of the world’s major problems and envisions a powerful China evicting the United States from the region. Wei obliquely identified the United States as the cause wars, conflicts, and unrest, and sought to convey that the United States will abandon the states of the South China Sea (SCS) when it is confronted by Chinese power, a typical divide and conquer strategy used by the CCP regime. The Xi Doctrine’s fourth element is the mendacity regarding China’s historical use of force and current actions. While the distortions of history were numerous, there were three major lies that should be alarming for the states of the region and the global community. First, Wei said that China had never invaded another country, which is a claim so transparently false it can only be a measure of the contempt he held for the audience. China has a long history of aggression, including against the Tibetans and Vietnamese, and perhaps soon against the Taiwanese. Second, Wei argued that hegemony does not conform to China’s values when, in fact, China proudly was Asia’s hegemon for most of the last two thousand years. Lastly, he claimed that the situation in the SCS is moving toward stability—from China’s perspective this stability is caused by its successful seizure of territory. In fact, the SCS is far less stable as a result of China’s actions. Efforts to counter this grab are denounced by Wei as destabilizing, which is a bit like a thief accusing you of a crime for wanting your property returned. Wei’s belligerent rhetoric is an indication that the CCP regime faces deep external and internal crises. Externally, the Trump administration has shocked the CCP with the three major steps it has taken. First, it has shifted the focus of the U.S. national-security strategy and now identifies China explicitly as its primary rival—abandoning the far more muted policies of previous administrations. Second, Trump has acted on this peer competitive threat by advancing tangible measures, such as arms sales to allies and the ban of Huawei. Third, the administration has made credible commitments to assure partners and allies to counter China’s aggression and bullying. These have unbalanced the CCP regime, and its natural reaction is to bully its way out. Additionally, the CCP regime has perceived that the world today has begun to consider the negative implications of China’s rise, and the United States is determined to prevent what heretofore had been considered China’s unstoppable rise. From the perspective of CCP, conflict is increasingly seen as inevitable and perhaps even imminent. Wei’s bellicosity should be seen in this light, and the PLA is tasked with fighting and winning the war. Internally, Xi’s anti-corruption campaign that selectively targets his political rivalries, and his abandoning the established rules such as term limited of presidency, have introduced deep cleavages into the unity of the regime unity. China’s economic slowdown, made worse by the U.S. trade war, is a fundamental challenge to the regime’s legitimacy. Xi’s repression and suppression of the Chinese people, particularly human-rights defenders, Christians, Kazakhs, Uighurs, and other minorities, have miscarried. Drawing from the pages of unfortunate history, in a classic social-imperialist move, the regime wants to direct these internal tensions outward. At the same time, the nationalistic fervor advanced by the CCP’s propaganda and by the rapid military modernization have made many young militant officers in the PLA overconfident. This is infrequently noticed in the West. They can hardly wait to fight an ultimate war to defeat the arch-enemy. This plainly dangerous mentality echoes the Japanese military’s beliefs before Pearl Harbor. The bellicosity evinced in Wei’s speech is serious and is not bluster intended to deter. The United States cannot meet China’s threat with half-measures, which are likely to further encourage China’s aggressive behavior. The United States must respond to China’s belligerence with greater strength, adamantine determination, and more vigorous diplomatic and military measures. With the Xi Doctrine, China has proclaimed and rationalized its aggression. A Trump Doctrine forged in response has to reveal to all global audiences, most importantly the CCP leadership, the recklessness of the Xi Doctrine and the supreme folly of aggression

#### Ignore rhetorically strong evidence --- Statistical analysis goes our way

Kihyun Lee 17 and Sung Chul Jung, Myongji University and Korea Institute for National Unification, 4/10/17, “The Offensive Realists Are Not Wrong: China's Growth and Aggression, 1976–2001”, https://onlinelibrary.wiley.com/doi/full/10.1111/pafo.12088

We conduct logit analyses of China's initiation of military conflict from 1976 to 2001 (Table 2: Models 1 & 3) but also rare event logit analyses because the binary dependent variable is heavily skewed to zero (Table 2: Models 2 & 4). Generally speaking, the results of the statistical analyses provide strong support for the hypotheses about economic power itself and territorial disputes (H1a, H2b) and weak support for those regarding economic power growth and US alliance (H1b, H2a) (see Table 2). 41 As China's economic power grows, whether it is assessed relative to all states or only Asian states, its likelihood of initiating conflict increases in a statistically significant way (H1a). As offensive realists argue, China's economic power had a positive effect on its foreign aggression during the period from 1976 to 2001 (Models 1, 2, 3, 4). China's economic power growth rate also shows a positive but insignificant effect on conflict initiation when measured relative to all states (Models 1 & 2). But the effect of rapid growth on conflict initiation becomes negative, not positive, and negative in the model when China's power is measured relative to Asian states (Models 3 & 4). This means that when China was rising rapidly compared to its regional neighbors, it was less aggressive toward Asian neighbors and major powers.

In support of H2b, the effect of territorial disputes on conflict initiation is positive and significant in Models 1, 2, 3, and 4. Not surprisingly, China was more prone to using military options against its opponents in territorial disputes than against other nations. Many international relations scholars argue that territory is a major reason why states fight each other, because it cannot be easily divided and often possesses symbolic and religious meanings. 37 China and its opponents are not an exception to this rule.

However, in contrast to H2a, China was not more aggressive toward US allies than toward other countries. Whether its opponent had a defense pact with the United States did not affect China's decision to initiate military conflict. This implies that China did not seek a direct military confrontation with the United States during the period from 1976 to 2001. Because this finding is about China's behaviors during the second half of the 20th century, however, it does not directly contradict the offensive realists’ expectation that China will challenge the United States in the future when the two nations are equal in power, at least in East Asia.

Among the four control variables, Distance has a significant effect on conflict initiation in Models 1 and 3. However, the other three variables – Relative Power, Economic Dependence, and Contiguity – do not affect China's military aggression in a statistically significant way.

Next, we illustrate the prediction of China's initiation of military conflict against a non‐US ally. 38 As China's share of global economic power changes from 0.05 to 0.35, its probability of conflict initiation against a territorial dispute opponent increases from 0.01 to 0.81, and its probability of conflict initiation against a non‐territorial dispute opponent increases from 0.002 to 0.45 (see Fig. 3). Although this prediction derives from China's past military behaviors, we can draw two implications: (i) China's economic power has some positive effects on its military aggression; and (ii) China's territorial dispute opponents are likely targets of the rising power.

A close up of a map

Description automatically generated

Summary and Implications

Offensive realists are right: China's growth has destabilized regional stability

in the post‐Mao period. Our statistical analysis of China's initiation of military conflict shows that its economic power has had significant and positive effects. In addition, China was more aggressive toward its territorial dispute opponents, although the United States’ Asian allies were no more likely to be military targets than other Asian states. In short, China's greater power made the country more assertive, rather than cooperative, toward Asian states and major powers. This leads us to expect that China will maintain its current uncompromising and firm position in the South and East China Seas if its economic rise continues. Also, China's growth will accelerate its resolute protection of core interests in strategic and economic matters.

# 1AR

## Defense

### 1NR --- AT Beller

#### The ontology of technology isn’t static---its influenced by social/political change

Paul Rekret 19, Associate Professor of Politics at Richmond University, “Seeing Like a Cyborg? The Innocence of Posthuman Knowledge,” Chapter 6 in *Digital Objects, Digital Subjects: Interdisciplinary Perspectives on Capitalism, Labour and Politics in the Age of Big Data* Edited by David Chandler and Christian Fuchs, 2019, https://library.oapen.org/bitstream/handle/20.500.12657/25880/1004203.pdf?sequence=1

Despite the undeniably heterogeneous and complex research programmes that Haraway and Latour developed from these basic insights, our concern here is with the widespread adoption of the claim that we inhabit an age of hybridity. The view that the subject has been eroded in the current epoch is an ontological contention that increasingly shapes an expansive theoretical paradigm and is, moreover, often taken as self-evident. But it is worth remarking that this is an odd claim – at least where it implies a relation between ontology and history – for it insinuates that, in general, while existence itself is defined by hybridity, this only becomes self-evident in an epoch where technological change makes its manifestation undeniable. To twist a well-known phrase, history here becomes the midwife of ontology, where the hybrid entities that emerge from bioand enhancement technologies bear the weight of actualising the ontological assertion that the human never was an integral, autonomous being exercising control over itself or its surroundings in the first place. Yet such a claim so often denotes a move that seeks to rescue technological advancements – which are often the product of destructive capitalist compulsions, if not explicitly militarist impulses – for progressive theoretical ends. It follows that it falls upon the theorist’s ontological speculations to salvage and reimagine the technological for emancipatory purposes, a task which can only be accomplished where the deeper truths about existence which these processes harbour can be discerned. It is in this way that the posthumanist can be said to collapse ontological speculation into ethico-political argument, since it is the affirmation of hybridity and concordant critique of anthropocentrism that acts as the starting point for ethical and political thought in this context (Rekret 2016). Besides producing a peculiar oscillation between history and ontology, the critique of anthropocentrism can sometimes effect a sort of theoretical narcissism which places the theorist at the endpoint of an eschatology wherein the true nature of existence is only discernible from the historical instant at which they find themselves.

## Offense

### 1NR

#### The transition would be violent which is separate offense for us AND means that it would inevitably fail

**Koch** and Büchs **19** [Max Koch, Faculty of Social Sciences, Socialhögskolan, Lund University, Milena Büchs, Sustainability Research Institute, School of Earth and Environment, University of Leeds, “Challenges for the degrowth transition: The debate about wellbeing”, Futures Volume 105, January 2019, Pages 155-165, https://www.sciencedirect.com/science/article/pii/S0016328718300715#!]

3.2. Implications of rapidly transforming social systems

The social practices lens is also useful for thinking about possible wellbeing implications of rapid social change more generally, and a transition away from a growth-based economy specifically. While the concept of social practices inherently implies the possibility of change (with its focus on agency and creativity), it equally strongly highlights the structural aspects of practices which provide stability and orientation. During times of rapid social transitions, social norms and ‘mental infrastructures’ often lag behind, creating disorientation, social conflict, and negative impacts on wellbeing (Büchs & Koch, 2017: ch. 6).

Stability of structural dimensions of social practices offers orientation and some extent of predictability of how oneself and other people are likely to act in the future, providing a framework within which flexibility and change are possible. This orienting function of structural dimensions of practices is likely to be an important condition for people to form reasonably stable identities and relationships – key ingredients for wellbeing. Examples from classical and contemporary sociological and psychological research suggest that different speeds of changing social structures can establish misalignments and disruptions of social practices which can, in turn, negatively influence health and other wellbeing outcomes. For instance, in his classical study, Durkheim presents suicide at least partly as an outcome of a failure of cultural resources to provide meaning and orientation in the context of other, more rapid social changes (Durkheim, 2006; Vega & Rumbaut, 1991: 375). This idea also links to Bourdieu’s concept of the “hysteresis effect”. Here, Bourdieu emphasises that, especially during phases of social transition, people’s habitus and “objective” social circumstances can become disjointed: as a result of hysteresis, dispositions can be “out of line with the field and with the ‘collective expectations’ which are constitutive of its normality. This is the case, in particular, when a field undergoes a major crisis and its regularities (even its rules) are profoundly changed” (Bourdieu, 2000: 160). This can contribute to a deterioration of people’s wellbeing as it makes them feel “out of place” or let them be perceived that way, “plung[ing] them deeper into failure” (Bourdieu, 2000: 161) because they cannot make use of new opportunities or are mistreated or socially excluded by others.

Empirical research which partly builds on the idea of hysteresis has shown that wide-ranging organisational change can have a range of negative effects on people’s health and mortality (Ferrie et al., 1998; McDonough & Polzer, 2012). One study found that across 174 countries, several measures of wellbeing and social performance, including life satisfaction, health, safety and trust, voice and accountability, were highest in periods of economic stability, but lower in times of GDP growth or contraction (O’Neill, 2015); and other studies concluded that life expectancy can be negatively affected by both rapid economic growth and contraction (Notzon et al., 1998; Szreter, 1999).

Several scholars have recently highlighted the potential for social conflict inherent in (rapid) social change. For instance, Maja Göpel (2016: 49) remarks: “Unsurprisingly, the navigation or transition phase in shifting paradigms as well as governance solutions is marked by chaos, politicization, unease and power-ridden struggles”. Wolfgang Streeck has issued similar warnings (Streeck et al., 2016: 169). It is not difficult to see how such scenarios bear the potential of undermining some of the fundamental conditions that are necessary for the satisfaction of basic needs as discussed above, and hence the danger of generating substantial wellbeing losses for current and near-future generations.

In the current context, it is very difficult to imagine that we might be able to observe a rapid and radical cultural change in which people adopt identities and related lifestyles that value intrinsically motivated activities over pursuing satisfaction and status through careers and consumption. Even more worryingly, political events in Europe, the United States and elsewhere since the ‘Great Crash’ of 2008 indicate that times of negative or stagnant growth can provide a breeding ground for populist, nationalistic and anti-democratic movements. Economic insecurity, a perceived threat of established identities through migrants, and deep mistrust against ‘elite’ politicians are amongst the main explanations for previously unimaginable events such as the Brexit vote, Trump presidency, and recent electoral successes for far right-wing parties in a range of European countries.

#### growth is decoupling – trends and demand

Newman 17 (Peter – Curtin University Sustainability Professor and Curtin University Sustainability Policy Institute head **citing** the International Energy Agency – an autonomous intergovernmental organization – yearly review which is a meta-analysis of relevant energy data, the Organisation for Economic Cooperation and Development – an intergovernmental economic organization – which performs a similar meta review of economic data, and BNEF which utilizes sophisticated new energy datasets and models with analysts and experts in six continents publishing over 700 energy related reports, 7/27/17; Curtin University Sustainability Policy Institute, conducting a twenty-year statistical analysis based on third-party meta studies; EDP Sciences, “The rise and rise of renewable cities,” [https://www.rees-journal.org/articles/rees/pdf/2017/01/rees170008s.pdf, accessed 7/21/18, DL)](https://www.rees-journal.org/articles/rees/pdf/2017/01/rees170008s.pdf,%20accessed%207/21/18,%20DL))

Abstract. The decoupling of fossil fuels from growth in economic activity has been proceeding rapidly for most of the 21st century and is analysed globally in terms of structures and technologies for energy efficiency and for switching to renewable energy in the world’s cities. This is leading to the decline of coal and oil. The evidence suggests that the changes are based on demand for the structures and technologies that are emerging, facilitating a disruptive process. The rise of renewable cities can therefore be expected to accelerate. 1 Introduction The rise of renewable cities began in the 1990s but has accelerated in the 21st century [1,2]. As shown below, both coal and oil have begun to fall in the nations of the world driven mostly by their cities as this is where growth and change is happening [3]. The question raised by this paper is whether the rise will continue and even accelerate. The theory behind whether the rise in renewable cities is likely to continue or accelerate is partly left to economists who project the future based on the past [4] and more recently by those who see disruptive innovation as causing the future and thus leading to much accelerated change [5,6]. Disruptive innovation is caused by demand rather than supply. The costs of supply need to be competitive but may not be the cheapest option when people discover they want it for many reasons and this changes the whole system that the market is based around. An example often given by Christensen [5] is how small floppy discs outcompeted the larger discs which were cheaper per unit of memory storage but were not as convenient to carry; the system changed in response by developing the portable lap top computer. Disruptive innovations can surprise businesses who focus just on supply costs and they can go bankrupt whilst their product is still the cheapest and the whole structural system around them changes in response to the new demand. This is known as the “Kodak effect” due to the way Kodak chose not to develop their digital cameras as they saw them as too expensive. This paper seeks to find evidence of whether the renewable city is being driven by disruptive innovations based on demand, as well as competitive costs of supply, leading to a whole system change. If it is so, then the rise in renewable cities is likely to continue and even accelerate based on demand for the structures and products of the renewable city at a surprising rate. 2 The decoupling of economic growth and fossil fuels In 2017, the International Energy Agency confirmed that economic growth has been decoupling from greenhouse emissions and fossil fuels since the start of the 21st century and that this was now leading to the first drop in fossil fuel consumption and subsequent emissions [7]. How this relates to the rise of the renewable city is the focus of this paper. The mechanisms are first understood by looking at a range of national data as set out in Figure 1. Denmark decoupled relatively from the 1990s but absolutely over the last 17 years and is typical of many European nations and cities. The US and Australia have been slower but have now decoupled relatively from the 2000s and absolutely over the past 5–9 years. China decoupled relatively from 2005 and absolutely over the past few years with coal whilst oil has plateaued. India has started relative decoupling in the past decade and may change to an absolute decline in fossil fuels as it is investing strongly in renewables and urban electric rail [11]. These trends suggest a global process – the rise of the renewable city – as outlined by Droege [1,2]; this appears to be occurring much faster than expected and invites the question as to whether it will accelerate [3]. 3 Mechanisms for the rise of the renewable city The mechanisms behind the decoupling of wealth and fossil fuels and the resulting rise of renewable cities are likely to be based around structural energy efficiencies and growth in renewables. Whether they are disruptive, demand driven changes, will be examined with coal and oil.

#### Growth forces structural changes that solve environmental damage

Faik Bilgili et al. 16. \*\*PhD in Economics, The City University of New York and Istanbul University; professor of Economics, Erciyes University, Turkey. \*\* Emrah Kocak, Researcher, Evran University. \*\*Ümit Bulut, PhD in Economics, Gazi University and Professor of Economics, Ahi Evran University. “The dynamic impact of renewable energy consumption on CO2 emissions: A revisited Environmental Kuznets Curve approach.” Renewable and Sustainable Energy Reviews 54(Feb): 838-9. Emory Libraries.

Some seminal papers reveal that, within the process of economic growth, environmental pollution level first scales up and later scales down. This is an inverted U-shaped relationship between GDP per capita and pollution level (Grossman and Krueger [3,4], Panayotou [5], Shafik [6], Selden and Song [7]). Since this relationship resembles the relationship between GDP per capita and income inequality produced by Kuznets [8], Panayotou [5] calls it Environmental Kuznets Curve (EKC). According to the EKC hypothesis, the level of environmental pollution initially intensifies because of economic growth, later tampers after GDP per capita reaches a threshold value (Panayotou [5], Suri and Chapman [9]; Stern [10]). Therefore, this hypothesis implies a dynamic process in which structural change occurs together with economic growth (Dinda [2]). Grossman and Krueger [3] first clarify how the EKC arises. They explore that economic growth affects environmental quality through three channels: (i) scale effect, (ii) structural effect, and (iii) technological effect. Fig. 1 presents the EKC within the periods of (i), (ii) and (iii). According to the scale effect, given the level of technology, more resources and inputs are employed to produce more commodities at the beginning of economic growth path. Hence, more energy resources and production will induce more waste and pollutant emissions, and the level of environmental quality will get worse (Torras and Boyce [11], Dinda [2], Prieur [12]). The structural effect states that the economy will have a structural transformation, and economic growth will affect environment positively along with continuation of growth. In other words, as national production grows the structure of economy changes, and the share of less polluting economic activities increases gradually. Besides, an economy experiences a transition from capital-intensive industrial sectors to service sector and reaches technology-intensive knowledge economy (the final stage of the structural change). Due to the fact that technology-intensive sectors utilize fewer natural sources, the impact of these sectors on environmental pollution will be less. The last channel of the growth process is the technological effect channel. Since a high-income economy can allocate more resources for research and development expenditures, the new technological processes will emerge. Thus, the country will replace old and dirty technologies with new and clean technologies, and environmental quality will deepen (Borghesi [13], Copelan and Taylor [14]). Consequently, environmental pollution initially increases and later decreases as a result of scale, structural and technological effect emerging along with growth path. Some studies of EKC hypothesis consider income elasticity of clean environment demand (Beckerman [15], Selden and Song [16], McConnel [17], Panayotou [18], Carson et al. [19], Brock and Taylor [20]). Accordingly, the share of low-income people’s expenditures for food and basic necessities is higher than that of high-income societies’ expenditures for the same type of commodities (Engel’s Law). As income level and life standards rise in conjunction with economic growth, the societies’ demand for clean environment advances. Besides, societies make often pressure on policy makers to protect the environment through new regulations. One might argue that, because of these reasons, clean environment is a luxury commodity and the demand elasticity of clean environment is higher than unity (Dinda [2]).

#### yes decoupling

Pao 18 (Hsiao-Tien Pao, PhD, Department of Management Science, National Chiao Tung University; Chun-Chih Chen, PhD, Department of Management Science, National Chiao Tung University; “Decoupling strategies: CO emissions, energy resources, and economic growth in 2 the Group of Twenty”, Journal of Cleaner Production, September 2018, DOI: 10.1016/j.jclepro.2018.09.190) \*Brackets added which provide the full version of each of these abbreviations: Hydro = hydropower; CKC = carbon kuznets curve; Ren = new renewable energy consumption; FF = fossil fuels energy consumption; 3Es = environment, energy, and economy, Nuc = nuclear energy consumption, TCE = total clean energy consumption, EG = economic growth

This study selects the G20 as a representative sample of global economic development to assess the CKC [carbon Kuznets curve], the 3Es dynamics, substitutability between Ren [new renewable energy consumption]/Hydro [hydropower] /Nuc [nuclear energy consumption] and FF [fossil fuels energy consumption], and thus to propose decoupling strategies for sustainable development. We extend the literature on the emission-growth nexus in the case of G20 to the 3Es dynamics by examining the rule of Ren [new renewable energy consumption]/Hydro [hydropower] /Nuc [nuclear energy consumption] and FF [fossil fuels energy consumption]. The descriptive statistical analysis suggests the absolute decoupling effect seems to have occurred with the drop in related environmental pressure and the continuation of economic growth. Within a panel EEO model framework, the per capita TCE [total clean energy consumption] /FF [fossil fuels energy consumption] elasticity of demand for carbon emissions is -0.021/1.04. The existence of the CKC [carbon kuznets curve] is consistent with the results of the descriptive statistical analysis. The results of panel VECM models support the Hydroled and Nuc-led growth hypotheses and the feedback hypothesis between EG [economic growth] and Ren [new renewable energy consumption]/FF and suggest the potential substitutability/symbiosis between Ren/Hydro and FF as evidenced by the negative/positive bidirectional causal relationship between them. Also, note that the use of nuclear energy is a key means of dealing with carbon emissions as evidenced by the positive unidirectional causal relationship running from emissions to Nuc [nuclear energy consumption]. Based on the growing global awareness of environmental protection, these interdependencies between 3Es are not surprising. That provides the main directions of each in the design of energy and energy conservation policies to ensure a diversified, sustainable energy consumption mix and a decoupling of environmental pressure from EG [economic growth]. Policymakers can introduce a wide range of complementary strategies for renewable energy and nuclear energy to improve energy efficiency and safety, reduce CO2 intensity, maintain stable economic growth, and implement the 2030 sustainable development agenda, thus lead the world to absolute decoupling. Absolute decoupling is the only way to achieve a truly sustainable future.

#### Warming causes extinction.

Bill McKibben 19. Schumann Distinguished Scholar at Middlebury College; fellow of the American Academy of Arts and Sciences; holds honorary degrees from 18 colleges and universities; Foreign Policy named him to their inaugural list of the world’s 100 most important global thinkers. "This Is How Human Extinction Could Play Out." Rolling Stone. 4-9-2019. https://www.rollingstone.com/politics/politics-features/bill-mckibben-falter-climate-change-817310/

Oh, it could get very bad. In 2015, a study in the Journal of Mathematical Biology pointed out that if the world’s oceans kept warming, by 2100 they might become hot enough to “stop oxygen production by phyto-plankton by disrupting the process of photosynthesis.” Given that two-thirds of the Earth’s oxygen comes from phytoplankton, that would “likely result in the mass mortality of animals and humans.” A year later, above the Arctic Circle, in Siberia, a heat wave thawed a reindeer carcass that had been trapped in the permafrost. The exposed body released anthrax into nearby water and soil, infecting two thousand reindeer grazing nearby, and they in turn infected some humans; a twelve-year-old boy died. As it turns out, permafrost is a “very good preserver of microbes and viruses, because it is cold, there is no oxygen, and it is dark” — scientists have managed to revive an eight-million-year-old bacterium they found beneath the surface of a glacier. Researchers believe there are fragments of the Spanish flu virus, smallpox, and bubonic plague buried in Siberia and Alaska. Or consider this: as ice sheets melt, they take weight off land, and that can trigger earthquakes — seismic activity is already increasing in Greenland and Alaska. Meanwhile, the added weight of the new seawater starts to bend the Earth’s crust. “That will give you a massive increase in volcanic activity. It’ll activate faults to create earthquakes, submarine landslides, tsunamis, the whole lot,” explained the director of University College London’s Hazard Centre. Such a landslide happened in Scandinavia about eight thousand years ago, as the last Ice Age retreated and a Kentucky-size section of Norway’s continental shelf gave way, “plummeting down to the abyssal plain and creating a series of titanic waves that roared forth with a vengeance,” wiping all signs of life from coastal Norway to Greenland and “drowning the Wales-sized landmass that once connected Britain to the Netherlands, Denmark, and Germany.” When the waves hit the Shetlands, they were sixty-five feet high. There’s even this: if we keep raising carbon dioxide levels, we may not be able to think straight anymore. At a thousand parts per million (which is within the realm of possibility for 2100), human cognitive ability falls 21 percent. “The largest effects were seen for Crisis Response, Information Usage, and Strategy,” a Harvard study reported, which is too bad, as those skills are what we seem to need most. I could, in other words, do my best to scare you silly. I’m not opposed on principle — changing something as fundamental as the composition of the atmosphere, and hence the heat balance of the planet, is certain to trigger all manner of horror, and we shouldn’t shy away from it. The dramatic uncertainty that lies ahead may be the most frightening development of all; the physical world is going from backdrop to foreground. (It’s like the contrast between politics in the old days, when you could forget about Washington for weeks at a time, and politics in the Trump era, when the president is always jumping out from behind a tree to yell at you.) But let’s try to occupy ourselves with the most likely scenarios, because they are more than disturbing enough. Long before we get to tidal waves or smallpox, long before we choke to death or stop thinking clearly, we will need to concentrate on the most mundane and basic facts: everyone needs to eat every day, and an awful lot of us live near the ocean. FOOD SUPPLY first. We’ve had an amazing run since the end of World War II, with crop yields growing fast enough to keep ahead of a fast-rising population. It’s come at great human cost — displaced peasant farmers fill many of the planet’s vast slums — but in terms of sheer volume, the Green Revolution’s fertilizers, pesticides, and machinery managed to push output sharply upward. That climb, however, now seems to be running into the brute facts of heat and drought. There are studies to demonstrate the dire effects of warming on coffee, cacao, chickpeas, and champagne, but it is cereals that we really need to worry about, given that they supply most of the planet’s calories: corn, wheat, and rice all evolved as crops in the climate of the last ten thousand years, and though plant breeders can change them, there are limits to those changes. You can move a person from Hanoi to Edmonton, and she might decide to open a Vietnamese restaurant. But if you move a rice plant, it will die. A 2017 study in Australia, home to some of the world’s highest-tech farming, found that “wheat productivity has flatlined as a direct result of climate change.” After tripling between 1900 and 1990, wheat yields had stagnated since, as temperatures increased a degree and rainfall declined by nearly a third. “The chance of that just being variable climate without the underlying factor [of climate change] is less than one in a hundred billion,” the researchers said, and it meant that despite all the expensive new technology farmers kept introducing, “they have succeeded only in standing still, not in moving forward.” Assuming the same trends continued, yields would actually start to decline inside of two decades, they reported. In June 2018, researchers found that a two-degree Celsius rise in temperature — which, recall, is what the Paris accords are now aiming for — could cut U.S. corn yields by 18 percent. A four-degree increase — which is where our current trajectory will take us — would cut the crop almost in half. The United States is the world’s largest producer of corn, which in turn is the planet’s most widely grown crop. Corn is vulnerable because even a week of high temperatures at the key moment can keep it from fertilizing. (“You only get one chance to pollinate a quadrillion kernels of corn,” the head of a commodity consulting firm explained.) But even the hardiest crops are susceptible. Sorghum, for instance, which is a staple for half a billion humans, is particularly hardy in dry conditions because it has big, fibrous roots that reach far down into the earth. Even it has limits, though, and they are being reached. Thirty years of data from the American Midwest show that heat waves affect the “vapor pressure deficit,” the difference between the water vapor in the sorghum leaf’s interior and that in the surrounding air. Hotter weather means the sorghum releases more moisture into the atmosphere. Warm the planet’s temperature by two degrees Celsius — which is, again, now the world’s goal — and sorghum yields drop 17 percent. Warm it five degrees Celsius (nine degrees Fahrenheit), and yields drop almost 60 percent. It’s hard to imagine a topic duller than sorghum yields. It’s the precise opposite of clickbait. But people have to eat; in the human game, the single most important question is probably “What’s for dinner?” And when the answer is “Not much,” things deteriorate fast. In 2010 a severe heat wave hit Russia, and it wrecked the grain harvest, which led the Kremlin to ban exports. The global price of wheat spiked, and that helped trigger the Arab Spring — Egypt at the time was the largest wheat importer on the planet. That experience set academics and insurers to work gaming out what the next food shock might look like. In 2017 one team imagined a vigorous El Niño, with the attendant floods and droughts — for a season, in their scenario, corn and soy yields declined by 10 percent, and wheat and rice by 7 percent. The result was chaos: “quadrupled commodity prices, civil unrest, significant negative humanitarian consequences . . . Food riots break out in urban areas across the Middle East, North Africa, and Latin America. The euro weakens and the main European stock markets lose ten percent.” At about the same time, a team of British researchers released a study demonstrating that even if you can grow plenty of food, the transportation system that distributes it runs through just fourteen major choke-points, and those are vulnerable to — you guessed it — massive disruption from climate change. For instance, U.S. rivers and canals carry a third of the world’s corn and soy, and they’ve been frequently shut down or crimped by flooding and drought in recent years. Brazil accounts for 17 percent of the world’s grain exports, but heavy rainfall in 2017 stranded three thousand trucks. “It’s the glide path to a perfect storm,” said one of the report’s authors. Five weeks after that, another report raised an even deeper question. What if you can figure out how to grow plenty of food, and you can figure out how to guarantee its distribution, but the food itself has lost much of its value? The paper, in the journal Environmental Research, said that rising carbon dioxide levels, by speeding plant growth, seem to have reduced the amount of protein in basic staple crops, a finding so startling that, for many years, agronomists had overlooked hints that it was happening. But it seems to be true: when researchers grow grain at the carbon dioxide levels we expect for later this century, they find that minerals such as calcium and iron drop by 8 percent, and protein by about the same amount. In the developing world, where people rely on plants for their protein, that means huge reductions in nutrition: India alone could lose 5 percent of the protein in its total diet, putting 53 million people at new risk for protein deficiency. The loss of zinc, essential for maternal and infant health, could endanger 138 million people around the world. In 2018, rice researchers found “significantly less protein” when they grew eighteen varieties of rice in high–carbon dioxide test plots. “The idea that food became less nutritious was a surprise,” said one researcher. “It’s not intuitive. But I think we should continue to expect surprises. We are completely altering the biophysical conditions that underpin our food system.” And not just ours. People don’t depend on goldenrod, for instance, but bees do. When scientists looked at samples of goldenrod in the Smithsonian that dated back to 1842, they found that the protein content of its pollen had “declined by a third since the industrial revolution — and the change closely tracks with the rise in carbon dioxide.” Bees help crops, obviously, so that’s scary news. But in August 2018, a massive new study found something just as frightening: crop pests were thriving in the new heat. “It gets better and better for them,” said one University of Colorado researcher. Even if we hit the UN target of limiting temperature rise to two degrees Celsius, pests should cut wheat yields by 46 percent, corn by 31 percent, and rice by 19 percent. “Warmer temperatures accelerate the metabolism of insect pests like aphids and corn borers at a predictable rate,” the researchers found. “That makes them hungrier[,] and warmer temperatures also speed up their reproduction.” Even fossilized plants from fifty million years ago make the point: “Plant damage from insects correlated with rising and falling temperatures, reaching a maximum during the warmest periods.”

#### War profiteering is descriptive false

Walt, 20 (Stephen M. Walt, Stephen M. Walt is the Robert and Renée Belfer professor of international relations at Harvard University and a columnist for Foreign Policy., 5-13-2020, accessed on 6-13-2021, Foreign Policy, "Will a Global Depression Caused by the Coronavirus Pandemic Trigger Another World War?", <https://foreignpolicy.com/2020/05/13/coronavirus-pandemic-depression-economy-world-war/>)//Babcii

For these reasons, the pandemic itself may be conducive to peace. But what about the relationship between broader economic conditions and the likelihood of war? Might a few leaders still convince themselves that provoking a crisis and going to war could still advance either long-term national interests or their own political fortunes? Are the other paths by which a deep and sustained economic downturn might make serious global conflict more likely? One familiar argument is the so-called diversionary (or “scapegoat”) theory of war. It suggests that leaders who are worried about their popularity at home will try to divert attention from their failures by provoking a crisis with a foreign power and maybe even using force against it. Drawing on this logic, [some Americans now worry](https://www.washingtonpost.com/outlook/2019/04/29/would-trump-start-war-boot-his-chances/) that President Donald Trump will decide to attack a country like Iran or Venezuela in the run-up to the presidential election and especially if he thinks he’s likely to lose. This outcome strikes me as unlikely, even if one ignores the [logical and empirical flaws in the theory itself](http://fas-polisci.rutgers.edu/levy/articles/Levy%20-%20Diversionary%20theory.pdf). War is always a gamble, and should things go badly—even a little bit—it would hammer the last nail in the coffin of Trump’s declining fortunes. Moreover, none of the countries Trump might consider going after pose an imminent threat to U.S. security, and even his staunchest supporters may wonder why he is wasting time and money going after Iran or Venezuela at a moment when thousands of Americans are dying preventable deaths at home. Even a successful military action won’t put Americans back to work, create the sort of testing-and-tracing regime that competent governments around the world have been able to implement already, or hasten the development of a vaccine. The same logic is likely to guide the decisions of other world leaders too. Another familiar folk theory is “military Keynesianism.” War generates a lot of economic demand, and it can sometimes lift depressed economies out of the doldrums and back toward prosperity and full employment. The obvious case in point here is World War II, which did help the U.S economy finally escape the quicksand of the Great Depression. Those who are convinced that great powers go to war primarily to keep Big Business (or the arms industry) happy are naturally drawn to this sort of argument, and they might worry that governments looking at bleak economic forecasts will try to restart their economies through some sort of military adventure. I doubt it. It takes a really big war to generate a significant stimulus, and it is hard to imagine any country launching a large-scale war—with all its attendant risks—at a moment when debt levels are already soaring. More importantly, there are lots of easier and more direct ways to stimulate the economy—infrastructure spending, unemployment insurance, even “helicopter payments”—and launching a war has to be one of the least efficient methods available. The threat of war usually spooks investors too, which any politician with their eye on the stock market would be loath to do. Economic downturns can encourage war in some special circumstances, especially when a war would enable a country facing severe hardships to capture something of immediate and significant value. Saddam Hussein’s decision to seize Kuwait in 1990 [fits this model perfectly](https://www.tandfonline.com/doi/abs/10.1080/00396339108442571): The Iraqi economy was in terrible shape after its long war with Iran; unemployment was threatening Saddam’s domestic position; Kuwait’s vast oil riches were a considerable prize; and seizing the lightly armed emirate was exceedingly easy to do. Iraq also owed Kuwait a lot of money, and a hostile takeover by Baghdad would wipe those debts off the books overnight. In this case, Iraq’s parlous economic condition clearly made war more likely. Yet I cannot think of any country in similar circumstances today. Now is hardly the time for Russia to try to grab more of Ukraine—if it even wanted to—or for China to make a play for Taiwan, because the costs of doing so would clearly outweigh the economic benefits. Even conquering an oil-rich country—the sort of greedy acquisitiveness that [Trump occasionally hints at](https://www.washingtonpost.com/outlook/2019/11/05/trump-keeps-talking-about-keeping-middle-east-oil-that-would-be-illegal/)—doesn’t look attractive when there’s a vast glut on the market. I might be worried if some weak and defenseless country somehow came to possess the entire global stock of a successful coronavirus vaccine, but that scenario is not even remotely possible. If one takes a longer-term perspective, however, a sustained economic depression could make war more likely by strengthening fascist or xenophobic political movements, fueling protectionism and hypernationalism, and making it more difficult for countries to reach mutually acceptable bargains with each other. The history of the 1930s shows where such trends can lead, although the economic effects of the Depression are hardly the only reason world politics took such a deadly turn in the 1930s. Nationalism, xenophobia, and authoritarian rule were making a comeback well before COVID-19 struck, but the economic misery now occurring in every corner of the world could intensify these trends and leave us in a more war-prone condition when fear of the virus has diminished. On balance, however, I do not think that even the extraordinary economic conditions we are witnessing today are going to have much impact on the likelihood of war. Why? First of all, if depressions were a powerful cause of war, there would be a lot more of the latter. To take one example, the United States has suffered [40 or more recessions since the country was founded](https://en.wikipedia.org/wiki/List_of_recessions_in_the_United_States), yet it has fought perhaps 20 interstate wars, most of them unrelated to the state of the economy. To paraphrase the economist [Paul Samuelson’s famous quip about the stock market](https://www.forbes.com/sites/briandomitrovic/2018/11/22/the-stock-market-has-predicted-nine-of-the-past-five-recessions/#308e13d74089), if recessions were a powerful cause of war, they would have predicted “nine out of the last five (or fewer).” Second, states do not start wars unless they believe they will win a quick and relatively cheap victory. As John Mearsheimer showed in his classic book [Conventional Deterrence](https://www.amazon.com/Conventional-Deterrence-Cornell-Studies-Security/dp/0801493463), national leaders avoid war when they are convinced it will be long, bloody, costly, and uncertain. To choose war, political leaders have to convince themselves they can either win a quick, cheap, and decisive victory or achieve some limited objective at low cost. Europe went to war in 1914 with each side believing it would win a rapid and easy victory, and Nazi Germany developed the strategy of blitzkrieg in order to subdue its foes as quickly and cheaply as possible. Iraq attacked Iran in 1980 because Saddam believed the Islamic Republic was in disarray and would be easy to defeat, and George W. Bush invaded Iraq in 2003 convinced the war would be short, successful, and pay for itself. The fact that each of these leaders miscalculated badly does not alter the main point: No matter what a country’s economic condition might be, its leaders will not go to war unless they think they can do so quickly, cheaply, and with a reasonable probability of success. Third, and most important, the primary motivation for most wars is the desire for **security, not economic gain**. For this reason, the odds of war increase when states believe the long-term balance of power may be shifting against them, when they are convinced that adversaries are unalterably hostile and cannot be accommodated, and when they are confident they can reverse the unfavorable trends and establish a secure position if they act now. The historian A.J.P. Taylor once observed that “**every war between Great Powers** [between 1848 and 1918] … **started as a preventive war, not as a war of conquest**,” and that remains true of most wars fought since then. The bottom line: Economic conditions (i.e., a depression) may affect the broader political environment in which decisions for war or peace are made, but they are only one factor among many and rarely the most significant. Even if the COVID-19 pandemic has large, lasting, and negative effects on the world economy—as seems quite likely—it is not likely to affect the probability of war very much, especially in the short term.

#### Interdependence solves great power war

**Johnson** and Gramer **20** [Keith Johnson is Foreign Policy's global geoeconomics correspondent, Robbie Gramer is a diplomacy and national security reporter at Foreign Policy, covering the State Department. “The Great Decoupling”, May 14th, https://foreignpolicy.com/2020/05/14/china-us-pandemic-economy-tensions-trump-coronavirus-covid-new-cold-war-economics-the-great-decoupling/]

Washington made an open and increasingly interconnected world economy a key building block of the postwar architecture, in large part to explicitly stave off future global conflicts. With the creation of the Bretton Woods system in 1944, before World War II even finished, or the later creation of the General Agreement on Tariffs and Trade—forerunner to the WTO—it set out to link economic interdependence with peace. So did others: The European Coal and Steel Community, created just a few years after the end of the war, cemented both closer economic and security ties in a war-ravaged continent and lay the foundation for the eventual creation of the European Union. Those trends continued, decade after decade, with only the odd hiccup or retreat, from the creation of the North American Free Trade Agreement and the WTO to the expansion and ever-closer economic integration between EU member states.

That whole process was itself a reaction to the last great decoupling: the upheaval of World War I, which ended the first age of globalization, followed a decade later by the Great Depression, trade barriers, economic nationalism, and a full-scale retreat from globalization.

And the end result of all that was to turn international economic rivalry into a zero-sum, beggar-thy-neighbor contest where economic concerns became security threats. Japan’s need for raw materials led to its occupation of Manchuria, and later the creation of the “Greater East Asia Co-Prosperity Sphere” that so worried Ambassador Grew during the 1930s. It eventually led to an attack on resource-rich Southeast Asia and a preemptive strike on the U.S. fleet at Pearl Harbor. Nazi Germany, largely cut off from global markets, sought, eventually by force, to create a European Großwirtschaftsraum, or greater economic area, the economic equivalent of the German expansionist concept of Lebensraum.

“The key lesson drawn from the inter-war experience was that international political cooperation—and an enduring peace—depended fundamentally on international economic cooperation,” noted the WTO. “No country absorbed this lesson more than the United States.”

#### Long term trends are driving sustainable capitalist development – their limits to growth arguments are empirically unsupported

Brook, et al, 15—professor of environmental sustainability at the University of Tasmania (Barry, with John Asafu-Adjaye, University of Queensland, Linus Blomqvist, Breakthrough Institute, Stewart Brand, Long Now Foundation, Ruth DeFries, Columbia Univeristy, Erle Ellis, University of Maryland, Baltimore County, Christopher Foreman, University of Maryland School of Public Policy, David Keith, Harvard University School of Engineering and Applied Sciences, Martin Lewis, Stanford University, Mark Lynas, Cornell University, Ted Nordhaus, Breakthrough Institute, Roger Pielke, Jr., University of Colorado, Boulder, Rachel Pritzker, Pritzker Innovation Fund, Joyashree Roy, Jadavpur University, Mark Sagoff, George Mason University, Michael Shellenberger, Breakthrough Institute, Robert Stone, Filmmaker, and Peter Teague, Breakthrough Institute, “AN ECOMODERNIST MANIFESTO,” <http://www.ecomodernism.org/manifesto/>, dml)

Intensifying many human activities — particularly farming, energy extraction, forestry, and settlement — so that they use less land and interfere less with the natural world is the key to decoupling human development from environmental impacts. These socioeconomic and technological processes are central to economic modernization and environmental protection. Together they allow people to mitigate climate change, to spare nature, and to alleviate global poverty. Although we have to date written separately, our views are increasingly discussed as a whole. We call ourselves ecopragmatists and ecomodernists. We offer this statement to affirm and to clarify our views and to describe our vision for putting humankind’s extraordinary powers in the service of creating a good Anthropocene. 1. Humanity has flourished over the past two centuries. Average life expectancy has increased from 30 to 70 years, resulting in a large and growing population able to live in many different environments. Humanity has made extraordinary progress in reducing the incidence and impacts of infectious diseases, and it has become more resilient to extreme weather and other natural disasters. Violence in all forms has declined significantly and is probably at the lowest per capita level ever experienced by the human species, the horrors of the 20th century and present-day terrorism notwithstanding. Globally, human beings have moved from autocratic government toward liberal democracy characterized by the rule of law and increased freedom. Personal, economic, and political liberties have spread worldwide and are today largely accepted as universal values. Modernization liberates women from traditional gender roles, increasing their control of their fertility. Historically large numbers of humans — both in percentage and in absolute terms — are free from insecurity, penury, and servitude. At the same time, human flourishing has taken a serious toll on natural, nonhuman environments and wildlife. Humans use about half of the planet’s ice-free land, mostly for pasture, crops, and production forestry. Of the land once covered by forests, 20 percent has been converted to human use. Populations of many mammals, amphibians, and birds have declined by more than 50 percent in the past 40 years alone. More than 100 species from those groups went extinct in the 20th century, and about 785 since 1500. As we write, only four northern white rhinos are confirmed to exist. Given that humans are completely dependent on the living biosphere, how is it possible that people are doing so much damage to natural systems without doing more harm to themselves? The role that technology plays in reducing humanity’s dependence on nature explains this paradox. Human technologies, from those that first enabled agriculture to replace hunting and gathering, to those that drive today’s globalized economy, have made humans less reliant upon the many ecosystems that once provided their only sustenance, even as those same ecosystems have often been left deeply damaged. Despite frequent assertions starting in the 1970s of fundamental “limits to growth,” there is still remarkably little evidence that human population and economic expansion will outstrip the capacity to grow food or procure critical material resources in the foreseeable future. To the degree to which there are fixed physical boundaries to human consumption, they are so theoretical as to be functionally irrelevant. The amount of solar radiation that hits the Earth, for instance, is ultimately finite but represents no meaningful constraint upon human endeavors. Human civilization can flourish for centuries and millennia on energy delivered from a closed uranium or thorium fuel cycle, or from hydrogen-deuterium fusion. With proper management, humans are at no risk of lacking sufficient agricultural land for food. Given plentiful land and unlimited energy, substitutes for other material inputs to human well-being can easily be found if those inputs become scarce or expensive. There remain, however, serious long-term environmental threats to human well-being, such as anthropogenic climate change, stratospheric ozone depletion, and ocean acidification. While these risks are difficult to quantify, the evidence is clear today that they could cause significant risk of catastrophic impacts on societies and ecosystems. Even gradual, non-catastrophic outcomes associated with these threats are likely to result in significant human and economic costs as well as rising ecological losses. Much of the world’s population still suffers from more-immediate local environmental health risks. Indoor and outdoor air pollution continue to bring premature death and illness to millions annually. Water pollution and water-borne illness due to pollution and degradation of watersheds cause similar suffering. 2. Even as human environmental impacts continue to grow in the aggregate, a range of long-term trends are today driving significant decoupling of human well-being from environmental impacts. Decoupling occurs in both relative and absolute terms. Relative decoupling means that human environmental impacts rise at a slower rate than overall economic growth. Thus, for each unit of economic output, less environmental impact (e.g., deforestation, defaunation, pollution) results. Overall impacts may still increase, just at a slower rate than would otherwise be the case. Absolute decoupling occurs when total environmental impacts — impacts in the aggregate — peak and begin to decline, even as the economy continues to grow. Decoupling can be driven by both technological and demographic trends and usually results from a combination of the two. The growth rate of the human population has already peaked. Today’s population growth rate is one percent per year, down from its high point of 2.1 percent in the 1970s. Fertility rates in countries containing more than half of the global population are now below replacement level. Population growth today is primarily driven by longer life spans and lower infant mortality, not by rising fertility rates. Given current trends, it is very possible that the size of the human population will peak this century and then start to decline. Trends in population are inextricably linked to other demographic and economic dynamics. For the first time in human history, over half the global population lives in cities. By 2050, 70 percent are expected to dwell in cities, a number that could rise to 80 percent or more by the century’s end. Cities are characterized by both dense populations and low fertility rates. Cities occupy just 1 to 3 percent of the Earth’s surface and yet are home to nearly four billion people. As such, cities both drive and symbolize the decoupling of humanity from nature, performing far better than rural economies in providing efficiently for material needs while reducing environmental impacts. The growth of cities along with the economic and ecological benefits that come with them are inseparable from improvements in agricultural productivity. As agriculture has become more land and labor efficient, rural populations have left the countryside for the cities. Roughly half the US population worked the land in 1880. Today, less than 2 percent does. As human lives have been liberated from hard agricultural labor, enormous human resources have been freed up for other endeavors. Cities, as people know them today, could not exist without radical changes in farming. In contrast, modernization is not possible in a subsistence agrarian economy. These improvements have resulted not only in lower labor requirements per unit of agricultural output but also in lower land requirements. This is not a new trend: rising harvest yields have for millennia reduced the amount of land required to feed the average person. The average per-capita use of land today is vastly lower than it was 5,000 years ago, despite the fact that modern people enjoy a far richer diet. Thanks to technological improvements in agriculture, during the half-century starting in the mid-1960s, the amount of land required for growing crops and animal feed for the average person declined by one-half. Agricultural intensification, along with the move away from the use of wood as fuel, has allowed many parts of the world to experience net reforestation. About 80 percent of New England is today forested, compared with about 50 percent at the end of the 19th century. Over the past 20 years, the amount of land dedicated to production forest worldwide declined by 50 million hectares, an area the size of France. The “forest transition” from net deforestation to net reforestation seems to be as resilient a feature of development as the demographic transition that reduces human birth rates as poverty declines. Human use of many other resources is similarly peaking. The amount of water needed for the average diet has declined by nearly 25 percent over the past half-century. Nitrogen pollution continues to cause eutrophication and large dead zones in places like the Gulf of Mexico. While the total amount of nitrogen pollution is rising, the amount used per unit of production has declined significantly in developed nations. Indeed, in contradiction to the often-expressed fear of infinite growth colliding with a finite planet, demand for many material goods may be saturating as societies grow wealthier. Meat consumption, for instance, has peaked in many wealthy nations and has shifted away from beef toward protein sources that are less land intensive. As demand for material goods is met, developed economies see higher levels of spending directed to materially less-intensive service and knowledge sectors, which account for an increasing share of economic activity. This dynamic might be even more pronounced in today’s developing economies, which may benefit from being late adopters of resource-efficient technologies. Taken together, these trends mean that the total human impact on the environment, including land-use change, overexploitation, and pollution, can peak and decline this century. By understanding and promoting these emergent processes, humans have the opportunity to re-wild and re-green the Earth — even as developing countries achieve modern living standards, and material poverty ends. 3. The processes of decoupling described above challenge the idea that early human societies lived more lightly on the land than do modern societies. Insofar as past societies had less impact upon the environment, it was because those societies supported vastly smaller populations. In fact, early human populations with much less advanced technologies had far larger individual land footprints than societies have today. Consider that a population of no more than one or two million North Americans hunted most of the continent’s large mammals into extinction in the late Pleistocene, while burning and clearing forests across the continent in the process. Extensive human transformations of the environment continued throughout the Holocene period: as much as three-quarters of all deforestation globally occurred before the Industrial Revolution. The technologies that humankind’s ancestors used to meet their needs supported much lower living standards with much higher per-capita impacts on the environment. Absent a massive human die-off, any large-scale attempt at recoupling human societies to nature using these technologies would result in an unmitigated ecological and human disaster. Ecosystems around the world are threatened today because people over-rely on them: people who depend on firewood and charcoal for fuel cut down and degrade forests; people who eat bush meat for food hunt mammal species to local extirpation. Whether it’s a local indigenous community or a foreign corporation that benefits, it is the continued dependence of humans on natural environments that is the problem for the conservation of nature. Conversely, modern technologies, by using natural ecosystem flows and services more efficiently, offer a real chance of reducing the totality of human impacts on the biosphere. To embrace these technologies is to find paths to a good Anthropocene. The modernization processes that have increasingly liberated humanity from nature are, of course, double-edged, since they have also degraded the natural environment. Fossil fuels, mechanization and manufacturing, synthetic fertilizers and pesticides, electrification and modern transportation and communication technologies, have made larger human populations and greater consumption possible in the first place. Had technologies not improved since the Dark Ages, no doubt the human population would not have grown much either. It is also true that large, increasingly affluent urban populations have placed greater demands upon ecosystems in distant places –– the extraction of natural resources has been globalized. But those same technologies have also made it possible for people to secure food, shelter, heat, light, and mobility through means that are vastly more resource- and land-efficient than at any previous time in human history. Decoupling human well-being from the destruction of nature requires the conscious acceleration of emergent decoupling processes. In some cases, the objective is the development of technological substitutes. Reducing deforestation and indoor air pollution requires the substitution of wood and charcoal with modern energy. In other cases, humanity’s goal should be to use resources more productively. For example, increasing agricultural yields can reduce the conversion of forests and grasslands to farms. Humans should seek to liberate the environment from the economy. Urbanization, agricultural intensification, nuclear power, aquaculture, and desalination are all processes with a demonstrated potential to reduce human demands on the environment, allowing more room for non-human species. Suburbanization, low-yield farming, and many forms of renewable energy production, in contrast, generally require more land and resources and leave less room for nature. These patterns suggest that humans are as likely to spare nature because it is not needed to meet their needs as they are to spare it for explicit aesthetic and spiritual reasons. The parts of the planet that people have not yet profoundly transformed have mostly been spared because they have not yet found an economic use for them — mountains, deserts, boreal forests, and other “marginal” lands. Decoupling raises the possibility that societies might achieve peak human impact without intruding much further on relatively untouched areas. Nature unused is nature spared. 4. Plentiful access to modern energy is an essential prerequisite for human development and for decoupling development from nature. The availability of inexpensive energy allows poor people around the world to stop using forests for fuel. It allows humans to grow more food on less land, thanks to energy-heavy inputs such as fertilizer and tractors. Energy allows humans to recycle waste water and desalinate sea water in order to spare rivers and aquifers. It allows humans to cheaply recycle metal and plastic rather than to mine and refine these minerals. Looking forward, modern energy may allow the capture of carbon from the atmosphere to reduce the accumulated carbon that drives global warming. However, for at least the past three centuries, rising energy production globally has been matched by rising atmospheric concentrations of carbon dioxide. Nations have also been slowly decarbonizing — that is, reducing the carbon intensity of their economies — over that same time period. But they have not been doing so at a rate consistent with keeping cumulative carbon emissions low enough to reliably stay below the international target of less than 2 degrees Centigrade of global warming. Significant climate mitigation, therefore, will require that humans rapidly accelerate existing processes of decarbonization. There remains much confusion, however, as to how this might be accomplished. In developing countries, rising energy consumption is tightly correlated with rising incomes and improving living standards. Although the use of many other material resource inputs such as nitrogen, timber, and land are beginning to peak, the centrality of energy in human development and its many uses as a substitute for material and human resources suggest that energy consumption will continue to rise through much if not all of the 21st century. For that reason, any conflict between climate mitigation and the continuing development process through which billions of people around the world are achieving modern living standards will continue to be resolved resoundingly in favor of the latter. Climate change and other global ecological challenges are not the most important immediate concerns for the majority of the world's people. Nor should they be. A new coal-fired power station in Bangladesh may bring air pollution and rising carbon dioxide emissions but will also save lives. For millions living without light and forced to burn dung to cook their food, electricity and modern fuels, no matter the source, offer a pathway to a better life, even as they also bring new environmental challenges. Meaningful climate mitigation is fundamentally a technological challenge. By this we mean that even dramatic limits to per capita global consumption would be insufficient to achieve significant climate mitigation. Absent profound technological change **there is no credible path to meaningful climate mitigation**. While advocates differ in the particular mix of technologies they favor, we are aware of no quantified climate mitigation scenario in which technological change is not responsible for the vast majority of emissions cuts. The specific technological paths that people might take toward climate mitigation remain deeply contested. Theoretical scenarios for climate mitigation typically reflect their creators’ technological preferences and analytical assumptions while all too often failing to account for the cost, rate, and scale at which low-carbon energy technologies can be deployed. The history of energy transitions, however, suggests that there have been consistent patterns associated with the ways that societies move toward cleaner sources of energy. Substituting higher-quality (i.e., less carbon-intensive, higher-density) fuels for lower-quality (i.e., more carbon-intensive, lower-density) ones is how virtually all societies have decarbonized, and points the way toward accelerated decarbonization in the future. Transitioning to a world powered by zero-carbon energy sources will require energy technologies that are power dense and capable of scaling to many tens of terawatts to power a growing human economy. Most forms of renewable energy are, unfortunately, incapable of doing so. The scale of land use and other environmental impacts necessary to power the world on biofuels or many other renewables are such that we doubt they provide a sound pathway to a zero-carbon low-footprint future. High-efficiency solar cells produced from earth-abundant materials are an exception and have the potential to provide many tens of terawatts on a few percent of the Earth’s surface. Present-day solar technologies will require substantial innovation to meet this standard and the development of cheap energy storage technologies that are capable of dealing with highly variable energy generation at large scales. Nuclear fission today represents the only present-day zero-carbon technology with the demonstrated ability to meet most, if not all, of the energy demands of a modern economy. However, a variety of social, economic, and institutional challenges make deployment of present-day nuclear technologies at scales necessary to achieve significant climate mitigation unlikely. A new generation of nuclear technologies that are safer and cheaper will likely be necessary for nuclear energy to meet its full potential as a critical climate mitigation technology. In the long run, next-generation solar, advanced nuclear fission, and nuclear fusion represent the most plausible pathways toward the joint goals of climate stabilization and radical decoupling of humans from nature. If the history of energy transitions is any guide, however, that transition will take time. During that transition, other energy technologies can provide important social and environmental benefits. Hydroelectric dams, for example, may be a cheap source of low-carbon power for poor nations even though their land and water footprint is relatively large. Fossil fuels with carbon capture and storage can likewise provide substantial environmental benefits over current fossil or biomass energies. The ethical and pragmatic path toward a just and sustainable global energy economy requires that human beings transition as rapidly as possible to energy sources that are cheap, clean, dense, and abundant. Such a path will require sustained public support for the development and deployment of clean energy technologies, both within nations and between them, though international collaboration and competition, and within a broader framework for global modernization and development. 5. We write this document out of deep love and emotional connection to the natural world. By appreciating, exploring, seeking to understand, and cultivating nature, many people get outside themselves. They connect with their deep evolutionary history. Even when people never experience these wild natures directly, they affirm their existence as important for their psychological and spiritual well-being. Humans will always materially depend on nature to some degree. Even if a fully synthetic world were possible, many of us might still choose to continue to live more coupled with nature than human sustenance and technologies require. What decoupling offers is the possibility that humanity’s material dependence upon nature might be less destructive. The case for a more active, conscious, and accelerated decoupling to spare nature draws more on spiritual or aesthetic than on material or utilitarian arguments. Current and future generations could survive and prosper materially on a planet with much less biodiversity and wild nature. But this is not a world we want nor, if humans embrace decoupling processes, need to accept. What we are here calling nature, or even wild nature, encompasses landscapes, seascapes, biomes and ecosystems that have, in more cases than not, been regularly altered by human influences over centuries and millennia. Conservation science, and the concepts of biodiversity, complexity, and indigeneity are useful, but alone cannot determine which landscapes to preserve, or how. In most cases, there is no single baseline prior to human modification to which nature might be returned. For example, efforts to restore landscapes to more closely resemble earlier states (“indigeneity”) may involve removing recently arrived species (“invasives”) and thus require a net reduction in local biodiversity. In other circumstances, communities may decide to sacrifice indigeneity for novelty and biodiversity. Explicit efforts to preserve landscapes for their non-utilitarian value are inevitably anthropogenic choices. For this reason, all conservation efforts are fundamentally anthropogenic. The setting aside of wild nature is no less a human choice, in service of human preferences, than bulldozing it. Humans will save wild places and landscapes by convincing our fellow citizens that these places, and the creatures that occupy them, are worth protecting. People may choose to have some services — like water purification and flood protection — provided for by natural systems, such as forested watersheds, reefs, marshes, and wetlands, even if those natural systems are more expensive than simply building water treatment plants, seawalls, and levees. There will be no one-size-fits-all solution. Environments will be shaped by different local, historical, and cultural preferences. While we believe that agricultural intensification for land-sparing is key to protecting wild nature, we recognize that many communities will continue to opt for land-sharing, seeking to conserve wildlife within agricultural landscapes, for example, rather than allowing it to revert to wild nature in the form of grasslands, scrub, and forests. Where decoupling reduces pressure on landscapes and ecosystems to meet basic human needs, landowners, communities, and governments still must decide to what aesthetic or economic purpose they wish to dedicate those lands. Accelerated decoupling alone will not be enough to ensure more wild nature. There must still be a conservation politics and a wilderness movement to demand more wild nature for aesthetic and spiritual reasons. Along with decoupling humankind’s material needs from nature, establishing an enduring commitment to preserve wilderness, biodiversity, and a mosaic of beautiful landscapes will require a deeper emotional connection to them. 6. We affirm the need and human capacity for accelerated, active, and conscious decoupling. Technological progress is not inevitable. Decoupling environmental impacts from economic outputs is not simply a function of market-driven innovation and efficient response to scarcity. The long arc of human transformation of natural environments through technologies began well before there existed anything resembling a market or a price signal. Thanks to rising demand, scarcity, inspiration, and serendipity, humans have remade the world for millennia. Technological solutions to environmental problems must also be considered within a broader social, economic, and political context. We think it is counterproductive for nations like Germany and Japan, and states like California, to shutter nuclear power plants, recarbonize their energy sectors, and recouple their economies to fossil fuels and biomass. However, such examples underscore clearly that technological choices will not be determined by remote international bodies but rather by national and local institutions and cultures. Too often, modernization is conflated, both by its defenders and critics, with capitalism, corporate power, and laissez-faire economic policies. We reject such reductions. What we refer to when we speak of modernization is the long-term evolution of social, economic, political, and technological arrangements in human societies toward vastly improved material well-being, public health, resource productivity, economic integration, shared infrastructure, and personal freedom. Modernization has liberated ever more people from lives of poverty and hard agricultural labor, women from chattel status, children and ethnic minorities from oppression, and societies from capricious and arbitrary governance. Greater resource productivity associated with modern socio-technological systems has allowed human societies to meet human needs with fewer resource inputs and less impact on the environment. More-productive economies are wealthier economies, capable of better meeting human needs while committing more of their economic surplus to non-economic amenities, including better human health, greater human freedom and opportunity, arts, culture, and the conservation of nature. Modernizing processes are far from complete, even in advanced developed economies. Material consumption has only just begun to peak in the wealthiest societies. Decoupling of human welfare from environmental impacts will require a sustained commitment to technological progress and the continuing evolution of social, economic, and political institutions alongside those changes. Accelerated technological progress will require the active, assertive, and aggressive participation of private sector entrepreneurs, markets, civil society, and the state. While we reject the planning fallacy of the 1950s, we continue to embrace a strong public role in addressing environmental problems and accelerating technological innovation, including research to develop better technologies, subsidies, and other measures to help bring them to market, and regulations to mitigate environmental hazards. And international collaboration on technological innovation and technology transfer is essential in the areas of agriculture and energy.